

History of the American Society of Transplant Surgeons

ON THE OCCASION OF ITS 40TH ANNIVERSARY

EDITORS

THOMAS G. PETERS, MD
DIANE L. MOSSHOLDER, MA



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Foreword

The American Society of Transplant Surgeons has a story to tell, and this book beautifully chronicles the experiences of the third and fourth decades of our Society. It is a rich story that follows the accomplishments and challenges of our members in the science they pursue, the progeny they teach, and the patients for whom they care. Over the past 20 years, we began to see the transition from a bold new profession to one that now must wrestle with the changing landscape of health care in the United States.

During Dr. Mitch Henry's Presidency, with the coming of the 40th anniversary of ASTS, Dr. Barry Kahan challenged him to record the last 20 years of its history, mirroring the book commemorating the first 20 years. With the laying of that gauntlet, Dr. Tom Peters, the ASTS Historian, and Diane Mossholder took the reins and proceeded to initiate this project. With the help of the "ASTS 40 Group," the Editorial Board listed in the Acknowledgments on page 7, planning proceeded, and this book is the outgrowth of that effort. No published work, especially a history, is fully complete unless it has, by its authors' diligence, sought all the available facts from all known resources. In this, the authors have succeeded and even surpassed expectations that many in our Society's leadership envisioned.

Since the 1994 publication of our Society's first 20-year history, growth in transplantation surgery has required that our Society also grow. This book, *History of the American Society of Transplant Surgeons: On the Occasion of Its 40th Anniversary*, tells the story of our Society, which has nurtured its members in so many ways, guiding us in exciting, and occasionally difficult,

times and allowing friendships to blossom. Through this book, we can now know even more about this extraordinary organization, the American Society of Transplant Surgeons. Enjoy!

Alan N. Langnas, DO | President, 2013–2014 | American Society of Transplant Surgeons



Introduction

THOMAS G. PETERS, MD

The year 2014 marks the 40th anniversary of the American Society of Transplant Surgeons. To commemorate this momentous occasion, the ASTS Council elected to review the accomplishments of the Society over its last 20 years. In 1994 the first 20 years of ASTS history were documented in detail; that book, entitled *History of the American Society of Transplant Surgeons, On the Occasion of Its 20th Anniversary*, is now available in its entirety on the ASTS website. At the 20-year mark, ASTS was, indeed, maturing. ASTS leaders had already influenced the regulatory environment, which was growing rapidly, and had come to better define transplantation surgery as a specific academic and clinical discipline. Now, the ASTS history from 1994–2014 and the many changes in our Society will be equally well preserved in a similar fashion, that being the goal of this book.

Through these third and fourth decades, ASTS evolved in a fashion that could not have been anticipated, even at the 20-year mark. The working foundation of any organization, its bylaws, have been modified over the course of the last two decades to permit growth of the ASTS Council, establish new standing committees, and clarify new and varied tasks of the Society. Unforeseen as the Society turned 20 years of age were educational issues affecting all from student to attending surgeon, more active involvement of our younger ASTS members, and workforce as well as reimbursement matters that affect our patients and institutions. ASTS has met

these and many other challenges head-on, taking leading roles to best define and preserve the unique aspects of our specialty. Clearly, as transplantation science and clinical efforts have grown, so has the American Society of Transplant Surgeons. The pioneer spirit, mentioned early in the 1994 volume and so ingrained among American leaders, has continued in the Society.

The pioneer spirit, mentioned early in the 1994 volume and so ingrained among American leaders, has continued in the Society.

Transplantation is still a specialty in its youth. Many of the ASTS founding members are still with us, and most of those who have sadly passed on were alive and contributing to ASTS history during our 20th to 40th years. This has allowed more than an oral history to be preserved, as ASTS has come to honor many of the early leaders in our field through lectureships, symposia, and its Chimera Chronicles documenting not just olden days but also ASTS' growth and expansion: our leaders, telling us what they did and what the ASTS did! We are lucky to have, even in the last 20 years, surgeons who have a long and valuable perspective from which we can draw. We aim to capture that perspective.

Sadly, as 40 years have passed since the founding of the American Society of Transplant Surgeons, a number of our members have passed on. At the time of publication, six Past Presidents have died: Folkert O. Belzer, the 2nd President; Thomas L. Marchioro, the 3rd President; H.M. Lee, the 11th President; Robert J. Corry, the 13th President; John C. McDonald, the 14th President; and Nicholas L. Tilney, the 22nd President. Remembrance of other ASTS members, now deceased, may allow us to reflect on so many contributions by those upon whose shoulders we stand. Efforts to identify all deceased ASTS members and list their names in this work were undertaken in a broad and extensive fashion. Any omissions are deeply regretted, and the responsibility for oversight must rest with the editor.

Like the 20th anniversary publication, this work is due to the efforts of many ASTS members and a selfless group of contributors who gave of their time to research the historical aspects of a wide variety of topics and write a history that is both interesting and dynamic.

We start with a brief overview of the first 20 years to gain a sound insight into ASTS' founding and early growth. Then, the thoughts of and about the Past Presidents from 1994 to 2014 are captured in two ways: first, their own reflections on the times, troubles, and triumphs of their presidential year, and second, the text of their presidential addresses.

Next, the milestones and strides of the last two decades are next taken up in a topical fashion, recognizing individuals, issues, problems, and changes as well as goals— both met and unmet. Documenting symposia development, training, interaction with other professional groups, and matters of public policy highlight what a living organization really does, and ASTS has certainly breathed life into many such areas.

Throughout the work, various photographs, tables, graphics, and timelines augment what is hoped to be a work that is easy on the eye and interesting to the mind. These resources come from far and wide, from old members and new, and from our ASTS archives as well. And, we wrap up with a new beginning envisioned by looking forward to the next 40 years of our Society's work. And, it is the people who make the difference in any organization. Officers, council members, committee chairs, members at-large, and a highly talented staff have made enormous contributions, the aggregate of which have molded a large and dynamic society.

Finally, this book will, we hope, serve as a reference. There is an index of each person mentioned in it.

This is a history of a particular Society, not the surgical discipline from which it grew. Nonetheless, transplantation surgery has started, grown, and matured within the lifetimes of most practitioners who toiled in the field of organ transplantation during the third and fourth decades of our American Society of Transplant Surgeons. This book tells the story of ASTS as it has been the compass guiding our specialty to best serve our profession and our patients.



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We acknowledge the efforts of all contributing authors, especially our ASTS Past Presidents who contributed time and talent in advising the Editors and in

submitting the written recollections of their respective presidential years.

The editors also take this opportunity to thank ASTS staff members who assisted with the many details of a multi-authored publication: Ning Duan, Maggie Kebler, Laurie Kulikosky, Mina Behari Plante, Jamison Visone, Holly Warren, and Joyce Williams.



In Memoriam

With fond memory we recall those members whom death has claimed. Their contributions to the American Society of Transplant Surgeons and to furthering the field of transplantation will long inspire current and future transplant surgeons and physicians.

Mark B. Adams
J. Bradley Aust
Fritz H. Bach
Folkert O. Belzer
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Brandi Cominos-Liggins
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Clifford H. Van Meter
Ben A. Vanderwerf
Richard Wilson
James S. Wolf
Shuin-Lin Yang
Robert Z. Zhong
Charles F. Zukoski

David Hume died before the organization of ASTS. Nevertheless, his monumental pioneering contributions have been recognized by the establishment of the annual David M. Hume Lecture at the ASTS State of the Art Winter Symposium.



The First Twenty Years of the American Society of Transplant Surgeons

BARRY D. KAHAN, PHD, MD

The seed planted by John Bergan, Director of the American College of Surgeons Transplant Registry, who in 1972 envisioned a spring meeting in Chicago, was germinated by the efforts of Fred Merkel to flower as the American Society of Transplant Surgeons (ASTS) with 127 charter members in 1974. Clearly an impetus to the enterprise was passage of Public Law 92-603, which addressed the shortage of end stage renal disease treatment opportunities by entitling individuals to financial coverage for these services through Medicare. Heretofore, treatment was limited to university-based centers supported via the National Institutes of Health, the Veterans Administration, and/or local resources. Passage of this law demanded guidance by broadbased, knowledgeable patient-oriented groups to provide information to the government for implementation of the new benefits, an increasingly important role of ASTS over its first decade.

At an organizational meeting in 1974, the committee structure of ASTS was established and the Nominating Committee proffered Tom Starzl as the first President. The 24 presentations at the first meeting established the major foundation of the enterprise: a robust exchange to further scientific and medical knowledge and practice of transplantation. From its founding, the

Society has sought surgeons with interests in all types of transplantations with a mission to develop professional standards for the discipline. While the initial sets of meeting manuscripts were submitted to and published by *Surgery, Transplantation* became the voice of the Society in 1977.

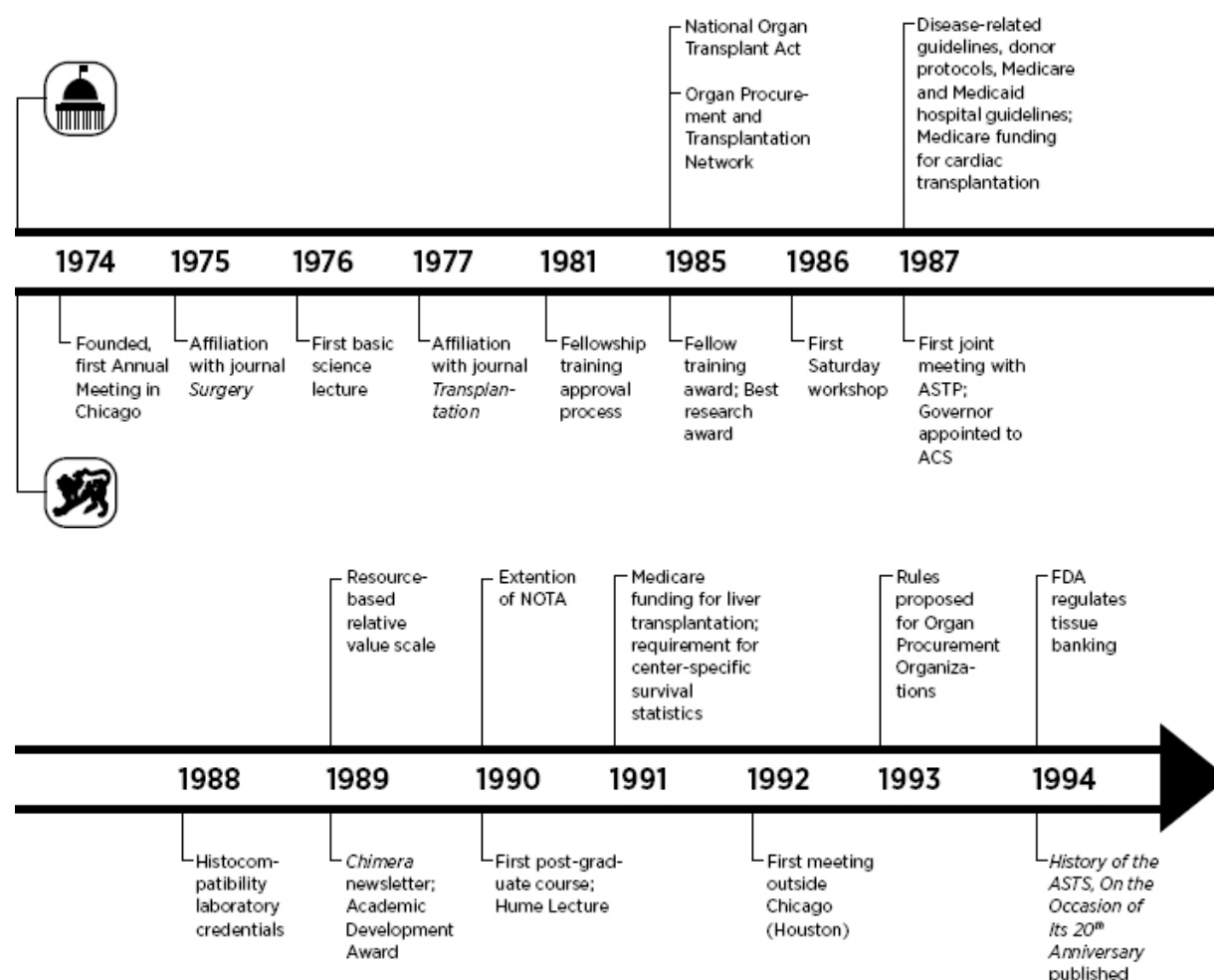
The earliest series of Presidential Addresses emphasized the need for collaborative interactions with nephrologists to increase their knowledge about the benefits of transplantation (Belzer/Marchioro), expansion (Merkel) and quality control (Cerilli) of organ procurement, meticulous evaluation of tissue typing laboratories and potential benefits for graft outcomes (Turcotte), randomized clinical trials of new immunosuppressants (Turcotte), robust training in scientific investigation (Simmons), and humanitarian goals of the enterprise (Salvatierra).

Following the cyclosporine revolution to dramatically improve transplant outcomes, Salvatierra stimulated Congressman Al Gore to press for what eventually became the National Organ Transplant Act of 1984, which constituted the Organ Procurement and Transplantation Network (OPTN) and the Scientific Registry, thereby moving the enterprise further under governmental control. Standardization and regulation of practices previously advocated in Presidential Addresses—ethical guidelines (Monaco) and demand for adequate training of practitioners (Corry)—now became provinces of the United Network for Organ Sharing (UNOS) operating the government-sanctioned OPTN, as described in the address by McDonald. Although the government subsequently required hospitals that receive Medicare payments to have donor protocols in place, their exact nature and case-by-case implementation continued to vary among facilities. The Society was able to persuade Congress to extend the National Organ Transplant Act in 1990 and to provide guidance for the release of center-specific survival statistics (1991), for rules guiding organ procurement organizations (1993), and for tissue banking regulations (1994).

Presidential Addresses examined emerging issues: approaches to enhance organ donation and scientific strategies to reduce acute rejection episodes and improve long-term results (Alexander, Kahan, Sutherland, Diethelm, and Barker).

Challenges to the interactions between the government and ASTS members arose in two arenas. While the Disease-Related Guidelines (DRG) in 1987 stipulated periods of hospital reimbursement for transplant procedures and related conditions, the more pressing issue was the development of the

Resource-Based Relative Value Scale (RBRVS) in 1989. This scale stratified surgical procedures based upon perceived intensity, length, required skill, proclivity to complications, and training requirements (Kahan). This governmental exercise was particularly relevant to kidney transplantation, for its surgical fee was unchanged since 1972. Fortunately, ASTS convinced governmental regulators that transplant operations should be recognized among the highest classes, although it was not possible to deal with procedures related to rendering donor organs suitable for a recipient. The second arena of ASTS leadership led to Medicare funding for heart (1987) and liver (1991) transplantations for eligible recipients.



Internal Society functions form important backbones of the enterprise. The Basic Science Lecture initiated in 1976 was renamed The David Hume Memorial Lecture in 1990. The Education Committee, initiated in 1974, formalized the criteria for approval of Centers for Fellowship Training in

1981, one of the major accomplishments of the Society that was guided by Najarian. The initiation of the Fellow Training Award and the Best Research Paper by a Trainee in 1985 became coveted goals of these programs. The Academic Development Award (1989) provided support for a young surgeon embarking on a career in academic transplantation. The Saturday Workshop (1986) evolved to the Post Graduate Course (1990), which sought to provide young surgeons with emerging scientific and clinical knowledge. The growth of the Annual Meeting led to a change in venue from Chicago to Houston (1992) and subsequently other cities.

Through the two decades the core principles of ASTS remained: support of and education in new scientific and medical knowledge, as well as meeting clinical needs and humanitarian goals of greater organ availability and adroit performance of transplant procedures.



Presidential Reflections



Frank P. Stuart, MD*

President, 1993–94

Issues of most concern to transplant surgeons during the 20th year of ASTS focused on legislation of the U.S. government and the continuing severe shortage of cadaver organs for transplantation. The main feature of federal legislation was reauthorization of the Transplant Act. Meanwhile, the United Network for Organ Sharing (UNOS) was re-awarded the contract to serve as the national Organ Procurement and Transplantation Network.

In addition to legislation concerning whole organs, Congress had become increasingly concerned with safety of tissues (e.g., bone, corneas, valves, skin) for transplantation. The United States was being flooded with tissues from other countries, where procedures to ensure safety from transmissible disease might be insufficient. Consequently, it was very likely that a

comprehensive tissue transplant act would become law in 1994. Meanwhile the Food and Drug Administration assumed responsibility for regulating tissue banks.

Transplant surgeons supported responsible regulation of tissue banking and tissue transplantation. However, a way needed to be found in the tissue legislation to ensure that tissue banks and OPOs would not work at cross-purposes. It would be unfortunate if some hospitals ended up being tissue donors and other hospitals organ donors. Rather, all hospitals must be efficient participants for the national good to identify both organ and tissue donors in each hospital. Alabama may have led the way in resolving this potential conflict by giving OPOs in that state the responsibility to ensure that not only organ donors, but also tissue donors, meet an acceptable safety standard with respect to viability, transmissible disease, and other concerns.

Finally, the continued growth in the need for transplantable cadaver organs in the face of a donor plateau for the third consecutive year had placed tremendous pressures on our specialty. Clearly, the American people need more organs for transplantation. The ASTS Ethics Committee and many of our members were exploring what once would have been marginal donors; that is, organs from older donors and donors whose heart has stopped before organ retrieval, even though brain death occurred earlier. The average wait for cadaver kidneys was approaching three years. The wait for critical lifesaving organs such as lung, heart, and liver was approaching a year or more. Thus, there was increased interest in live, related donors. This had been standard for many years with the kidney, but was being applied now to liver and lung. It was likely that transplanting portions of the liver and lung would become more frequent.

In addition to living related donors, unrelated donors connected by friendship or other strong bonds were increasingly offering to donate organs. Some proposed financial compensation for the family of the cadaver organ donor. However, current U.S. law does not permit such compensation. There was considerable debate about whether compensation would accomplish anything useful and whether the law should be changed to permit a trial of compensation.

The Transplantation Society and ASTS were and are strongly opposed to transplanting organs taken from executed prisoners, even if they expressed a desire to have their organs removed for that purpose. Nevertheless, a few voices in the United States were proposing this approach. Transplant

surgeons believe that a healthy distance should be maintained between the execution process and organ transplantation. It is simply not worth blurring things in the public mind to obtain a handful of additional organs each year. Although organs were being taken from executed prisoners and transplanted in several other countries, that should not be used as a rationale to extend it to Western societies and the United States in particular.

Another result of the static supply of cadaver organs was renewed interest in xenografting. During 1993, several attempts were made at transplanting livers from baboons into human recipients. However, the pig is increasingly viewed as a more likely source of organs for human beings. Such xenotransplants were viewed as possibly becoming routine in the next 10 to 15 years.

Meanwhile, ASTS grappled with the question of whether or not the United States was training too many transplant surgeons during that transitional plateau in transplant activity. Most expected organ transplantation to increase rapidly with the coming of safe xenografting, but it was feared the field may be training more transplant surgeons than needed during the next 10 years.

All in all, it was a challenging, exciting privilege to serve as President of ASTS during its 20th year.



Mark A. Hardy, MD
President, 1994–1995

The year of my presidency of ASTS (1994 to 1995) was full of innovations, excitement, and a few little revolutions (some not so little). Some of these eventually led to major changes in the Society and others to significant policy changes in our relations with the government and with other societies,

particularly with what was then known as ASTP (American Society of Transplant Physicians) and is now known as AST (American Society of Transplantation). This name was adopted by ASTP after my tenure as part of the discussions to somehow unite the two societies or perhaps as a claim to being the more important and more inclusive American society.

The issue of combining the two societies became highly controversial and in some regards remains so, but to a much lesser extent as the interdependence of the societies became clearer to their memberships and particularly to their leaderships. The possibility of uniting the two societies was discussed and addressed through surveys in both societies during my presidency. We achieved a collegial rapprochement between the two societies, which agreed to work together while remaining administratively separate, according to the wishes of their individual memberships. These discussions continued after my presidency and led to joint scientific meetings, joint abstract selection, and combined negotiations with regulatory agencies and NIH, but keeping the two powerful voices separate.

The training of transplant physicians in ASTP was ill-defined during my presidency; most of them were self-trained or at best trained by transplant surgeons in a non-standardized fashion. This was most striking among the cardiologists and pulmonologists, who for the most part had been inadequately trained either in immunology or in immunopharmacology and still cared for the heart and lung transplant patients. As the practice of transplantation changed from one that was predominantly developed and organized by surgeons to one that involved increased participation of medical and pediatric specialists who were ill-prepared in management of immunosuppression and of complications associated with it and with transplantation of extra-renal organs, a new cadre of physician non-surgeons started to be trained, mostly as apprentices on the surgical transplant services. The need for greater knowledge of geriatric medicine as recipients became older and sicker and an insufficient number of surgeons, probably mostly due to an increased number of transplant operations, led to greater participation of transplant physicians in caring for transplant recipients, either post-operatively or especially on a long-term basis.

The budding relationship between the two societies resulted in an impetus to a more formal training of transplant physicians. At the educational level the two societies established separate post graduate courses, which wasted resources. There were also separate program committees resulting in

duplication of presentations at the annual meetings. Despite a number of informal overtures from officers of ASTP to the officers of ASTS concerning a closer relationship between the two societies, and even perhaps a merger, ASTS at the insistence of most of the old guard, led by many founding members, was quite firm in its intent to remain a primarily surgical society and feared being overwhelmed by the large membership of the non-surgeons in the ASTP.

I appointed Oscar Salvatierra, a friendly and experienced diplomat, to head a committee to initiate collaborative efforts that I felt might lead to closer interaction between the societies. The officers of both societies met informally, trying to find a satisfactory middle ground, and succeeded in coming to an agreement to create a joint Program Committee to avoid duplication of abstracts and to eventually have a joint program for both societies with joint registration. Despite this groundwork, which was initially collegial, mistrust between the societies continued after my presidency as jockeying for membership and funding became competitive. Little could at first be achieved to initiate joint projects, particularly in relation to interactions with the regulatory agencies and the government.

We all realized that this was a long-term issue and that we missed the boat by not initially making ASTS a non-exclusive society. To correct this we established at ASTS a new “scientific membership” category during my presidency. This was originally prompted by the application of Dr. David Sachs, who did two years of a surgical residency prior to becoming a scientist. The Society increased its number of non-surgical members as it tried to “catch up” with the membership of ASTP. Unfortunately this effort was too little, too late.

Another administrative concern that I had as president of ASTS was that our surgical specialty maintain its unity and avoid splintering into specialty societies focusing on kidney, liver, pancreas, heart and lung, or intestinal transplantation. Unfortunately such fragmentation of our membership had already occurred and has increased over the years, leading to decreased interaction among the transplant surgeons and physicians and to a decrease in cross fertilization of ideas which are the basis of our overall progress. Twenty years ago I stated that “It is only through close cooperation among all those interested in transplantation that the field will continue to grow,” and I continue to fervently believe that. I see fragmentation of the transplantation field continue to increase as the number of transplants performed increases

and as both surgical and non-surgical caregivers are too busy to talk to each other.

A major change of which I am very proud was the introduction of the use of electronic communications and plans for the establishment of a website (primitive though it might be) for our Society. The idea of establishing a Home Page with a public and more secure access was initiated, and plans for its funding were formulated. Bob Merion and Bill Marks led this effort very effectively. Together with representatives of ASTP, they also initiated discussion with Hoffman-Roche through Rob Gordon to develop a national and international transplant network for both societies, which eventually became CenterSpan. My original impetus to encourage this undertaking was Bill Marks' ultimatum to me that he will only communicate with me by email and no longer by telephone; this forced me to do most of my "talking" via the computer, which since then has remained my main means of communication.

Bill took full charge of this task, starting with the change of the committee's name from Medical Review Committee to the Informatics and Data Management Committee; its mission was to establish a communications network via the Internet among the officers of the Society, Council members, members, committees, individuals, and agencies outside the Society. It is amazing how much progress has been made in that regard since then, but what is even more surprising is that thanks primarily to Bill's and Bob's foresight, we began to construct the network and to fund it in 1994, before we even had a centralized office for all our activities other than for planning and organizing our meetings.

One of the important accomplishments of our team in 1994–1995 was the development of standards for the Society's education effort. This continues to evolve and has had a major impact on our field. In trying to establish the surgical manpower needs in transplantation in 1994, Dixon Kaufman did a superb job in surveying all the transplant centers and determined in a relatively precise manner the annual availability of new positions in relation to the individuals trained to fulfill these positions; he took into account a well-defined number of trainees who return to their native countries after finishing their training. These findings were coupled with the discussions of the role of ASTS in accrediting training programs; these discussions were begun with the founding of the Society but never modified until 1994.

Our Council, after many heated and sometimes humorous discussions, set the initial requirements for the number of kidney, liver, and pancreas

transplants that each fellow was required to perform in order to be certified. One of our eminent liver transplant surgeons, Bud Shaw, led the discussion by stating that there are surgeons “whom I can take through 30 liver transplants and they will learn how to do them, and then there are other trainees whom I can take through 100 liver transplants and they will never know how to do them.” We did set guideline numbers for each organ, which were arbitrary and which have gone through many changes since then. The competency of the trainee is still determined by the evaluation of the Program Director and not by the “numbers racket.”

At that time we were working with 49 ASTS-approved kidney transplant programs and only 20 ASTS-approved liver transplant programs. Even with that number of graduating trainees, smaller than those who are in training now, we were concerned about availability of positions for the graduates after they finished their training. We relied heavily on the fact that one-third to one-fifth of our trainees were from foreign countries and that half of them returned to their native lands. Despite this, not all trainees found their initial jobs in transplantation and practiced hepatobiliary, general, or vascular surgery for a living.

As we developed some idea on how many transplant surgeons had been trained and were unemployed, and how many we might need in the next 10 years, the issue arose of whether to limit the number of training programs or the number of applicants. I was convinced that by simply clarifying the number of opportunities available, the number of young, qualified surgeons would adjust to the number of jobs available, and may well be supplemented by trainees from foreign countries who will carry their newly gained knowledge back to their native countries. I felt very strongly throughout my presidency, and continue to do so many years later, that we must establish and maintain high and firm standards for training of the future transplant surgeons so that they do not become merely technicians in the field that we developed. The surgeons must continue to be major contributors to the development of our field as it assumes greater importance in the health care delivery system.

We did establish criteria for new programs and criteria for five-year renewal which were better defined and in some ways more demanding than the previous ones. ASTS still thought of transplant surgeons as “Men (and a few Women) for All Seasons” who could operate, administer a program, manage immunosuppression, and be well versed in immunology and/or

physiology, biochemistry, molecular biology, etc., and lead a laboratory. To achieve this, despite the handwriting on the wall, the Society continued to collaborate with the pharmaceutical industry in creating ASTS Fellowships. With the assistance of and funding by the Industrial Council which I appointed as advisors to the Society, we helped to create the Sandoz Award (now Novartis) for two years of training in an ASTS accredited transplantation program and the Ortho/Fujisawa (now Astellas) Award for two years for a junior faculty member. Other smaller awards by Upjohn and others rewarded best papers and provided stipends for young investigators to attend the meetings. The main awards were all highly competitive and given to some of the present leaders in the field, and even to one of the recent presidents of ASTS. It is gratifying to see that this tradition has continued, although the emphasis on laboratory research has markedly decreased due to pressure from clinical practice and decrease in financial support for research.

As part of our recognition and respect for the singular achievements of our members in the field of transplantation, we were able to establish with the help of Syntex/Hoffman La Roche Company (thanks to the efforts of Hans Sollinger) an annual prize which we named the Pioneer Award. It was first awarded to Dr. Belzer for a “major contribution to the field of transplantation,” which his renal perfusion apparatus and solution represented. I delivered it to him, along with Hans and Ron Ferguson, at his home in Madison, Wisconsin, on a cold winter day, since he was too ill at that time to attend the meeting. He was very pleased by this honor which he so highly deserved.

As part of our educational effort that year, Ali Naji developed a postgraduate course to cover all phases of transplantation to be given prior to the ASTS annual meetings and eventually to be self-supporting. This became very successful and I believe evolved into a tradition adopted by our colleagues at ASTP. We also initiated establishment of a centralized ASTS office to enable ongoing certification of training programs and begin to take over the administrative activities of the Society. This has obviously grown into a major administrative office of the Society, with an Executive Director to whom I am very grateful for providing me with much of the existing archived material from the year of my presidency. My memory of the trials and tribulations, as well as joys and satisfactions, from that year was

incomplete without the aid of the minutes of the Council meetings and copies of *Chimera* from that year which were forwarded to me.

Like all presidencies, mine was very much occupied with regulatory and governmental matters. The era of intense government control of both transplantation practice and reimbursements was beginning but had not yet reached the levels that it has today. The guidance and the assistance of Dr. Desmarais in that regard was invaluable as he set the pattern and educated all of us on how to approach and manage these issues. Along with some very capable and dedicated members of the Council, we focused on defining the specifics of CPT coding in our field, which had major impact on future reimbursement standards, including especially “bench surgery” and management of post-transplant immunosuppression, as well as CPT codes for new procedures such as pancreas transplants from living donors, intestinal transplantation, and even islet transplantation. We also helped in the revision of CPT codes for renal transplantation and had a major influence on the rules which established standards for the various OPOs through my direct discussions with the Secretary of Health and Human Services (HHS) and with the Health Care Financing Administration (HCFA). These discussions and eventual approval went beyond my presidency but had a major influence on how the OPOs are administered today. Interaction with members of regulatory agencies and with the members of Congress who headed various committees (especially the Appropriations Committee) and/or their staffs was an education that I have not forgotten and through which I was led by a most competent staff, especially Dr. Desmarais. I was grateful that I lived only a train or shuttle ride away from Washington since I had to take these rides frequently and usually on short notice.

As the field of organ transplantation expanded, the ethical issues became more prominent to the outside world and helped to build both the academic and television careers of several ethicists who focused on questions of organ donations, informed consents, and other matters long familiar and managed with the highest ethical standards by the national transplantation community (not always by the international community, which was known in some areas to trade in donor organs and in others to obtain organs from executed prisoners). Our Ethics Committee focused on examining the ethical implications of expanding the donor pool and the risk/benefit ratio of using expanded donors which we were yet to define, but which we decided should not be termed as “marginal” as was the habit up to that time. A survey of

membership at that time suggested strongly that the high rate of death of ESRD patients on the waiting list outweighed by far the possible complications of using a suboptimal allograft.

The discussion on who should get such organs awaited many further deliberations at various levels and eventually led UNOS to change the allocation system, which continues to evolve to the present time. The ethical issues related to the impact of relatively newly created managed care regulations were left to the individual centers, since the concern that some patients were not intubated in the ER to avoid costs were beyond our control and had to be addressed locally. We publicized the concern and raised worries among hospital administrators and state health agencies. We decided that the charade concerning reimbursements would play itself out with or without our intervention, as it did over several years in most states.

During my and most other presidencies, we have been very fortunate as members of the transplant community in the United States not to face individual accusations of unethical behavior or practices and I was grateful for not having to conduct any investigations or adjudicate any claims in that regard. We had what I thought was a “very clean” year without bad press and only an occasional fictional TV program which periodically set back our organ donation efforts, as when a donor heart landed on the floor of an operating room on a soap opera on TV.

It became clear throughout my presidency, as it still is, that the leadership of the Society must convey to the public, through any and all means possible, the dangers posed by inadequate support for research and for clinical care, especially life-long support for immunosuppressive drugs. We must convey to Congress that such support must increase, and that it is not only life-saving but in the long run, it is economical—it is far cheaper for the government to pay for the drugs than for the patient’s return to dialysis. It has also become clear that collaboration with industry was and continues to be needed in these turbulent times of budgetary restrictions, not only in the evaluation of new drugs, but particularly in the development of new areas of research that may lead to translational solutions of problems related to health care delivery. I started this collaboration between the Society and industry during my presidency, and this has continued in a much less formal fashion and needs to be reinstated.

There is little doubt that our Society was built on the shoulders of surgeon/scientists whose research has been an essential element in achieving

the progress we have made to date. We must continue that tradition despite major changes in health care delivery systems across the country and especially in academic centers. With marked decrease in research funding and dwindling clinical dollars over the years starting prior to my presidency, I felt that we had to expand our professional horizons and enter the marketing field to educate the public about our work and about the importance of both basic and applied research to provide long-term help to transplantation patients. Almost 20 years later, my feelings in that regard have not changed, but have become even stronger.

As the administration of transplantation units became more complex and much more expensive than ever before, with close monitoring of outcomes and advanced data collection requirements by various agencies, the traditional academic surgery organizational structure started to be partially replaced by hospital administrators who have focused primarily on the bottom line. Similar financial constraints also started to be imposed by managed care companies that looked for academic centers of excellence and then developed various bargaining patterns trying to obtain the best, but at the same time the least expensive, services for their customers. Such unhealthy competition among the centers detracted their members from academic endeavors in order to save on cost or risk losing the contracts, which was an unacceptable possibility to their hospital employers.

Such change in the landscape characterized by financial constraints and a marked shift in responsibility and even hiring from the academic department to the hospital has led to a decreased interest in teaching and research which has not yet improved. As part of our adjustment to these new requirements and barriers to academic pursuits, surgeons of the future must establish closer links with the basic scientists by providing appropriate clinical questions and work together with them to carry the answers to the bedside. We must continue to aim high in our academic goals in order to maintain our high standards in medical education and scientific innovation as we continue to serve our patients in the best possible way despite the unfavorable health care environment emanating from Washington.

As I said during my presidency, “There is no one who will carry our flag with more vigor and enthusiasm than the patients who have benefited.” This has not changed, and the number of grateful patients has increased significantly since I was President of the Society. We must encourage their contacts with their legislators and political representatives in Washington,

and their support in any other way that may be helpful to market our ideas and successes. We must continue to be active leaders in the development of new health care delivery systems and remain proactive as we sharpen our skills in the field of law and economics to preserve and expand the field of transplantation for our patients.

Almost 20 years after serving as the President of ASTS and continuing to work in transplantation in these difficult times of budgetary restrictions, I feel confident that the Society has made significant progress, that it is healthy, and that it is still fully prepared to lead the field of transplantation into greater accomplishments in the future, which may someday include clinical tolerance induction and xenotransplantation. The lessons that we learned over the years have taught us that we must remain united to fulfill our dreams for the 21st century of providing organ and cell replacement for everyone who needs it.



Nicholas L. Tilney, MD*
President, 1995–1996

I got involved rather late with the American Society of Transplant Surgeons. I'm not sure why, but those of us in Boston thought the Society was a Midwest thing and didn't pay much attention to it. I suppose that mindset, incorrect as it was, lasted probably five or six years.

When we did get involved, going to the Drake Hotel in Chicago, that small, intimate, extremely interesting, occasionally cantankerous and vituperative meeting was wonderful. People in transplant all knew each other and we all liked each other, so, within a few years, the Society was something that all the members really appreciated. And all of us looked forward to the ASTS meetings. It was a great thing.

I did, ultimately, get involved with the ASTS administration. I think it all started with a complaint on my part. I remember being rather frustrated that my interest in the basic science stuff wasn't emphasized. I recall going to the Drake, and thinking the scientific program was too clinically oriented. All this wonderful basic science was going on, and nobody seemed to be paying any attention to it. So, I complained to the Program Committee, and they put me on the Program Committee! I'm not sure that it helped very much, but we got more basic science papers on the program at the Drake. So, I thought the basic science was pretty interesting stuff, and the clinical part, which had really come into its own as more and more patients were surviving, was extremely interesting.

As to my own evolution in the ASTS, it seems to me that as time passed, I became the Treasurer, and then I became President-Elect, and then President. During that period, the early and mid-1990s, we had a lobbyist from Washington, and ASTS leaders went there to support our legislative efforts. I spent a lot of time talking to some of the bureaucrats, and that activity was not thoroughly satisfactory; but, anyway, that is the way part of my leadership evolved.

Also, I had a lot of international friends and colleagues. I had lived and worked in England for several years and wanted to broaden the scope of the ASTS just a bit. So, I thought it was a nice idea to get people from other countries involved. We invited worthy scientists from elsewhere to give talks, and they were excellent. My relationships internationally meshed nicely with the American Society of Transplant Surgeons, and these interactions have been long-lasting and an aspect of the ASTS which I have enjoyed tremendously.

Finally, the personal aspects of one's life as a transplant surgeon may present a hard scale to balance. We have four daughters, and Mary, my wife, had another role outside our home. Mary was our laboratory supervisor for, I think, 30 years. Even though I remember the times that, as a transplant surgeon, I thought I was just not home enough (all of us have that problem), we have had a very nice family life all these years, even traveling a lot together. It has been great.



Hans W. Sollinger, MD, PhD

President, 1996–1997

In 1973 I received my MD degree from the University in Munich, Germany. My interest in transplantation was stimulated initially by an enthusiastic young lecturer from the Institute of Experimental Surgery. The lecturer was Privat Dozent (Assistant Professor) Walter Land, who later became one of the leading German transplant surgeons. Land at that time worked for the charismatic Professor Walter Brendel. Professor Brendel, a physiologist by training but later the Director of the First Institute for Experimental Surgery in Germany, managed to supervise areas such as shock and trauma, brain edema, and experimental organ transplantation, and later in his career was the real inventor of the lithotripter (this comment might get me in trouble, but I was there when the Dornier Engineers came to the lab).

One of the first big hits of the Institute was the production of a powerful antilymphocyte globulin which gained notoriety when Dr. Christiaan Barnard's second heart transplant patient was treated for rejection in the spring of 1968. He survived the rejection episode and went on to live another year.

As they say, timing is everything. I applied for a research position at just about that time, and one of my first jobs was to purify the horse-derived serum from antibodies directed against human erythrocytes (hemagglutinins). Once I got settled in the laboratory, I decided to get my Dr. med there, as I liked the atmosphere Professor Brendel had created. In Germany, completing medical school does not automatically make you a "Herr Doktor" (PhD). In order to be legally addressed as Doktor, you have to produce a scientific thesis. In many cases, this is simply a chart review lasting a few months and

resulting in an abstract or a paper. In the Brendel Lab, the Doktor had to be earned over several years of experimental work, and almost all of the candidates coming out of the lab graduated *summa cum laude*.

I could not finish my Doktor prior to graduating from medical school, so I received permission to continue my thesis work and at the same time spent a few hours a week in the Emergency Room to acquire some clinical skills.

It took very little time to realize that I needed more training in cellular immunology to complete a thesis with some substance. It was fortunate for me that Dr. Fritz Bach had attended several conferences which Brendel had organized in the Austrian Alps. Fritz Bach at that time (1974) was the undisputed champion of cellular immunology. His laboratory performed mixed lymphocyte cultures and cell-mediated cytotoxicity tests with greater accuracy than any other lab in the world, and the Immunobiology Research Center in Madison, Wisconsin, soon became Mecca to dozens of young scientists who found themselves in a well-funded, well-organized lab supported by Fritz's abundant creativity. For two years in Austria, I had taught Fritz how to keep his skis parallel, so he readily agreed to accept me into his lab in the winter of 1975.

I was lucky that Fritz allowed me to spend a few weeks with Kevin Lafferty, who at that time was doing his legendary thyroid culture work in Denver during a sabbatical. Kevin and I remained friends until his untimely death in 2001. For the younger generation, I would like to insert here a plea to read Kevin's classical papers on the origins of alloreactivity (Lafferty KJ, Woolnough J. The origin and mechanism of the allograft reaction. *Immunol Rev* 1977;35:231-62). Many of these papers were published in Australian journals and never reached wide distribution in the United States, but if anyone should have any doubts, Kevin Lafferty is the father of co-stimulation.

An interesting episode occurred while I was in Denver. Kevin had his original thyroid manuscript rejected by *Nature*, and somehow by accident, the handwritten rejection by Sir Peter Medawar had slipped into the envelope, containing proof that Sir Peter still believed that antigen alone can be immunogenic. The paper was later published in *Science*.

Back in Madison, I dutifully attended the clinical transplant conference which was headed by the new Chair of Surgery, Dr. Folkert (Fred) Belzer, a Dutchman who trained with John Najarian in San Francisco and had already done significant work in organ preservation. By 1975, Belzer had performed

some 100 kidney transplants, which made him one of the most experienced surgeons in the world.

After my thesis work was completed, I decided to extend my stay in Madison, certainly heavily influenced by the fact that I had become quite close to a wonderful young lady named Mary Lang. We met by chance as she happened to share a chairlift seat with me at one of our local ski areas in Wisconsin. From then on, everything happened very fast. We were married in March of 1976. Fred Belzer then asked me if I wanted to stay in Madison, and I began to endure four years of surgical residency. I was the only one who did the dreaded transplant rotation twice, because I really liked to work with Belzer. Happily, later that year our first daughter, Niki, was born, followed three years later by our second daughter, Muffy.

In July 1980, I was appointed Assistant Professor of Surgery, and Belzer, Neal Glass, and I ran what was to become one of the largest kidney transplant centers in the world.

I was immediately shocked by how severely ill diabetic patients with renal failure were, and it did not take me long to believe that a pancreas transplant would make the disease much more manageable. However, Belzer steadfastly refused to let me start a program. He pointed to the poor results at the few active centers, and in his own words, “Hans, unless you come up with something better, there will be no pancreas transplantation in Madison.” The pressure was on. I knew that a surgeon in Barcelona had used the ureter. I had heard this at one of the early ESOT meetings but did not know of the Gliedman experience. I thought the bladder should be a good conduit, as the anastomosis could be decompressed with a Foley catheter until healed, most of the time the bladder would be sterile, and perhaps we could use urine amylase as a marker for rejection. After a few successful dogs, without any IRB permission, Belzer told me it was time to go ahead, and he became one of my biggest supporters. The third transplant was a great success, with the patient alive and well for several years. The technique, which initially used a segmental pancreas, was improved over time, and the literature is clear that many others made substantial improvements.

What is less well known is the fact that I really got on Belzer’s nerves by performing most pancreas transplants at night to keep cold times as short as possible. As my mentor, he felt compelled to come in and assist me—what a gentleman, to protect this young assistant professor from the potential negative publicity which was a part of almost any pancreas transplant

program at this time. Belzer hated to work at night, and in his own words, “Hans, I worked on organ preservation so I can sleep at night, and now it starts again.” My response was, “You just have to discover a better cold storage solution.” A few days later, I was asked to show Jan Wahlberg, a visiting fellow from Sweden, how to perform a dog pancreas transplant, and Belzer and Jim Southard mixed up a solution which they had rejected as a machine perfusion solution years ago. The result was a paper in *Transplantation* demonstrating successful 72-hour preservation of the canine pancreas. The UW solution was discovered, and my next job was to go out and procure a pancreas using the new solution. It worked just great.

The next, more exciting episode occurred when I received a call from a Syntex scientist in 1988. He introduced himself as Dr. Tony Allison and explained that the company had an inhibitor of IMPDH which had the potential to be a useful immunosuppressant. I had learned from Belzer’s preservation experience not to waste my time with rodent experiments, but to go right to the dog. After a few failures with overdosing, resulting in massive gastrointestinal bleeding and necrosis, I came to a cocktail of cyclosporine A plus RS-61443 (the code for mycophenolate mofetil) and low-dose prednisone. Many of the dogs survived long-term in good condition, and I predicted in my first paper that the drug lacked nephro-, neuro-, and hepatotoxicity but had gastrointestinal side effects. What did I learn? That “the dog never lies” when it comes to immunosuppressants.

From then on, matters progressed nicely. I invited Mark Deierhoi and Gil Diethelm from Alabama to join me in the Phase I trial, and our results were identical. The pivotal Phase III trial included 1,500 patients, and the drug was submitted to the FDA for review.

While I was pulling out of our driveway in June of 1995 to take my kids to camp, the FedEx man stopped me to give me a large parcel. The sender was the CEO of Roche, and the parcel contained a very expensive bottle of champagne and a note which said only, “You are a father.” The FDA had approved the drug.

By that time, I had become quite involved with ASTS. During my first meeting in 1976 I gave an oral presentation at the Drake in Chicago. The ballroom’s configuration at that time was almost identical to today’s room, and it was filled with 150-200 surgeons, surgical residents, and surgical lab fellows, but no physicians, nephrologists, or anybody who did not work in a surgical department. The chairs were lined up in two rows, smokers to the

left and non-smokers to the right. One talk was given at a time, and compared to today, the discussions were outright violent. The leaders and chairs of sessions, among them Starzl, Najarian, Belzer, Jim Williams, Jim Cerilli, John McDonald, and Gil Diethelm, dominated the proceedings, with the second generation—Robb Corry, Barry Kahan, Frank Thomas, David Sutherland, and Ron Ferguson—representing the future of transplantation.

I was invited to serve on the Scientific Studies Committee, which was dominated by Barry Kahan, who later would be a very influential President. While I did not do a lot over the years, I was asked to look after the program, but do believe that my term was cut short when Frank Stuart became President. While I was very interested in serving in certain functions of a society, I was elected to the Council but never served as Secretary or Treasurer.

It was for this reason that I was quite surprised, after arriving late to the meeting in 1995, when some of the old guard congratulated me on being appointed President-Elect. I had absolutely no idea that this was coming and felt totally unprepared. The good news was that Nick Tilney would be the President ahead of me, and I was certain that he would teach me the ropes, which he did in a very detailed and patient manner. He shared with me anything he did or decided, and he asked for my consultation despite the fact that he knew quite well that though I had good instincts and common sense, I had a total lack of experience.

Taking over as President after the 1996 meeting, I seemed to be on autopilot. Absolutely nothing happened. There were a few rumblings that the ASTP (now the AST) was getting bigger and making more noise. Going into the fall and starting to make the preparations for the upcoming meeting, I sensed that there might be a problem with the Wright Organization, the small, family-run company which had been our long-time meeting organizer. The ASTS meetings had grown significantly in size and had moved to the larger Sheraton Chicago, and when it became obvious that the Wright Organization would not be able to keep up with our growth, we needed to make a change.

In desperation to find a new meeting organizer, I went to the competition. The ASTP had contracted with a very reputable firm by the name of SLACK, which had dozens of employees and was very professionally organized. Within a short time, SLACK hired a young woman who in no time took charge of the meeting organization, and we were able to have a great meeting, with our social event being a boat trip on Lake Michigan. That

young woman, Katrina Crist, later became Executive Director of ASTS and served for many years.

During these events and in my interactions with SLACK, I got to know the leadership of AST quite well. In fact, some of them were friends from the CellCept trials. It was obvious to me that the number of transplants would rise only very gradually over the years, while every year 15,000-20,000 patients were turned over for posttransplant follow-up. In other words, the number of transplant physicians and their influence would grow much faster than that of surgeons. I also felt that the ASTS had not been as inclusive as we should have been. Scientists, tissue typers, transplant nurses, and coordinators were among the many who worked with us on a day-to-day basis but had no home in our Society. I felt the tide was changing, and it was time for us to change, too.

In the beginning, I thought I had picked a lucky time. My AST Co-President, Les Miller, a cardiologist from Minnesota, had the same sentiments. We both felt it was time that there was one transplant society which provided a home and a forum for all in our field. At a specially arranged meeting in Houston, Les and I and a few Council members from both societies sat outside in a garden restaurant, and we both felt we were just hours away from signing the papers to form one society. The next day we would reconvene and draw something up for the business meeting. After returning to our rooms, the calls were coming in both for Les and me from, let us just say, “a number of seniors” who felt that the identity of our societies were endangered by creating one large society. The deal fell through. It was fortunate that a year later Ron Ferguson, who followed me as President, could negotiate for a joint meeting, which has now become the world’s most significant gathering of transplant professionals.

Finally, every president has one duty which is a lot of fun and makes it worthwhile to do all the other, less pleasant jobs. The Presidential Address is a highlight of every Annual Meeting. Many Presidential Addresses are political. Coming from Wisconsin, I wanted to do something different. I wanted to tell the story of Ray Owen and the cattle twins, a story which is far too little known by our younger generation of transplanters. While many of our younger members have heard about Sir Peter Medawar, winner of the Nobel Prize for Medicine 1960, few if any have heard of Ray Owen, who is still alive at age 98.

In the 1940s, Ray discovered that paternal (genetically disparate) cattle twins share each other's blood type in adult life. It was fortunate that Ray knew about the work of Lilly, an anatomist from Chicago who in the 1920s discovered that cattle, unlike other animals, share a placenta when twins are present. In other words, a neonatal exchange of blood cells takes place and results in adult tolerance. It is proven that Medawar either did not know or did not understand Owen's observation. In the late 1940s, during a cocktail reception in England, a veterinarian asked him to differentiate identical from non-identical cattle twins. Medawar's response, "Just exchange skin grafts. If they reject, they are not identical," was the wrong answer. Skin grafts between non-identical cattle twins do not reject. Only after Medawar read Sir Macfarlane Burnet's book, published in 1949, did he learn about the cattle twin observation and stimulate Rupert Billingham and Leslie Brent to perform intrauterine injections of donor cells which resulted in allograft acceptance in mice, leading to Medawar's Nobel Prize in 1960. A gracious letter, handwritten by Medawar, speaks from a different area of science and transplantation which I had the great luck and honor to catch at the very end.

It is my hope that there is a young investigator somewhere who may already be opening the door to a new time, which hopefully will be as exciting and fulfilling as the days we had during the earlier days of transplantation.



Ronald M. Ferguson, MD, PhD
President, 1997–1998

When I think about my ASTS presidential year, my recollections go back further, to the ASTS organizational meeting at the Eden Roc Hotel. That

meeting occurred during the American College of Surgeons Annual Meeting of 1974 in Miami, Florida. I was at the College meeting because I was a University of Minnesota surgery resident giving a paper at the Surgical Forum. I tagged along with the Minnesota folks and went to this organizational meeting. I was like this little mouse in the corner listening to all this stuff, and it was fascinating. So, that was my first exposure to the ASTS.

The surgeons involved in transplantation at that time wanted some sort of organization so that they could deal with issues of reimbursement for transplant patient care. Two persons active in this process were Drs. Aaron Bannett and Fred Merkel, each of whom indicated an interest in forming such an organization, which, of course, quickly became the American Society of Transplant Surgeons. At the organizational meeting, Tom Starzl was elected the first President.

My path to the ASTS presidency began with service on a lot of the committees: the Program Committee, the Scientific Studies Committee, and others. Then, I was elected as Secretary of the Society, and ultimately became President of the ASTS in 1997. That was a very turbulent time in the entire field of organ transplantation because there was a lot going on with federal government policy issues. The “final rule,” which would govern so much of clinical transplantation, was being written, and there was an enormous controversy about it. The degree of concern actually resulted in a lot of passionate fighting between transplant centers and HHS Secretary Donna Shalala. Over-regulation and even mandates about how to care for patients—including how to allocate organs—were prominent in the discussions that took place.

Another important matter was the ASTS relationship with the American Society of Transplant Physicians (ASTP), now the American Society of Transplantation (AST). The ASTP membership was growing, so there were serious proposals during my ASTS presidency to form a single professional organization combining the ASTS and the ASTP. Hal Helderman was the president of the ASTP at the time, and Hal and I formed the Joint Council in which both organizations were equally represented. The first Joint Council meetings were focused on trying very hard to form a single organization that could represent all transplant issues in the United States. It actually didn't work out that way, as a number of influential ASTS members pointed out repeatedly that transplant surgeons had unique issues which would need the

undivided attention of a surgically oriented organization. So, ASTS and ASTP remained separate societies, although the Joint Council continues to focus on mutual concerns even after all this time.

As part of the legacy of being an ASTS President, I have often discussed the discipline of clinical transplantation, a specialty which is a particularly demanding mistress. I recall once being asked to give a talk about how to be a “successful faculty.” There was a question and answer period, and a young woman stood up and asked what would I do differently if I had to do it over again? I said I’d go to more soccer games. No one remembers that you get up at 2:00 in the morning and go in and do a kidney. But, if you operate at 4:00 in the afternoon and you miss your kid’s soccer game, that will be remembered. I think the lesson is that transplant clinical practice can take a toll on families, so I advised the questioner to keep a balance in her life.

I think the American Society of Transplant Surgeons, since its founding in the mid-seventies, has really become the nucleus of the transplant community. What do I mean by that? As a young resident in the laboratory, and then clinically as a fellow, and then as a junior faculty person, it was the forum every year at the Drake Hotel where all transplant surgeons would get together. A young surgeon would sit down at a reception and senior surgeons would talk, and they would bring the youngster into the community. So in a subtle and informal kind of way, these pioneers became mentors, and told us what the world was all about. And these senior surgeons did this willingly and with evident pleasure in bringing younger surgeons along. Perhaps the small size of the ASTS facilitated that mentoring. But I think the young people still need contact with those who are a little more weathered in the field and a little older. So the Vanguard Committee that puts on the ASTS Winter Symposium continues to encourage interaction of seasoned surgeons with some of our younger colleagues. I think that kind of camaraderie between those coming up and those with many years of experience is an exceptionally good thing.



Joshua Miller, MD

President, 1998–1999

At this point, to reminisce about my ASTS presidency in 1998, before the turn of the century, is to collect and classify a series of flashbacks. My first recollection was receiving a call at 6:30 one morning in my hotel room at the ASTS Annual Meeting in 1996 in Chicago, from Hans Sollinger, just finishing his own presidency. He told me that I was to be President-Elect. My first panicky thought, while still on the phone, was, “What would I ever say in a Presidential Address two years later?”

Nonetheless, 1998 arrived with several “burning” issues but not necessarily with my having had any influence on them. It was the year of the “liver wars,” with the Feds taking a heavy hand in distribution policies and with Pittsburgh essentially being lined up against the world but with Pittsburgh winning! Hearings were conducted by the Department of Health and Human Services, chaired by Secretary Donna Shalala. Things I said at those hearings by way of didactic information about organ donation may not have sat well with her, and I subsequently had to profusely apologize for this two years later when she became the president of my University of Miami and when she presided over naming the “Joshua Miller Endowed Chair” in Transplant Surgery.

It was the year of the ASTP becoming the AST, with the ASTS presidential old-timers, the real pioneers, having strong views and whom I did not wish to antagonize, versus new non-surgical scientist and physician leaders set on flexing their collective political muscles. Both cause celebres left me wondering why I had set out to “drain the swamp.”

Nonetheless, both of these contentious issues quieted down, which has forever given me the hope for an eventual peaceful settlement in the Middle East. An incidental highlight of my presidential dinner and efforts toward facilitating this peaceful settlement was singing a song to the tune of “The Farmers and The Cowboys Should Be Friends,” an adaptation from “Oklahoma,” accompanied by my pianist daughter-in-law, poking fun at the physicians versus the surgeons.

On a more serious note, that must be considered the best part of my presidency—the chance to interact with leaders in the science, medicine, and policy of this burgeoningly fruitful specialty. I came to know them on a personal level and to respect their erudition, hard work, and humanity.

Several small steps that occurred in 1998 might bear mentioning:

1. Understanding how other cultures handle deceased organ donation, in that a delegation was sent and graciously hosted to delve into the Spanish model, and to project it and adapt from it.
2. Unifying both society meetings in the joint ASTS/AST Annual Scientific Congress, which was obviously directed by the industrious future leaders in both societies.
3. Planting the seed for an ASTS Winter Meeting subsequently planned more firmly by my successor, Ron Busuttil, in his establishing a Vanguard Committee to conduct it.
4. The most significant of all was presiding over and fostering the tremendous growth of ideas and organization that has continued to astound me in seeing the progress of our field to the present day.



Ronald W. Busuttil, MD, PhD
President, 1999–2000

From its very beginnings, transplantation was recognized as a medical discipline which necessarily required a diverse and cohesive group of specialists in medical, surgical, and investigative areas. This far-reaching contribution of our specialty, with the emphasis on a multidisciplinary approach both to patient care and to research, has become the model for others. Accordingly, it has been applied in some form by virtually every clinical and investigative specialty, as well as most successful professional organizations, including the American Society of Transplant Surgeons.

The ultimate goal of the team approach simply stated is “the best in patient care, scientific discovery, and education.” It is a mandatory goal for our profession and one that has been emphasized repeatedly by our prior leaders. As a result of the mentorship that I received from many prominent leaders in academic surgery and the experience I gained from leading one of the largest liver transplant programs in the country, I felt that I was prepared to take a leadership position in the ASTS.

Upon assuming the presidency of ASTS in 1999, I set three goals for the Society and myself. The first goal was to fully integrate the younger members of our profession and Society into our activities, direction, and vision. To accomplish this, we initiated a focused campaign to recruit younger members into our Society, and we created a new standing committee, the Vanguard Committee, composed of members who had been in ASTS for less than three years. The first Chair of the Vanguard Committee was Dr. Ken Drazan, with mentorship by Drs. Jim Schulak and Dick Thistlethwaite. Within a few months, the committee was engaged and doubled the number of young surgical recruits as well as basic scientists. The Vanguard Committee sponsored the 1st Annual ASTS Winter Symposium, which has been a resounding success for the past 14 years.

The second goal was to re-establish a closer relationship with the AST (formerly known as the ASTP) with the aim of moving toward a new joint society in the future. Although our negotiations on this front were not fruitful in the end, we did agree on the creation of a joint scientific meeting, the American Transplant Congress (ATC), which had its debut during my presidency in 1999–2000. Furthermore, we established the *American Journal of Transplantation*, the new official journal of our two societies, which has been very successful. I was fortunate to be able to work with Jack Lake, the AST president, on these and other issues and together, I believe, we

made substantial progress on a number of cooperative contributions and important ventures.

The third goal was to continue my prior efforts as President-Elect to broker a consensus between the Department of Health and Human Services (DHHS) and the transplant community on the thorny issue of organ allocation. For close to two years, I was actively involved in deliberations with various Congressional and DHHS committees on behalf of ASTS. The aim of my efforts was to support a balanced organ allocation policy which kept medical decision making in the hands of transplant physicians and surgeons.

Despite our eleventh-hour attempt at a compromise with DHHS on the issue of Secretarial authority and the composition and functions of the Independent Review Board as proposed by the IOM, we were unable to reach a final written agreement. However, I was convinced that our commitment to ongoing discussions and negotiations demonstrated the absolute need for ASTS involvement in transplant policy formulation, and furthermore that our efforts helped to ensure DHHS support for a bill to reauthorize NOTA, which was drafted by Senators Frist and Kennedy.

The involvement of ASTS in governmental policy was not new. In fact, ASTS was born in response to the U.S. Department of Health, Education, and Welfare, which sought input from the transplant surgeons regarding Medicare reimbursement for end-stage kidney disease in 1974. In 1978, ASTS members were involved in the establishment of a national computerized registry of transplant recipients called UNOS. In 1984, NOTA was enacted to create a national system for donor organ distribution and allocation. ASTS provided strong commentary on this legislation, and many important contributions were made by past presidents Belzer, Ferguson, Kahan, Monaco, Starzl, and Williams.

I considered my two years as President-Elect and President of the ASTS as one of the milestones of my surgical career. Through the collegiality and collaboration which I was privileged to receive from past and current ASTS members, I truly believe that we advanced the mission of our Society and ultimately our patients.



Nancy L. Ascher, MD, PhD

President, 2000–2001

At the time of my ASTS presidency, I also assumed the position of Chair of the Department of Surgery at UCSF. Despite this added responsibility, transplantation has remained my primary interest and clinical focus. The reasons I was attracted to transplantation in the first place have remained as the basis of my continued interest and enthusiasm—the opportunity to alter a patient’s life in a major way through successful transplantation has been the basis of my clinical life.

The national landscape of transplantation in 2000 provided us with challenges. The issue of ASTS as an “exclusive” club versus making the club more inclusive was enthusiastically debated. The relationship with AST was strained in the competition for size and influence.

I felt that my tasks were to enhance the ASTS/AST relationship and to foster joint efforts and activities. I was also determined to put ASTS on a sound financial footing with an anticipated decrease in support from pharma going forward.

The AJT provided both an opportunity to address the concern of less industry support as well as to provide another avenue through which ASTS and AST could work collaboratively. Efforts at enhancing membership were undertaken with colleagues in cardiac and thoracic transplantation.

I was also determined to modernize lobbying efforts in order to increase our understanding of governmental policies and opinions and to also increase our influence in Washington.

The ASTS presidency has been the pinnacle of my transplant career, an affirmation of a choice that required commitment and sacrifice. The purpose

of my Presidential Address was to try to place our transplantation practices and values in the context of religious teaching prevalent in Western culture. My premise was that our attitudes and practices as transplant physicians, surgeons, patients, and caregivers are based on the values of devotion and sacrifice.

In addition to my professional life, I have had a long interest in Western art and the themes in religious art. I used the stories of the Christian martyrs as a parallel to the families of cadaveric donors who “sacrifice their loved ones” for “immortality” (life after death) and the leap of faith of live donors who put themselves in harm’s way to aid another human being. In this context I looked for the basis of altruism and looked for the role of the transplant surgeon and physician.



Marc I. Lorber, MD
President, 2001–2002

I mentioned in my 2002 Presidential Address that I was privileged to attend the ASTS annual meeting in 1975 as a medical student, and since then I missed only the 1978 Annual Meeting (I was an intern and definitely otherwise occupied). Much of the content driving my thoughts, now more than a decade after completing my term, also occupied my thoughts when I delivered my Address at the Annual Meeting on April 30, 2002.

ASTS has been an important guiding light for transplantation, beginning with the early excitement as the field transitioned from a promising area of clinical research to mainstream clinical therapy. I mentioned the excitement fueled by the lively, open, and vigorous debate during the floor discussions after papers were presented at the early ASTS meetings, and that I was

moved by Starzl's comments in his Presidential Address, especially his quotation from T.S. Kuhn:

“... a great advance (in science) necessitates the overthrow of an established dogma, and when that occurs the advance itself becomes the new dogma to which advocates flock. It is natural for those disciplines to become protectors instead of improvers of the status quo, guardians of the past instead of seekers of the future....”

This warning was relevant when Kuhn's work was published in 1962 and when Starzl admonished us to consider the words in 1975; they were relevant in 2002; and I believe they are just as important today. The early ASTS presidents demonstrated their unique leadership styles as the organization grew and flourished. I feel this tradition was followed through the middle years where I was among those privileged to serve, and it certainly continues with the remarkable dedication and talent exhibited by our leadership during the recent past and today.

My initial leadership opportunity came as chair of the Program and Publications Committee (1989–1992), with responsibility for leading the team who would select presentations from submitted abstracts, as well as to organize (each year with the Society President) the format for the Annual Scientific Meeting. This afforded me the chance to interact closely with each of our presidents, the senior ASTS leadership, and many contemporaries. I followed that experience with terms as Councilor at Large (1992–1995), Treasurer (1997–2000), then President-Elect (2000–2001). I was also privileged to serve on the ASTS/AST Joint Executive Council from its inception in 1998 through 2005, as well as on the Founding Committee of our journal, the *American Journal of Transplantation* (1999–2000).

The several years leading to my presidency in 2001–2002 were certainly remarkable for controversy, and our interactions with the AST(P) were frequently strained. At the same time these years were very rewarding as the ASTS evolved to accommodate the rapidly changing landscape. The entire field of transplantation experienced remarkable acceleration during those years when ASTS and the AST enjoyed strong membership growth and unprecedented financial stability.

Thanks to my predecessors, when my term began the ASTS/AST relationship had dramatically improved, interactions had become constructive, and Joint Council meetings were productive. Also, the initial ATC gatherings were highly successful, as the event was increasingly

acknowledged as the premier yearly transplant meeting, and the *American Journal of Transplantation*, launched in May 2001, was enjoying unprecedented early success.

During my Presidential Address, I spoke of the enthusiastic optimism at the 3rd annual ASTS Strategic Planning retreat when the ASTS leadership team set an ambitious agenda that was catastrophically disrupted two days later by the September 11, 2001, attack on our nation. However, as the year progressed, the ASTS leadership and the membership maintained focus, and much was accomplished. ASTS membership growth continued, ASTS research awardees demonstrated their productivity, and a number of new initiatives were introduced. Notable among these were the early discussions about possible ASTS support for a proposed NIH live donor liver transplant study, efforts seeking to improve relations with the larger surgical community, formation of the ASTS Foundation, and a very successful 2nd Annual Winter Symposium organized by the Vanguard Committee, which was elevated to standing committee status.

As I reflect upon many of the issues about which we spoke during my term, it is evident that while considerable progress has been made, many similar challenges remain. I am proud that this outstanding organization has maintained its strong leadership position throughout these past 40 years on behalf of the patients who will benefit from this remarkable therapy. As the patient care environment grows increasingly more complex and costly, the challenges continue to grow. ASTS leadership has remained focused on training high quality surgeons in an increasingly regulated work environment, working to maintain adequate funding for relevant basic and clinical research, and perhaps most importantly driving the field forward. ASTS has withstood the test of time to date, and I am confident that it will continue to lead the way long into the future.



James A. Schulak, MD
President, 2002–2003

I had the great pleasure and honor of serving as the 29th President of ASTS and of being aided in this endeavor by Secretary Arthur Matas, Treasurer Richard Howard, President-Elect Abraham Shaked, and Ms. Gail Durant, the ASTS Executive Director. Within just a few days of taking office I was called upon to testify, on behalf of ASTS, in the U.S. Congress to the House Appropriations Subcommittee on Labor, Health and Human Services, Education, and Related Agencies. Guiding me through this process was Mr. Peter Thomas, the ASTS Legislative Counsel, who was instrumental in arranging for this opportunity for ASTS to have a meaningful voice on Capitol Hill. The major topics addressed in this testimony included strategies to increase and facilitate organ donation, a request for additional funding of the mission of the Division of Transplantation, support for increasing the NIH budget, and introduction of the ASTS/NIH collaboration regarding the study of live donor liver transplantation. This latter endeavor was the first-ever collaboration between ASTS and NIH, in which ASTS co-funded the newly established “Adult to Adult Living Liver Donor Cohort Study.” Spearheading this significant and ultimately very productive study were ASTS members Bob Merion, Avi Shaked, Jean Emond, Michael Abecassis, Mark Ghobrial, Robert Fisher, and James Trotter.

As was then, and I presume, usual in the everyday business of ASTS, we had meaningful, and at some times contentious, interactions with the AST. I had the pleasure of working very closely with Dr. Bill Harmon, the president of the AST. We had a policy of frequent (sometimes weekly) phone conversations about both important and mundane issues. This practice kept

both of us in touch with what was occurring in each other's organization and proved to be very helpful in preventing both of us from being blind-sided by surprises.

At that time the *American Journal of Transplantation* was in its infancy, and much time was spent during Joint Council meetings and in the AJT business meetings in discussions regarding its direction, mission, and plans for growth. It was at this time that the AJT was extended to monthly publication. In regard to the ASTS business meetings, I made the executive decision to separate the Council meeting from the general ASTS leadership meeting that included the Council and Committee Chairs, in order to give the Council more time to deliberate upon important issues facing the organization.

The 3rd Annual ASTS Winter Symposium, "Tumors and Transplantation," under the leadership of Dr. Sandy Feng and the Vanguard Committee, was held in January at the Eden Roc Resort in Miami. This meeting was highly successful and well attended, as have been all of our winter meetings. When I took office, one of my goals was to strongly support the evolution of our Winter Symposium from a meeting intended for our junior members to one that would be considered by all of our membership as "the" yearly ASTS meeting. It is my impression that over the past decade this is happening, and I strongly encourage the Society to continue to emphasize to our membership the importance of having a yearly meeting geared primarily to transplant surgeons where they can enjoy the camaraderie of being with colleagues from around the country.

One of the goals that my immediate predecessor, Marc Lorber, and I held jointly was to gain a seat on the American Board of Surgery for ASTS. We did achieve this important status in late 2002, and in 2003 I was elected by the ABS to be the first ASTS representative to this most important entity in American surgery. The six years I spent as an ABS Director were not only very satisfying for me personally but also provided our Society with valuable updated information regarding the certification process for fellowship training, the importance of meaningful transplant rotations for general surgery residents, and the new processes for maintenance of ABS certification.

We also petitioned the American College of Surgeons to establish a separate Advisory Council for Transplantation. While the ACS chose not to do this, it did grant ASTS seats on three established Advisory Councils,

namely General Surgery, Urology, and Cardiothoracic Surgery. Moreover, the ACS also granted ASTS a seat on the all-important General Surgery Coding and Reimbursement Committee. Much of this work was spearheaded by Michael Abecassis, who was our first Chair of the ad hoc Committee on Professional Reimbursement that was established the year before by President Lorber. Mike was greatly aided in these reimbursement matters by Ms. Diane Millman, who was the ASTS legal counsel and advisor on professional reimbursement. Their initial accomplishment was to obtain proper reimbursement for live donor partial hepatectomies. Needless to say, this important work taken on by Mike and Diane has led to significant changes in the way transplant surgeons are paid for our professional service and for how our hospitals are reimbursed for transplant admissions, for which we are all grateful.

The ASTS Foundation was also established in 2002, with Marc Lorber serving as its first President. The purpose of establishing the ASTS Foundation, which, if my memory serves me correctly, was the brainchild of Goran Klintmalm, was to provide ASTS with a vehicle to pursue philanthropic support over and above what we already were receiving from industry. To aid with the direction of the Foundation, ASTS established a new Development Committee within the Foundation. Over the years, it has been very gratifying to witness the generosity of our membership as manifested by its ongoing contributions to this endeavor.

The second official American Transplant Congress (the fourth annual joint meeting of ASTS and AST) was held in Washington, DC, in 2003. A highlight of the meeting was an address from Dr. Anthony Fauci, the Director of the National Institute of Allergy and Infectious Disease. A particular highlight for me and the ASTS leadership was the presentation to Dr. Nicholas Tilney, a past ASTS President, of the prestigious ASTS Roche Pioneer Award. Dr. Tilney then treated the audience with a most eloquent acceptance address.

Overall, my year as ASTS President was one of the most important professional endeavors in which I have had the pleasure to participate. I will always be indebted to ASTS and its membership for having had the privilege to serve in this capacity and remain most thankful to my fellow ASTS officers, Council and committee members, and Gail Durant for their help in making the year a very successful one.



Abraham Shaked, MD, PhD

President, 2003–2004

As for many of us, my involvement with ASTS started once I finished my fellowship at UCLA in 1990, at that time a relatively small and somehow exclusive Society. Being a “West Coast guy” meant being a little marginalized by what was considered the leading scientific institutions (Boston, Minnesota, Pittsburgh) and consequently a minimal involvement in Society life. The Society meetings were small gatherings of close associates whose life revolved around exciting surgical endeavors, the exploration of new immunosuppressive drugs (introduction of tacrolimus), chasing tolerance (what else!), and making sure to secure NIH funding for basic lab research (the same old issue).

Accepting a leadership position at the University of Pennsylvania and the Children’s Hospital of Philadelphia in 1995 and establishing a long-lasting partnership with a future ASTS President (Kim Olthoff) was a significant and exciting change resulting in the development of one of the largest academic transplant centers in the country. A surprise phone call in 1996 from Mike Abecassis, at that time the Chair of the Scientific Program Committee (responsible for organizing the annual meeting), asked whether I would consider taking the position. I remember Mike telling me that the attendance at the annual meeting was down and that “maybe a crazy ex-Israeli army officer” was needed to turn things around. This was followed by a call from ASTS President Nick Tilney, an outstanding transplant surgeon and researcher (a Bostonian who was not able to pronounce my name right), asking me whether I would like to accept this “thankless position.” One would call it luck; another will say serendipity.

Being appointed the Chair of the Scientific Committee in 1996 resulted in assuming the responsibility for organizing the ASTS Annual Meeting (still in Chicago). This was an exciting and interesting experience, specifically since I was parachuted to the position without having any major involvement in the Society life. It was an immediate, intimate exposure to those who are then and now considered the founding master surgeons and researchers who established the field as we know it today. More important, it was the incredible opportunity for forming associations with the younger generation, those who will become lifelong colleagues and friends.

There were immediate risks facing the Society that were addressed:

1. The dwindling attendance as the outcome of exclusivity. We recognized that participation can be encouraged by increasing the abstract submission acceptance rate to about 70 percent. In reality, presenting an abstract is a good reason to come to the meeting, enhance the exposure to the ongoing clinical and scientific explorations, and provide the best platform for forming collaborations. The outcome of this policy became evident within a short time. It also helped that members of the scientific committee informed the community of these changes and asked program directors to encourage submission and consequent attendance.
2. We initiated a massive fundraising campaign, traditionally not done by ASTS. The continuous fund flow from pharmaceutical companies was used to provide multiple research grants to members and collaborators, award young residents and students for their research (and indirectly, encourage talented people to consider transplantation as their future specialty), and support extremely important lobbying efforts that led to favorable changes in laws and acts supporting donation, transplantation, etc.

As serendipity dictates, I found myself assigned to coordinate the first American Transplant Conference with my counterpart from the AST, Mo Sayegh, a talented researcher nephrologist from Brigham. At that time the ASTS leadership recognized the futility and duplications associated with the multiple separate transplant meetings by physicians and surgeons. The first ATC, organized in 2000 in Boston, clearly demonstrated the success of this initiative, resulting in the establishment of an extremely successful annual meeting that I believe is very much enjoyed by all transplant personnel.

And as further dictated by luck, I was assigned to coordinate with Mo the first World Transplant Congress in 2006 in Boston and was recently punished by being assigned to participate in planning the 2014 WTC in San Francisco. These are exciting collaborations with The Transplantation Society, which allows the American members to expand their association with the world transplant community. One would say that “old soldiers never die, they just fade away.”

Serving as a Secretary, President-Elect, President, and Past President of ASTS from 1999– 2005 allowed my continuous participation and contributions in events that shape the Society as it is today. Working with so many talented people was a unique privilege resulting in exciting ongoing projects, including the creation of the *American Journal of Transplantation* in 2001, lobbying for the National Living Donor Assistance Center, participation in multiple regulatory efforts with DHHS and Medicare, establishing the ASTS fellow matching program, incorporating the ASTS Foundation, and many other projects that keep the ASTS going.

ASTS is the home for many of us. The ASTS activity continues to impact on our professional life, our academic scientific activities, our training programs, and our personal education. It is a place where we meet our friends and form our collaborations. It is a place where we meet the future generation, knowing that the field will continue to evolve.



Richard J. Howard, MD, PhD
President, 2004–2005

Being President of the American Society of Transplant Surgeons was a great privilege, and I am continually grateful to the membership for allowing me to

serve from May 2004 to May 2005. It was a time of continuing the efforts of my predecessors to pursue the goals of ASTS, increase the membership of the Society, and work to improve legislation and regulations at the federal level on behalf of our patients. In this latter effort ASTS frequently joined with our colleagues in the AST as well as other transplant organizations such as UNOS, APOPO, The Transplantation Society, and officials in the Division of Transplantation of DHHS.

It was a time of transition, since Gail Durant, the Executive Director, had recently resigned after six years of service. I was on the committee to interview candidates for Executive Director. But because of limited availability of other members of the committee, I ended up being the sole interviewer (which I did in Orlando, since it was close to Gainesville). We hired Katrina Crist shortly before my tenure began. She had previously been Executive Director from 1997 to 1999. She served ASTS well until she resigned in 2011.

ASTS had recently made a commitment to become more involved in federal legislative and regulatory issues by hiring a Washington, DC, lobbying firm. Gail Durant and I interviewed several lobbying firms in Washington, DC, before selecting Powers, Pyles, Sutter, and Verville. Again, the other members of the selection committee could not attend these interviews. The Society had long had a strong interest in regulations, since transplantation is governed by strong federal regulation.

Congress passed an organ donor bill earlier in 2004, which provided for \$25 million to promote organ donation. But the funds still needed to be provided by a separate bill. With that background, some of us went to Washington to lobby for the allocation of money to fund the bill. We met with legislative assistants of members of the Appropriations Committee, but not with the congressmen themselves. I always thought that the amount of money we sought was too small for anyone to go out of his way to secure funding. Perhaps if it were for \$2.5 billion instead, it might have gotten someone's attention. It may also be that transplantation does not affect enough of their constituents for it to have a presence in any congressman's concerns.

We also met with Secretary of Health and Human Services Tommy Thompson and presented him with an Honorary Membership in ASTS, thanking him for his efforts on behalf of transplantation. I was invited to sit in his chair and write anything I wanted on his personal stationery. I tried to change the regulations about immunosuppressive drugs, but there was just not

enough time. The most interesting part of the visit to his office was the center on the same floor that was established after the events of 9/11. It was staffed by numerous individuals, including representatives from the Armed Forces. They could bring up satellite images in real time of virtually anywhere. This center was to be a central planning site in the case of bioterrorism. It was probably never used. I doubt it still exists.

We also had breakfast with a member of the Appropriations Committee, Arlen Specter from Pennsylvania. Although he promised us his strong effort to fund the bill, I don't know what he actually did. But we did learn how things work in Washington. To meet with a congressman it is expected that we would give a donation to his campaign fund. So each ASTS member who met with him wrote out a personal check and we handed it to his aide in an envelope. In the words of Plunkett of Tammany Hall, this seemed like "legal graft."

While "guiding those who make policy decisions that influence the practice and science of transplantation" is part of our mission, we must be cognizant that lobbying and getting access to the correct individuals in Washington is expensive. It is something ASTS should continually reevaluate.

Because of some historic disagreements—and even at times hostility—between ASTS and the American Society of Transplantation, Jay Fishman, the president of the AST, and I sought to try as much as possible to bring the two societies together. While we still had differences in emphasis and each society had its own interests, there was much we had in common, especially furthering the interests of transplantation as a field and trying to secure better reimbursement for transplant-related activities, funding for immunosuppressive medications, and support for transplant research. For the first time we held a joint ASTS/AST Presidential Dinner among numerous aircraft at the Boeing Museum in Seattle. While it was successful in my estimation, it may have been the last such joint dinner. While there was some talk before and after my presidency about combining into a single society, that is unlikely to happen and for good reasons.

I have always been impressed that ASTS as well as other transplant societies have always taken actions that are of high moral standing. Its policies, actions, and achievements have always put patients and the field of transplantation above all else. I am sure it will continue.



A. Benedict Cosimi, MD

President, 2005–2006

Having been one of the original charter members of ASTS at its founding in 1974, I have been involved with our organization for the 40 years since its inception. After working on numerous committee assignments, I was elected to the Council in 2001, and in 2005–2006 I had the privilege and honor of serving as the 32nd President of ASTS. I recall many gratifying activities of that year and, in particular, three seminal accomplishments:

In 2005, a fortuitous alignment of UNOS, HRSA, and ASTS leadership occurred with Dr. Frank Delmonico (previously my second transplant fellow) serving as UNOS President and Dr. Jim Burdick (previously my third transplant fellow) as Director, Division of Transplantation at HRSA. We all recognized that the data-reporting requirements from UNOS had been unacceptably expanded over the previous 20 years despite the significant influence from a number of our preceding presidents, particularly Mel Williams, Oscar Salvatierra, and H.M. Lee, on the content of the National Organ Transplant Act, which was first passed into law by Congress in 1984. The Act had been primarily directed to defining a national system for organ procurement and distribution, the Organ Procurement and Transplantation Network (OPTN), which had been contracted to UNOS, but the Act also provided for a “national registry for all organ transplants.” By 2005, this obviously essential and seemingly innocuous activity had grown, through a series of “unfunded mandates” recommended by well-meaning UNOS subcommittee members (admittedly many of whom were us), into an unsustainable burden for every organ transplant program. The joint ASTS/AST/OPTN/HRSA project that we undertook in 2005 carefully

reassessed each of the several thousand data elements being submitted to UNOS and resulted in elimination of reporting requirements for over 40 percent of these previously mandated items.

I worked closely with Dr. Richard Fine, then president of the AST, to review the terms of our previous *American Journal of Transplantation* (AJT) contract with our publisher. In view of the unexpected remarkable success of the AJT joint venture over the first five years of its existence, it seemed appropriate at that point to both of us and to our publisher that the previously signed contract should be re-negotiated early. We successfully restructured a new seven-year contract that significantly increased the cumulative financial returns to the societies, projected to exceed over \$1 million annually.

My year as President ended with my hosting, at the Hynes Convention Center in Boston, the first World Transplant Congress (WTC 2006). As the Congress President, I again had the privilege of working closely with AST President Richard Fine and TTS President Kathryn Wood to organize this unique joint collaboration of the three societies. WTC 2006 brought together more than 6,500 specialists from all over the world for the largest scientific meeting ever held in the field of transplantation. Dr. Mo Sayegh, who chaired the Program Committee, had the seemingly impossible task of sifting through more than 4,000 submitted abstracts to develop the scientific program. Under his well-recognized, seemingly calm, organized leadership, but always holding one phone to each ear, the committee came up with more than 1,200 oral presentations (including my ASTS Presidential Address) and nearly 1,000 posters, for a program which was opened by addresses from then-Senator Hillary Clinton and basketball star Alonzo Mourning, then progressed through the volumes of scientific presentations, which were unanimously voted as outstanding, and culminated in an unforgettable evening of dining and entertainment at Boston's Faneuil Hall Marketplace. Who would have dreamed such an event could develop from our first meeting in 1975 (25 papers presented; fewer than 100 attendees) or even our 20th meeting in 1995 (94 papers presented; 730 attendees)? In fact, the success of WTC 2006 engendered such enthusiasm that the three societies have again come together to organize a second Joint Congress, WTC 2014, to be held in San Francisco, where ASTS will celebrate its 40th anniversary together with an anticipated more than 7,000 Congress attendees.



Arthur J. Matas, MD
President, 2006–2007

While procrastinating about writing this reminiscence, I read the previously published comments by the first ASTS presidents. Many mentioned the Council that they had worked with, and I began thinking about the word “obligatory” as in “necessary” or “mandated.” If this short piece is ever read by future generations of transplant surgeons, I would be disappointed if they thought that the praise I have for the people I worked with during that year was obligatory.

As the ASTS election process is likely to change (evolve) in the near future, let me describe how it was. The ASTS leadership consisted of two bodies: a) the Executive Committee (Past President, Immediate Past President, President, Secretary, Treasurer, and President-Elect) and b) the Council, which consisted of the Executive Committee and six (now nine) councilors-at-large. Additionally, all the committee chairs (at that time about 20) attended the Council meetings to participate in the discussions and report on committee activities. Usually the Executive Committee was “elected” from previous committee chairs and those making a committed and ongoing contribution to the Society. However, there was no election in the true sense. The nominating process was open to everyone, but the Nominating Committee (consisting of the two past presidents, the President, and the four (now six) senior councilors) vetted the nominations and proposed a single candidate for each position to the ASTS membership at the annual ASTS meeting. At that time additional nominations could come from the floor, but rarely did.

The Secretary and Treasurer served for three years and were not elected in the same year; councilors served for three years, with two (now three) being elected each year. In a three-year cycle the open positions were: 1) Secretary, President-Elect, and two councilors; 2) Treasurer, President-Elect, and two councilors; and 3) President-Elect and two councilors. In general, but not necessarily, the Secretary and the Treasurer moved on to be President-Elect and President so that in practice the three-year nominating cycle was usually: Secretary; Treasurer; President-Elect (plus two councilors each year). In the third year, the President-Elect was chosen from individuals who had made outstanding and important contributions to the Society but had not been elected Secretary or Treasurer. (A nice problem that our Society has is that there are many more highly qualified candidates than there were positions for.)

During my term as President, I was fortunate to have an outstanding Executive Committee (Past President Dick Howard, Immediate Past President Ben Cosimi, President-Elect Goran Klintmalm, Secretary Bob Merion, and Treasurer Mike Abecassis). All outstanding individuals; but what made the Council special was that although each of us was committed to the mission of the Society (science, education, advocacy) and the advancement of ASTS, each of us also had differing primary interests within transplantation: clinical, translational and experimental research, regulatory issues, economics of transplantation, and the many ethical issues associated with transplant decision making.

If we had all had the same focus, it would not have been as good a Council and as special a year. At the same time, our many committee chairs (too many to name individually) not only helped promote the advancement of our Society but also brought new and challenging ideas to our Council meetings. None of what was either accomplished or initiated during that year could have been done without the participation of the ASTS administrative staff: Katrina Crist, Executive Director; Kim Gifford, Assistant Director (and our current Executive Director); and Joyce Williams. In hindsight, I wish I had said “thank you” to all of the above more often.

Perhaps the biggest single dilemma we tackled during that year was whether or not to join with AST to form one society. There was pressure to do so. Both societies were highly supported by pharmaceutical companies with funds that provided the societies opportunities to promote research, fellowship training, and education. It was clear that the support was going to

dwindle as: a) the patents expired on individual immunosuppressive drugs and b) the ramping up of regulations guiding what pharmaceutical companies' expenditures could be (e.g., at one ATC meeting, a company that was providing espresso coffee at the exhibits had a sign up saying, "If you are from Minnesota, we cannot serve you.").

There were other good reasons to think about one society: a) we had already integrated our two separate meetings into one (the ATC); b) we had developed a journal (the *American Journal of Transplantation*) that was supported by both societies; and c) if there was one society, the support would not be split in two and we could eliminate some duplication of effort (e.g., we could unite our public policy advocacy groups).

There were also reasons to consider maintaining separate societies. ASTS, at that time, limited its membership to surgeons and was focused on training of surgical fellows, development of new and improved surgical techniques for both donors (LD and DD) and recipients, and fostering clinical, transitional, and basic research to improve patient care, as well as on important surgical considerations (e.g., preservation injury). There was concern that much of this focus would be lost if we merged with the larger AST. But even though both societies were committed to the cause of transplant patients, there were numerous sources of acrimony—some openly stated, some hidden behind the scenes:

1. The first source of acrimony was that only surgeons could join ASTS. Experimental (small and large animal) models and clinical transplantation were developed by surgeons, and when clinical transplantation first became successful, the major clinical teams were almost entirely composed of surgeons and immunobiologists/HLA lab directors. When ASTS was first formed (before my time), a decision was made to limit membership to surgeons. Within a few years, nephrologists (and then hepatologists) began to be involved with the evaluation and care of donors and recipients. These transplant physicians were excluded from ASTS (and some were angry and bitter about this); they, with the immunologists, formed the American Society of Transplant Physicians (ASTP).
2. The ASTP rapidly grew into a large society and its annual meeting, held back-to-back with the ASTS meeting, was excellent. Informal talks of merging the two societies began. There were a number of limiting factors, mostly related to process and money. To me, at that

time a member of both societies but not part of the discussion in either, it appeared that each group could not visualize an infrastructure as one integrated entity with common goals and respecting individual specialties' interests. Instead each felt that members of the other would usurp power to advance their own interests. For example, from which ranks would the executive board be drawn? How would any funding (e.g., membership dues, corporate gifts) be used? Would surgeons (the smaller group) have an equal voice and would there be support for surgical research and education? These were all problems that could potentially be solved.

However, complicating the discussions was a parallel dialogue about how to divide revenue (from the annual meeting and journal). The AST wanted the revenue divided on a per capita basis; ASTS wanted equal share. At the same time, the AST significantly expanded its membership ranks and eligibility criteria, including any professionals involved in transplant care. Whereas that was probably a great decision, the timing—while arguing that revenue should be split on a per capita basis—was poor and seen by ASTS as provocative. In my opinion, this parallel discussion undermined moving forward to a joint society and helped fuel the mistrust between the societies.

3. A key moment in this combination discussion/struggle came at a time that the societies were still talking: the ASTP sent out a fax—yes, it was that long ago—announcing their name change to the American Society of Transplantation (AST). Although also an ASTP member, I had no idea that this was going to be done or why. But, given that there was a “gentlemen’s agreement” that while discussions were ongoing there would be no name changes, and given that the AST was the projected name for a single society, the ASTS saw this as a deliberate act of hostility. That act alone, presumably by the ASTP council or executive board, set meaningful discussions back for years.

As a relatively apolitical person who saw that the societies were pursuing many of the same goals, some of these actions and emotional responses were beyond me. When asked if I would consider being nominated to be an ASTS councilor, I said yes, with the thinking that maybe I would do something to help eliminate or minimize this acrimony. During my three years as a

councilor and another three years as a member of the Executive Committee, there was ongoing pressure—mostly due to concern about reduced pharmaceutical support—to form a single society. On a positive note, during that time, the division of revenue was addressed and resolved. However, the historical mistrust remained and no definitive decisions were made about one versus two societies. Again, my perception was that lack of a formal decision left each society in limbo and with limited ability to focus on long-term planning.

That is a very long background for what, to me, stands out as the most important development of my presidential year. We organized—really the administrative staff organized—a retreat of the ASTS Council and committee chairs. The goal was to review and solidify the short- and long-term goals of our Society; develop priorities for the upcoming year; and, most importantly, discuss forming a single society. Because of the agenda, some of our past presidents were invited for their input.

To me, the defining moment of that meeting was when, after a long discussion, we went around the table (roughly 35 people), starting with the past presidents, and each person gave his or her opinion on whether or not we should maintain two individual societies or whether we should work with the AST to form a single society. To a person, the feeling was that we should maintain two societies because: 1) if there were one society, there would still need to be a separate structure to focus on surgical interests and training (and if that was going to be necessary, why not just maintain the two-society structure?) and 2) maintaining a separate society would allow us to really focus on surgical education (including fellowship training), research, and advocacy for issues directly related to surgeons (e.g., RVUs for transplant surgery procedures).

I must admit that when I discussed this with AST leadership, they were unhappy as, at that time, they were hoping for a single society. However, I think this clear message took the discussion off the table (at least temporarily) and allowed each society to focus on their individual goals. At the same time, not having ongoing discussions about uniting (and the continued unrest that one society would benefit more than the other if a single society was formed) allowed the two societies to increase interaction to promote mutual interests.

I am no longer part of the ASTS Nominating Committee but I can tell you that while I was, the future ASTS leaders were chosen partly on an

estimation of how well they would work with the AST leadership (not my influence; it was everyone's feeling). And my sense is that relationships between subsequent councils continued to improve. We have reached a point where, in addition to previously planned and ongoing joint annual meetings, the presidents from the two societies talk frequently and discuss common goals and mutual agendas. Each society is informed of the other's plans so that there will be no surprises leading to new acrimony.

Beyond outlining this problem and the decision the Council made, I could continue to write pages on the contributions of each of the members of our Council and committees. But for me, that discussion and resulting conclusion dominated the year (I can still remember who was there and where they sat).

It has been a delight for me to watch the continuing growth and evolution of ASTS: there has been renewed energy on education of our fellows (there is now a defined curriculum that the fellows must complete) and our annual Fellows Symposium gets better each year. A curriculum has been developed on the business and leadership side of transplantation. The winter meeting, with its topic-specific format, has continued to evolve and grow in popularity. ASTS has taken leadership for a government-funded program to help offset living donor expenses. We have advocated strongly and loudly for appropriate reimbursement for transplant surgical procedures and patient care, as well as other issues affecting surgeons and transplant recipients (e.g., extending Medicare coverage for immunosuppressive medications). Our joint ventures with AST continue (the annual meeting, the journal, public advocacy), and the societies are developing common policies in some areas so that we can speak with a common voice.

It was an honor and privilege to serve as the ASTS President. I consider that year to be one of the most important years of my life. At the same time, I am excited about the ongoing evolution and improvement under the direction of today's leadership.



Goran B.G. Klintmalm, MD, PhD, FACS

President, 2007–2008

In May of 1980, I attended my first ASTS meeting at the Drake Hotel in Chicago. At that time I was a fellow with Tom Starzl in Denver and we had commenced using Cyclosporine in December 1979. We had an exciting story to tell. For me it was electrifying seeing all the senior American and European transplant surgeons together, discussing, arguing, and socializing. Ever since that meeting, my professional life has always centered around ASTS.

In 2000, I was elected as one of the two ASTS councilors-at-large. At this time, we were experiencing significant changes as a result of the Secretary of Health and Human Services, Donna Shalala, becoming far more involved in transplant issues. New regulations were imposed on all levels in transplantation by HRSA, CMS, and UNOS. The three years on the Council were critical to realize the many issues facing the Society; organizational, training, financial, and our sister society, AST. In 2003, I was elected to Treasurer for ASTS. The position was not difficult to manage thanks to the expertise and dedication of Katrina Crist and her staff. My main contribution as the Treasurer was to set a goal for us to achieve financial “independence.” Having negotiated managed care contracts for my transplant programs since 1987 and seeing how the market was changing and being aware how the laws governing pharmaceutical companies were rapidly changing, I realized that one day the Society may need to provide financially for itself. Thus, I proposed to the Council that the Society would need a set target amount in our Foundation which would produce sufficient funds to allow us to continue our annual scientific meetings, fellowship programs, fellowship grants, and

education, even if outside support would diminish in the future. This proposal was accepted, and I expect we will meet the goal shortly.

In January 2005 we learned that CMS was about to propose new detailed regulations that would affect every facet of transplantation. I have always been of the opinion that if you want to have an impact, you need to work with your opponent before they make up their minds. Thus, I arranged for the ASTS Council to be invited to CMS, who willingly arranged a meeting a couple of weeks later. Indeed they were most anxious to talk to us, but at the meeting, they told us the draft regulations had already been approved for public comment and asked us to work on the draft and send it back with our comments.

The entire Council and relevant committee chairs and members with particular expertise, together with ASTS legal counsel, were organized to review the draft guidelines. The marching orders were not to dismiss the draft out-of-hand, like physician organizations tend to do, but instead to give a constructive, detailed critique of each paragraph. Some paragraphs we stated to be undoable/unrealistic/unenforceable/ misguided/et cetera, and we explained why. But for the most part, we re-wrote the particular paragraph with our changes together with our explanations.

When the regulations came out in August, we found that almost all our suggestions had been accepted verbatim. Entire sections had been taken from our documents. Immediately after this, we performed the same review of the Guidelines for Participation with the same approach and success. HHS published The Final Rule in March 2007.

Later in 2005, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) sent us a draft of their regulations (these would now be three different regulations: UNOS, CMS, and JCAHO!). Their draft was completely unrealistic, and in my opinion they would have made all organ transplantation in the United States impossible. The Executive Committee organized an assault team who traveled to JCAHO's headquarters in Chicago and delivered our critique. The JCAHO draft guidelines have not been heard of since.

Once elected to the Executive Committee, I began observing and listening to the members and committee chairs differently. I took note of individual engagement, level of insight in any and all topics at hand, and most of all strategic abilities—the ability to anticipate and prepare for what may come. The reason was to look for future candidates for committee chairs,

councilors-at-large, and officers. During my entire tenure of seven years in the Executive Committee, I continued to observe and listen to the members. This was invaluable insight and knowledge for future appointments.

I spent much time during my year as President-Elect thinking about the Society. At the time, the Society seemed to have lost some of its leadership status in transplantation, and the Council needed strengthening. ASTS had been created to provide academic leadership in a vibrant time of development of organ transplantation science and practice. The training of transplant surgeons and leaders was another goal. However, the environment in which ASTS was working was changing rapidly. Not only the regulatory side—UNOS, CMS, HRSA, FDA, and the rest—but also the financial underpinning of medicine in the United States. There was much to do in a very short time, one year. Thus, I developed a draft program for my year as President to be presented to the Council with the hope to use my year in office to implement the plan, not formulate it.

Friday afternoon, the end of the Council meeting September 18, 2007, in Chicago, I had requested time to give a presentation to the Council over what I planned for the next year as President. At the business meeting four days later, Arthur Matas would hand the gavel to me.

The program I presented was quite large and diverse. The main points were, in the order they were presented:

1. The Council needed to be expanded from six to nine: three councilors-at-large to be elected yearly for a three-year term. Reasons for this were several; the responsibilities of the Society were growing and we needed more and varied expertise on the Council. Also, we needed a larger pool of candidates from which to choose officers. Additionally, being a councilor should not automatically imply that you would become an officer, and finally, with a growing Society more members should have the opportunity to serve on the Council. I asked Stuart Flechner, chairman of the Bylaws Committee, to prepare a bylaws change to expand the number of councilor seats, which would allow the election of more councilors-at-large at our business meeting. This could not wait a year to be implemented! The bylaw change was to be presented and to be passed four days later.
2. Due to the changing environment and needs, we needed new committees: a Business Practice Services Committee; a Physician

Extender Committee; and a Composite Allograft Committee. Again, I asked Stuart Flechner to write bylaw changes for Tuesday's meeting.

3. Time passes quickly, and the pioneering days seemed to come to a close. The first generation transplant surgeons were retiring in increasing numbers. Several books had been published over the years by our members due to a personal interest. It was time to create an official position charged with documenting our past and future, a Historian. This proposal was also made as a bylaw change, four days hence. I later proposed Tom Peters as our first Historian, and he was dutifully appointed. Tom has run with the charge and done an incredible job.
4. Finally, I felt we needed to boost the self-esteem, the pride, of our Society. I called it "branding." I asked the Advisory Committee to consider the possibility of creating a new membership category, Fellow of ASTS. This would be for members with several publications, while at the same time removing the publication requirement for regular membership to broaden the recruitment base.

I asked for delivery of the recommendations from all committees for the fall Council meeting scheduled four months later.

At the Tuesday business meeting, the new enabling bylaws were passed. Additional councilors-at-large were elected to go from six to nine immediately (three individuals to serve three years and two more to serve two and one year, respectively). The new committees were formed and populated. A veritable storm of activity ensued. Every committee was given projects to review and instructed to present their recommendations for the fall Council meeting. Every large initiative moved forward except the proposal of a Fellow of ASTS, which was recommended against by the Advisory Committee.

During the summer I engaged two co-conspirators in a different project. I wanted ASTS members to be able to be recognized for what they are, ASTS members. With Katrina Crist and Kim Gifford's help, I had a lapel pin made. A lapel pin I wanted our members to wear with pride! I used the ASTS logo adopted when Barry Kahan was President, the chimera. I resized some of the parts, notably increasing the size of the Ibex head (a mountain goat) and the snake's head on the tail. I made them larger to be distinguishable on a small pin. The Chimera pin was presented to the Council members and the

membership at the Council meeting on January 23, 2008, during the Winter Symposium in Florida. The creation of the Chimera pin was the project I had the most fun with during my tenure.

Early in the fall of 2007 I began to think of my Presidential Address. I named it “Standing on the Shoulders.” It was important to me to deliver more than just a summary of what we had accomplished as a Society during the past year; everyone can read that in our Society publications. What was far more important to me was to present to the attendees my interpretation of events as they relate to our specialty. And to communicate what I saw coming over the horizon that will impact our future. Finally, to express my gratitude to all those that made it all possible (colleagues at Baylor, colleagues in the Society, the ASTS staff, and most of all my family). It was a very humbling experience to give the address.

My tenure as President of ASTS is what I am the most proud of in my professional and academic life, second only to building the Transplant Programs at Baylor University Medical Center. The duties of the office filled most of my days, and I would not have missed it for anything. I simply hope that I was able to make a small contribution, not only to ASTS, but to the transplant community at large.



John P. Roberts, MD
President, 2008–2009

So You Want to Be ASTS President?

Reflections are difficult as life rushes on; we focus on the present and the future, rather than on the past. While I doubt that many will read this missive, I did spend some time thinking about what a young person might want to

learn. I don't think that the important issues of my time will be of great interest, as most of these issues were either incorporated into the current reality in some fashion or lost on the winds of time. Though I will discuss some of these at the end, what I would like to start with is a discussion of how one gets to be President of ASTS.

It is my strong belief that becoming President is primarily based on merit more than on politics, and the merit is judged based on involvement in the Society. The best place to start is by joining the Vanguard Committee. This committee has the responsibility for organizing the Winter Symposium (Latin, from Greek *symposion*, from *sympinein* to drink together, from *syn-* + *pinein* to drink), and it is a good way to get to know your peers and seniors. As with all the ASTS committees, just being a member is not enough; active participation is crucial. Each of the committee members has a day job, and there is frequently a reluctance to take on an additional chore that doesn't have an immediate benefit. But if you take on a task and complete it with a quality product, you will get recognized as having interest and talent. It is this work that leads to subsequent roles in the Society. These roles generally evolve into more committee work. Most of the tasks get assigned on an ad hoc basis during the committee conference calls, and those who volunteer usually are immediately assigned. While you shouldn't take on a project that you won't complete, you may not be able to be too selective.

One of my favorite truisms is if you want to get something done, ask a busy person to do it. Busy people are busy because they get a lot done and are subsequently asked to do more. This plays out in the academic arena, where typically those who are productive clinically are frequently productive in the academic front as well. I am not saying to give away your protected time or family life; just make time work as productively as possible for yourself.

Did I mention that being collegial is important? A couple aspects of collegiality: you need to mix and mingle, meet and greet. The easiest way is to be a good listener. Most surgeons want to drone on, and being there to listen makes them happy. Squeeze in your name, where you are from, and what you are interested in, and you will make an impression.

Try to submit your academic material to the meetings. The Winter Symposium is a good place to start. If you don't have data, make a video. We surgeons love videos, so the attendance is good and you get to be in front of the crowd. You may be able to get in some very basic techniques, like variations on back table preps, if the videos are done well.

It is also important to have one or more mentors involved with the Society. While these can be from your own institution, they don't have to be. Your mentor should provide advice about which projects you should volunteer for and how best to complete your task. A mentor may be acquired in a number of ways, but if you don't ask it won't happen. The chair of a committee that you are on is a plausible start. Don't be a pest—but a polite request for help is hard to refuse.

An organization like ASTS is dependent upon a staff to run it because the day jobs of the membership and leadership tend to get in the way. A good relationship with the staff is crucial, and the most important aspect again is getting your assignments completed on time. Leadership relies on the recommendations of the staff for committee nominations, and if you are known as one who doesn't come through, you are unlikely to get chosen.

The stepping stone from committee member is committee chair. Committee chairs not only interact with the committee but with the Council. The Council meetings are definitely a time to strut your stuff, but you have to have the goods, and you need to make a case within about five minutes. Getting the goods together requires you to be able to lead the committee members and will make clear to you very quickly that committee members who are not reliable are a disaster. You should have deadlines well before the Council meeting and be prepared to get some of the work done on your own.

The next step is councilor. Councilors are typically midlevel or senior members. You will have been involved with multiple ASTS committees and have exposure to other national organizations such as UNOS/OPTN committee service. You should have a leadership position within your institution. You don't need to be the boss, but you should have significant responsibility. A recent change in the process for selection is a vote of the membership. I believe this is a good thing, but how this is going to play out is not clear. For sure, you are going to need to have name recognition, and this will probably be coming from service, presentations at ATC and Winter Symposium, and Council participation.

The toughest step is going from councilor to President. In the current scheme, there are three different routes. The first two are routes via Secretary and Treasurer. These positions are filled every three years, usually from the Council, so that one year a Treasurer is chosen, the next year the Secretary is chosen, and the third year is open. Typically, the holder of one of the Secretary or Treasurer positions is considered the prime candidate for

President-Elect when rotating out of the position. In the third year, the President-Elect is typically chosen from the councilors rotating off or from someone outside the Council, such as a past councilor.

This system has the advantage of keeping institutional memory. Someone who is active in committees, then becomes a councilor for three years, then Secretary/Treasurer for three years, then President-Elect, President, Immediate Past President, and Past President each for one year is going to be in the Society leadership for at least 10 years. While some may view this as stagnation, it does keep the organization focused on the key issues. After a number of years as committee chair(s) and then councilor, I was nominated for President-Elect in the off year after I had rotated off the Council. This did cut a few years off my service.

My presidency was really helped by great staffers led by Katrina Crist and Kim Gifford. The Executive Directors are truly the engines keeping the Society moving forward. In order to remember what the issues were during my term, I searched old email folders and found that in my year as President, I received about 8,500 emails that were ASTS business. This comes out to something close to 25 emails per day, assuming that weekends were lighter. Sorting these threads by subject, there are a lot of issues that didn't change the world, such as negotiating with AST about the funds flow from the journal. There were other accomplishments that I cannot take credit for as they were part of the forward motion of the Society. One area that I personally tried to move forward was financial incentives for living donation, specifically providing health insurance to the donors. If you care to read my thoughts about the matter, they are here: <http://asts.org/docs/default-source/chimera/chimera-winter-2009.pdf?sfvrsn=6>. We did experience some traction on the issue in Congress for a while but were never able to get all of the forces aligned in the correct fashion. With the Affordable Care Act and the exchanges, there may be another opportunity. However, it may require a rewrite of NOTA, though it has been suggested that a government program to provide incentives would be exempt from limitations on incentives contained in NOTA.

The year, like many years of my life, passed by in a whirl. The biggest change was the sudden decrease in the email as the new President took over the day-to-day management. Though one remains involved as Immediate Past President, there is a definite, sudden change when the gavel is handed off.

After the Past President year, your name is added to the list of “dead presidents.” We actually had a brief dalliance with creating the ASTS Dead Presidents Society, but this was derailed by a surplus of interest from the past presidents combined with a lack of follow through.

My involvement with ASTS was an important part of my transplant surgeon’s life. I made life-long friends and, with the forces of good generated by ASTS, we made a difference.



Robert M. Merion, MD, FACS
President, 2009–2010

As I accepted the presidential gavel in mid-2009 as the 36th ASTS President, our organization continued breaking records and breaking down barriers to success. We accepted our 1,500th member, welcoming members in emerging allied roles like advanced transplant providers and surgical assistants.

During my year as ASTS President, we celebrated a trio of 10-year milestones. First, the *American Journal of Transplantation* (AJT), our field’s premier journal, had a smooth transition in leadership from visionary inaugural editor-in-chief Philip Halloran to the capable management and forward-looking mind of Allan Kirk. Second, the ASTS Winter Symposium, conceived as a smaller surgeon-focused homage to the ASTS annual meeting of the “good old days” at the Drake Hotel in Chicago, notched its 10th successful year in January 2010 under a banner theme “The Cutting Edge of Transplant Surgery.” At the meeting, we launched a new feature, the ASTS David Hume Lecture, sponsored by the American Foundation for Donation and Transplantation. Nick Tilney delivered a compelling inaugural oration, titled “As Time Goes By: The Evolution of Transplantation.”

A third milestone was the 10th annual meeting of the American Transplant Congress (ATC). Along with AJT, the ATC has been a highly successful joint venture of ASTS and the American Society of Transplantation (AST). The San Diego meeting in May 2010 was no exception. At the meeting, it was also a huge pleasure for me to present the ASTS Pioneer Award, our Society's highest honor, to former ASTS President, transplant surgeon, and immunologist Frank Stuart.

Policy and regulatory issues were in abundant supply in 2009 and 2010. National guidelines for evaluation of living kidney donors and living liver donors were being developed by the Organ Procurement and Transplantation Network/United Network for Organ Sharing (OPTN/UNOS) without formal input from ASTS. These medical practice-related guidelines needed much earlier input and guidance from ASTS and other medical professional societies. Otherwise, fully formulated OPTN/UNOS policies would emerge without the benefit of expert medical professional society input. In April 2010, I represented ASTS at a meeting with all of the major stakeholders, including representatives from the federal Division of Transplantation, and successfully advocated for a new process that became known as the Rockville Agreement. With government concurrence, an OPTN/UNOS Joint Society Policy Steering Group was established to identify emerging policy development efforts that could affect medical practice. This group would introduce ASTS, AST, and NATCO expertise early in the process through the creation of Joint Society Policy Working Groups. At its initial conference call in June 2010, the new process was invoked for the first time for development of living kidney donor guidelines.

During my presidency, I advocated passionately for a transition to *elected*—rather than *selected*—leadership of the Society. It was my strong conviction that with over 1,500 members, ASTS had reached a size, stature, and maturity where change was overdue. Having a small Nominating Committee select individuals for positions of leadership and having a handful of members “vote” them into office by acclamation at the annual business meeting had outlived its usefulness. Instead, I argued, we should solicit nominations broadly from the membership, use the Nominating Committee to evaluate qualifications of those candidates, and offer contested ballots for most elected positions. Separately, I advocated for a voting process that was open to the entire membership through an online voting mechanism, replacing the old system of in-person voting at the annual

business meeting. Some argued that direct contested elections by the full membership might devolve to beauty contests, but I placed far more confidence in our members' abilities to discern the qualities necessary to advance ASTS toward its goals and lead ASTS into its future. Electoral and pluralistic democratic reform would have to wait another year before being adopted, and yet another year before being implemented, but I have nonetheless savored the delayed reward for my efforts. The ASTS bylaws were modified to stipulate that six candidates would be put forward to the membership for three Councilor-at-Large positions and three candidates for the Secretary or Treasurer position. Full membership voting was instituted, and that privilege has now been exercised by hundreds of ASTS members in the first several contested leadership elections in our Society's history.



Michael M. Abecassis, MD, MBA
President, 2010–2011

I was the 37th ASTS president (2010–2011), having served continuously on numerous committees since 1993; I was never Councilor, which irritated a few senior members of ASTS who shall remain nameless. In fact, I was in a tight race for Secretary with Bob Merion (the best man won) and was heading into an unwinnable race with John Roberts (the best man would have won) for Treasurer when a little bit of horse trading resulted in John being named President-Elect in exchange for my being named Treasurer. So there I was, Treasurer, President-Elect, and finally President. Saying that this was one of the most cherished experiences of my life would be an understatement, as clearly this marked a highlight in my professional career. My year as President was filled with exciting national events with potential impact on

the transplant community, so I will attempt to remember some of these, while not taking any of it too seriously, by adding some levity and maybe some embellishment.

I will start with the Arizona crisis. Governor Janice K. “Jan” Brewer had made the decision, and a bill had been passed by the Arizona Senate, that severely limited access to a number of transplant types for Arizona Medicaid beneficiaries. This bill denied payment for liver transplants for patients with cirrhosis secondary to Hepatitis C, heart transplantation for patients with cardiomyopathy, lung transplants for any patient, and pancreas transplants for any patient. The State of Arizona had gathered a panel of experts from the transplant community whose testimony had been spun in favor of these decisions, and the main “medical” person that Governor Brewer had put in charge of the “research” that supported the bill was a retired anesthesiologist who had completely misrepresented and misquoted the literature. Nonetheless, despite valiant efforts by the transplant programs in Arizona and their institutional government liaison folks, the bill became the law of the land.

I became aware of this after the fact and quickly mobilized both ASTS and AST, including our Washington lobbyists, and decided that this would create a dangerous precedent and that we needed to fight this law, tooth and nail. I will not go into the details of how we did this, other than to say that Maryl Johnson (AST president) and I quickly became experts on Arizona state politics, both being completely committed to reversing this law. And we did. But in the process, we had a conversation with Governor Brewer’s staff, as well as with the retired anesthesiologist who was obviously in way over his head. During this conversation, Maryl and I stuck to our talking points, which made a compelling case for the fact that the rationale for the bill was misinformed, that the data used to support passage of the bill were flawed, and that on that basis alone, the law should be repealed. I quickly learned that sticking to talking points was not a skill set unique to Maryl and me, but that politicians were true masters at this art. Finally, seeing that we were losing the battle, and completely frustrated by the sense that we were talking to a wall, I blurted out the following: “The rationale for the bill and the bill are just plain stupid!” After a brief silence, the person representing Governor Brewer said: “I can’t believe you just called the Governor stupid! This conversation is over.” And we were all greeted by the sound of them hanging up.

Well you can just imagine the comments from my colleagues. “That was great, Mike! We’re done. That’s it! Did you really have to call her stupid?” And while I was defending the fact that I had not really called Governor Brewer stupid, but instead had said the rationale for the bill and the bill were stupid, and while I was getting a lecture on how to speak to politicians, we were advised that the Governor’s people “had called back and wanted to talk...” So we went at it again. And this time, as they lamented the financial state of Arizona’s budget, and how bankrupt they were, and the cost of health care, I said: “Look, if you told me the state has no money and you can’t afford to pay for health care, we would not be having this conversation. But instead, you are targeting a specific population, which by the way we happen to know is primarily ethnic, and depriving them of life-saving procedures without a good rationale.” At which point, the Governor’s spokesperson said: “So if we said we’re not paying for any health care for Arizona Medicaid beneficiaries, you would be OK with that?” This was when I really learned that we needed to measure our words, and I could already see the headlines: “ASTS says OK to deprive Arizona Medicaid beneficiaries of health care benefits.” So I quickly corrected her by saying, “No, what I said was that WE would not be having this conversation, implying SOMEONE ELSE, much more influential than AST and ASTS would be, especially given the ethnic mix of your Medicaid population.” That’s pretty much how the conversation ended, and the bill was ultimately repealed. Lesson learned: don’t use the word “stupid” when addressing a Governor.

A second anecdote relates to my Presidential Address. As I’m sure most of us who had to think about what to say have done, I looked through previous addresses, trying to get some ideas about what to do and what not to do. This is a worthwhile exercise, as some of these addresses left me wondering what these folks were thinking, or smoking, while others really left an imprint. So I decided to do something a little different, and my entire objective was to deliver a message that hopefully someone would remember. So I delivered an address based on the premise that transplantation was losing its “luster,” and that we needed to put the luster back into transplantation if we wanted to keep attracting the best and brightest, and to advance the field beyond just the next logical step. I borrowed the term “BHAG – Big Hairy Audacious Goal” from Jim Collins’ *Built-to-Last*, claiming that, as a community, we needed to take some risk and consider quantum leaps as opposed to incremental small steps.

The address achieved, at least in part, the desired outcome. A number of folks came up to me during the meeting and subsequently, and repudiated and disavowed the notion of a BHAG as something they had heard from me for the first time, and they had obviously looked up the term and appreciated the reference. Some even told me that they had read Jim Collins' books as a result and thanked me for the reference. Another anticipated result was that the term "luster" started to become used by a number of folks, including the fact that at the following ASTS Winter Symposium, there was an entire session dedicated to the luster. Unfortunately, I lost a debate to John Roberts. His thesis was that transplant was not losing its luster, and mine, that it was. He won, but the point is that the concept had developed traction and that people were thinking about it. It should be noted, as an aside, that I had kicked John's butt the previous year at a debate on ethics, where I had taken the "con" side of the argument, which bordered on the unethical, and that despite John being President and having chosen the "pro" side (which should have easily won), I beat him by a wide margin—just needed to be said). In any case, the following year, in his Presidential Address, Mitch Henry mentioned that it was hard for him to compete with an address about luster. So I was pretty happy with the result.

However, there was a bit of an unanticipated and unintended consequence. A number of more senior transplant physicians and surgeons came up to me after my address, and sent me emails, condemning the notion that transplantation was losing its luster. To be fair, I had stolen the phrase from a prospective transplant surgery fellow who backed out of a matched position at Northwestern citing the fact that transplantation "had lost its luster." My thesis was not that it had lost the luster, but that it was in danger of losing its luster unless we acted quickly and aggressively. Nonetheless, these colleagues felt that I had minimized and insulted all progress made and being made in the field by the use of that single phrase. Interestingly, I received a similar number of phone calls and emails from more junior colleagues telling me that the address had inspired them. So in the balance, I felt that if I angered the old members like myself, but inspired the younger members, the future of ASTS, in the balance, I had achieved my objective. Lesson learned: don't be afraid to ruffle a few feathers as long as the balance is in favor of progress.



Mitchell L. Henry, MD

President, 2011–2012

As I reflect on my presidency, the people and the relationships that have grown out of this opportunity come first to my mind. Working closely with those on the Council, and particularly the Executive Committee, allowed me to get to know their talents, interests, and passions and was one of the most valuable parts of my year. It is remarkable to me how thoughtful and creative these people are, and the dedication they have to our Society. The second group that needs to be identified is Kim Gifford and her staff at the ASTS offices. Just as I was ready to begin my year as President, Katrina Crist had chosen another opportunity, and we needed to find a new Executive Director. The natural choice was to interview Kim, and the rest is history. During my year, I spoke with Kim at least several times a week, and her help and guidance were invaluable. Each of the staff members in the office are uniquely talented and contribute to their specified area of expertise, and as a group act as a finely tuned machine. The successes of the ATC and the AJT are something we've come to take for granted, but it was obvious to me that these achievements only come about as a result of a great deal of hard work by many.

ASTS focused significantly on legislative and regulatory affairs during the year. There were many specific interactions with these bodies, and I have listed them below.

- We commented on the CDC/PHS guidelines addressing transmission of infectious diseases during organ donation. ASTS decided not to endorse the document. It was felt the extensiveness, combined with the fact that many of the recommendations were not supported by the literature or

many of our medical experts, made it problematic. We subsequently spoke with Dr. Wakefield of HRSA and she was receptive to our concerns. Dr. Robert Gaston of the AST and I then met with Dr. Koh of HHS to explain our position that the CDC zero transmission policy was flawed. We spoke with Dr. Cono of the CDC and she assured us the public comments were being reviewed. Our concerns were heard and we awaited the final iteration of the policy.

- ASTS had discussions with the Advisory Committee on Blood Safety and Availability (ACBSA) regarding a position to be created to represent transplant. Mr. James Berger assured us this would be considered in the fall of 2012.
- We made overtures to CMS for significant revisions to the Living Donor Services guidelines to allow transplant centers to more easily and effectively participate in kidney paired donation.
- ASTS discussed the importance of generic drugs in transplantation and the FDA's approach to this topic. A face-to-face meeting with the FDA was set for fall of 2012.
- We began talks within the professional societies, ACOT, CMS, and UNOS about the duplicative regulatory and auditing activities for transplant programs by both UNOS and CMS. This clearly was the beginning of a protracted effort going forward.

There were many notable accomplishments within the structure of ASTS during my Presidential year.

- Dr. Jean Emond and the Bylaws Committee proposed extensive changes in the bylaws to realign our committee structures with current activities. These were unanimously accepted by the Society.
- Dr. David Axelrod and the Business Practice Services Committee proposed an Advanced Leadership Development Program to allow individuals who previously completed the primary LDP to enhance their skills and knowledge further.
- Dr. Michael Ishitani and the CME Committee brought their maintenance of certification (MOC) product to the Council and then subsequently to be beta tested. It was felt this would be an excellent opportunity for our members to have transplant-specific and economically efficient access for future maintenance of certification.

- Dr. Dorry Segev and the Vanguard Committee again put on an outstanding Winter Symposium that was self-supporting.
- ASTS held online competitive elections for Executive Committee and councilor positions for the first time in its history.
- Dr. Jonathan Fryer reported a new collaborative link between the American Board of Surgery's SCORE program and the ASTS curriculum.
- Dr. Doug Farmer and the Fellowship Training Committee put forth the HPB/HP accreditation issue during fellowship that was accepted by the Council.

As you can tell by the above description, it was a very busy and productive year. I truly enjoyed the interactions with my colleagues and the staff of ASTS. It was an honor to be the President of ASTS for 2011–2012.



Kim M. Olthoff, MD
President, 2012–2013

At the time of this writing, being ASTS President is still a recent blur—having just completed the year, I am not yet at a stage where I feel that I can truly “reflect” upon it. How can I provide a thoughtful reflection so soon? Reflection requires time to let things settle, simmer, ferment, decant. The past year is still a fresh memory of both a frenetic and rewarding time. It was filled with illumination and education, insight and confusion, war and peace, progress and retreat, victory and frustration, and crowned with a ration of success balanced with a quota of humble gratitude. I am still just trying to figure out what really happened and what my role was in the big picture!

When one becomes a president, it is apparent that there are many events that led up to it, so please allow me start my reminiscences from my early memories of ASTS.... My first was when I was a resident in the lab at UCLA and I had an abstract accepted for oral presentation at the 1989 ASTS annual meeting at the Fairmont Hotel in Chicago. It was a simple study comparing UW solution to Collin's solution, and my slides were complete with plain histograms and survival curves. While it wasn't rocket science, it did get me in front of the elite of transplant surgery at the plenary session. I still remember being terrified seeing Tom Starzl in the front row and having Goran Klintmalm ask me a question. This meeting was followed by many more, and ASTS continued to be central to my career. I was fortunate to receive the Ortho-Biotec (how the companies have changed!) award as junior faculty for my research and was lucky to be placed on the Scientific Studies Committee. My "big break" came when I was placed as Chair of the Awards Committee (I am sure by some backroom deal-making between Tom Peters and Avi Shaked) and was able to participate in the Council and Committee Chair meetings, making my arguments for more money and for more research awards.

These experiences were the foundation of my ASTS experience, but some great role models also played a part. I am fortunate to be from an institution where there have been two previous ASTS presidents, providing excellent examples of an ASTS presidency. Clyde Barker was Penn's first. For me, Dr. Barker represented the gloried past history of ASTS. He was one of those transplant surgeons who was there at the very beginning of our Society and participated in building the field of transplantation from nothing. I was a chief resident at UCLA, just about to start my transplant fellowship there (with yet another ASTS President—Ronald Busuttil) when Dr. Barker was ASTS President in 1992–93, and he later recruited me to Penn. He told fabulous stories about working with Rupert Billingham at the Wistar Institute, his friendship with Tom Starzl, and how Dr. I.S. Ravdin got him to do the first kidney transplant at Penn, with success! Dr. Barker has always represented the richness and importance of history and tradition.

In 1995, Dr. Barker recruited Avi Shaked, who was to become Penn's second ASTS President, and I was fortunate to be part of that recruitment. He has been a mentor, friend, and partner for over 20 years, from whom I have learned a great deal, not the least of which was how to be an effective and creative leader in ASTS on numerous fronts. When he was program chair,

then Secretary and President, I observed how he helped organize the first combined ATC, increased abstract submissions, approached pharmas to be bigger collaborators and contributors to ASTS, advocated to increase our research mission, and worked to expand our advocacy efforts. Most importantly, I watched how he worked to involve younger members and get new blood into the committee structure and program development.

I received a lot more advice from many of the other past presidents as the presidency approached (“you have to be tough,” “find a goal and stay focused,” “carve out enough time,” “don’t back down,” “delegate!”, “enjoy!”), and as I watched each one, I was inspired by their ability to organize, argue, motivate, instigate, and deliberate. Each with their own style, each with their own strength, each with their own vision. When I received the nomination as President-Elect, I knew I didn’t get there on my own, but with the support and mentorship of many who came before me.

Just before I started my presidency, I had decided that there were three areas I wished to highlight during my tenure. These were the importance of training future transplant surgeons, the evolving and changing area of research in transplantation, and the globalization of transplantation. I really wanted to make these messages the hallmark of my presidency and had the belief that I could charge right into these missions from the start. But I quickly learned that much of what the ASTS President does is *reactive* rather than *proactive*. Immediately upon starting my tenure, we had the controversial issue of living donor follow-up, trying to get consensus between ASTS and AST, the UNOS/OPTN living donor committee, transplant centers, HRSA, living donors, and more. Then we had to negotiate with the CDC on what they wished to put into the new PHS guidelines defining high risk donors and donor testing to minimize risk of transmission. Just these two issues took many hours on conference calls and trips on Amtrak to DC. In both these situations we did not end up with a final resolution that was 100 percent to our liking or agreement, but concessions were made on all sides to result in a more agreeable final product, and we made a significant impact. Much of the year progressed like this—putting out fires, taking a stand, writing the position, gathering the troops, getting consensus.

I did finally get to focus on the vision I had initially set. In the fall we had a Program Directors meeting where we put forth the reasons our training needed to evolve, followed by a strategic planning session that resulted in a

five-year plan for ASTS fellowship training that Alan Langnas is now in the process of implementing with the Fellowship Training Committee. This is truly exciting for me, as we see training change at such a fast pace, and I want ASTS to stay in the lead. At the Winter Symposium I gave the president's lecture on "Where has all the research gone?" in which I was able to obtain serious and humorous input, advice, and predictions from some of our past, current, and future leaders in the Society. This will be an issue for many years to come. Finally, I was able to present in my Presidential Address my vision for how ASTS has had a global impact and how we can have an even bigger world presence going forward. I have been fortunate to travel to many areas of the world and see how transplantation is growing in so many places, and ASTS should be a part of this. I continue to pursue this effort with the development of our Global Training Partners program.

So reflecting on this past year, I can say I was able to speak out about things that were important to me. But more importantly, I was able to hear others and learn from them. It was a year of growth and has enriched my life in so many ways.

**Editor's Note: These reflections first appeared in the 20th anniversary book published in 1994 and have been edited to reflect the passage of time.*

** **Editor's Note:** Dr. Tilney died in March 2013. The above Presidential Reflections are excerpted from the transcript of an interview recorded a year or so earlier for the ASTS Chimera Chronicles. Thus, with minimal editing by addition and deletion, we are privileged to enjoy Dr. Tilney's recollections of his presidential year and his involvement with ASTS in his own words.*

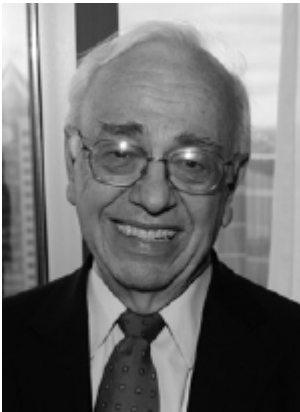
T.G.P.



1995 Presidential Address

MARK A. HARDY, MD, 1994–1995

The following Presidential Address is not the original one that I delivered at the 1995 Annual Meeting, but instead is a reconstruction from my columns in the Chimera, “Letter from the President”; from the minutes of the Council; and from my notes that I found in a file in my attic (at the time I wrote them in longhand on a yellow pad, and not on a computer as I do today).



Ladies and Gentlemen, Members and Guests,

First of all I want to thank you all for having elected me to the presidency of this distinguished Society, which from its beginning had its feet in the 20th century but its brain in the 21st century, and whose progress has been like a comet streaking across the sky. Last year has been

one of the highlights of my academic career and I thank you for letting me serve you. This year was just a small but significant part of the journey of our Society. Many both big and small steps forward were taken with the help of very capable ASTS Officers, Council members, committee chairs, and their associates. I owe them all a great debt of gratitude for guiding me in what had to be done and inspiring me to innovations in servicing our transplantation community, including our patients, both donors and recipients.

I want to particularly thank Ron Ferguson, who as Secretary was my advisor, critic, and strategist for our negotiations with the government and with our sister society, ASTP. I am very grateful to Nick Tilney, our President-Elect, who as Treasurer not only kept honest books, but more importantly kept reminding me of our Society's critical role as a vehicle for training and education. I also want to thank my first mentor in transplantation, Dr. Anthony Monaco, who guided me into this field in 1968 and who dubbed us all as "the eggheads of surgery" in his Presidential Address in 1986. Thank you also to Dr. Keith Reemtsma, my chairman at Columbia, who encouraged me and gave me a carte blanche, but aided me whenever I needed him, in creating an interdepartmental transplantation program of which I am very proud.

It goes without saying that the constant loving support of my wife and children, who are here today, has always been the fuel and the engine that keeps me going.

In the first part of this talk I want to discuss the main accomplishments and concerns of the Society this year and how they were addressed. In the second part I will share with you some of my thoughts about the difficulties that we will face in the future and the need to be prepared to overcome them.

We have all been concerned for several years with the quality and quantity of training of a new generation of surgeons for transplantation of all organs, both below and above the diaphragm. It is not just a numbers game and how many transplants trainees must be able to perform before they can set up a transplant program. The issues here are not only the technical skills of the surgeon, which in fact may be sufficient even after short-term training, but training in recipient and donor selection, pre- and post-transplant management of the patient, and particularly training in immunobiology so that future surgeons can improve on what has been accomplished in the past. They must be able to partner with basic scientists in translational research to readily move the expected innovations from the bench to the bedside.

I am proud to say that in the past year, with the assistance of the Education Committee headed by Dixon Kaufman, we re-evaluated and re-established our training criteria and set up a registry for trainees that will permit us to monitor the manpower needs for many years to come. In the past year we have initiated the establishment of more precise and standardized criteria for certification of training centers as well as of individual transplant surgeons, ensuring not only technical proficiency through performance of adequate number of cases, but also training in clinical management of patients and learning about the administrative functions of the unit.

When we enter the 21st century we must not only continue to lead in the development of the field of transplantation but must maintain our confidence and skills in the overall care of the patient, based on scientific knowledge and developments to which we must remain the main contributor. The future trainee must be able to transplant all organs below the diaphragm (we will leave those above the diaphragm to others), including cells, although they undoubtedly will concentrate on one or two organs such as the liver or the kidney, as surgeons have done in other specialties.

As we look back to our roots, we see that many of us started out in the laboratory learning immunology and applying it to the development of new methods of immunosuppression, identifying rejection, and developing new technical surgical approaches to transplantation of extra-renal organs. We worked side-by-side with colleagues in various disciplines, especially immunologists, and developed ideas that could benefit our patients. We must demand that training in immunology be part of education of our transplant surgeons even though many will focus primarily on patient care and not on basic research. The transplant surgeon must understand basic scientific concepts and be able to communicate with the basic scientists in order to continue to fulfill his/her clinical role effectively—although “cutting and sewing” well is critical, it is insufficient in our field.

As we are inundated with all the “new health care brouhaha” (from Nick Tilney’s correspondence) and hampered by the lack of research funds, we must continue the Society’s effort on its educational and training mission by raising more training and research funds and by close collaboration with industry. To that end I have established in the past year the Industrial Advisory Council to systematically develop a research funding plan for the Society. The small number of training grants must be increased in both

number and in amounts through a concerted effort of the membership and its supporters.

In the past year we have also initiated the development of the electronic communication network under the leadership of William Marks and the newly named Informatics and Data Management Committee to facilitate the dissemination of information and prompt and rapid interchange of ideas among our members and those of other societies, both national and international. We think that this will also be the tool for submission of abstracts and their evaluation and more importantly for their distribution to the whole transplant community.

As part of activities in the past year we have continued to face questions on how to interact with ASTP and how to delay or prevent the fragmentation of our membership into individual organ-specific societies, an alphabet soup which now includes IHTS (International Heart Transplantation Society), IPITA (International Pancreas & Islet Transplantation Association), LTS (Liver Transplantation Society), CTS (Cell Transplantation Society), and others on the way. In the case of fragmentation, the die is cast and the one solution that the Society is pursuing, with only mixed success, is to bring the annual meetings of all these societies together in one large Transplant Week and encourage them to function as a Federation. In this way the members of the various societies, who frequently have their allegiances to more than one, will be able to share ideas, problems, and solutions with their colleagues. The early discussions with the officers of other societies have been met with only tepid interest, with objections arising mainly from the practicality of operating such a joint congress at one site and the effectiveness of a meeting where too many presentations lead to dilution of interest and therefore of attendance. The idea of having a Federation of Transplant Societies is under discussion, and the final chapter on this subject still needs to be written.

The strength of ASTS remains its unity of purpose; once that is diluted, so too will go its effectiveness and impact. I am grateful to Oscar Salvatierra for heading an ad hoc committee that examined the various options on how we can best relate to ASTP. In a survey that Oscar conducted, 74 percent of our membership felt strongly that we should remain a separate surgical society, while half the membership would accept a joint society if the presidency, the council, and the officers were equally divided among the surgeons and the non-surgeons. A similar survey by ASTP found greater enthusiasm to merge the two societies, which is understandable since their

membership is much larger than ours and it is likely that they could therefore exert administrative control over the merged societies. Everyone agreed that cooperative efforts must increase regardless of whether the societies merge or not. It was apparent from both ASTS and ASTP surveys that the societies should not be competitive, but rather supportive of each other.

I am very proud that this conversation between the two societies began on my watch and expect that it will be expanded in the future to the benefit of not only both memberships, but especially to the benefit of the patients which both societies serve. The idea that the societies should remain in close communication in developing position papers was strongly endorsed, while supporting separate presentations so as to have greater impact when speaking with two major voices rather than one when taking a similar position on critical issues. I feel that we have made a productive start in developing formal collaborative efforts with our non-surgical colleagues, and that this relationship will eventually constitute a new infrastructure for our overall efforts in clinical transplantation and immunobiology. This interaction should be of greatest benefit and interest to members of both ASTS and ASTP.

Of greatest concern to everyone in the past year were donor shortage, organ allocation, extension of financial coverage to include immunosuppression, data on cost and outcomes, recognition and funding of new procedures, cell transplantation, and increasing support for UNOS to continue as OPTN contractor. It has become clear in the past year that ASTS must increase its interaction with Congress and the various regulatory agencies to emphasize the importance and value of transplantation to the community and to the country.

ASTS needed to address several main issues dealing with the donor organ shortage. These were: 1) rewarded giving and 2) enforcement of pro-organ donor regulations, which are variable from state to state such as required state laws, and 3) attitudes to presumed consent, which has not gained any foothold in the U.S. but has been newly adopted in a few European countries who converted from organ importers to organ exporters. The efforts regarding some of these issues have been led by individual states, such as Wisconsin and Kentucky, but now need to be promulgated at the national level through UNOS and through the National Organ Transplantation Act.

As a Society and as most of us as members, we have kept our head in the sand in relation to our interaction with the various government agencies. My year as your president has revealed to me that this is not only no longer

practical, but it is dangerous, and that we must become very proactive at the local, state, and national levels in supporting the interests of our patients. As part of cost-cutting, the government is examining everything we do in ever-increasing detail. Transplantation, although a relatively small specialty, has been targeted because of the availability of many of our data.

As the various suggestions and regulations regarding health care funding and service allocations come out of Washington, we must be active participants in their formulation and execution so as to avoid the shift in funding to favor non-surgeons and administrators. This is also particularly true in processing and licensing of new immunosuppressive drugs where we have been very active in interacting with the FDA through our very able representative, Barry Kahan. As your President I have made many trips to Washington together with some of the officers of the Society to discuss apportionment of adequate funds for basic and clinical research in transplantation and provision of adequate reimbursement to physicians and hospitals for care of transplant patients and for maintenance of the donor effort.

In all these interactions, the Society has been fortunate in having the assistance of Mr. Henry Desmarais, who through his knowledge of the playing field in Washington, through his advice to me and to the Council of the Society, and through his almost daily activities, has been an invaluable supporter of our interests in Washington. With his guidance and sage advice, our membership is being well served in the ongoing negotiations for reimbursements and in formulation of organ allocation based on existing data and on medical and ethical considerations.

In preparing this address I tried to decide on what subjects not to discuss and details regarding financial issues was one of them. Yet I feel compelled to mention some of the problems that we are all facing and which the Society must meet face on. Allow me to give you only a few examples of what we have been doing last year and thus provide you only with a taste of what is to come. HCFA is developing new rules to change Medicare Physician Fees Schedule, which will include adoption of RVUs for heart and lung transplantation and perhaps some form of reimbursement for pancreas transplants at Centers of Excellence rather than relying on payment decisions of individual Medicare carriers. Reductions in payments of fees and of assistant fees are being considered. The Society is working hard in negotiating with HCFA on setting the RVUs for various procedures,

preserving payments for bench surgery and for immunosuppression and maintenance, and increasing appropriately practice expense RVUs for many services under Medicare.

Health center reform remains very much a center stage issue in Washington. Establishment of HMOs raises the question of including all or some transplants. How that decision will be made is uncertain, but being eligible through Medicare may force the HMOs to provide transplant coverage. With the new President focused again on restricting health care costs, controls on provider charges or payments as well as on health insurance premiums are being suggested, which may disable the increasing transplantation efforts, prevent development of extra-renal organ transplants, and discourage new trainees from entering the field.

Another concern for the future is the effort by the government to organize a new system for financing graduate medical education under which Congress would set a limit on the total number of residencies and some agency would determine the distribution of such funds. Training in transplantation has not been considered as a major necessity for the future of American medicine and surgery. Although the last word has not been said about specialty distribution of future physicians, these determinations will undoubtedly have major implications for the future of transplantation in the U.S.

As part of the financial concerns and our relation with the various governmental agencies, the focus on long-term support for immunosuppressive drugs continues to be uppermost on our agenda despite the bill which was passed in Congress being vetoed. We are also very concerned about the FDA being slow-footed regarding approval of new immunosuppressive agents, and it is our intent to establish much closer professional links with the FDA, at its invitation, to advise and consult in that regard.

The government's attention to outcomes for lung, heart, and pancreas transplants illustrates a new emphasis on approval and support of new procedures. The Society should not only be deeply involved in these determinations and evaluations, but support the effort as much as it can, since this promises to be of major benefit to the transplant community and particularly to the patients.

I want to leave you with the message, perhaps delivered already too late, that we should try to reassemble the various pieces of transplantation services found among several new organ-specific societies, piece by piece,

and create a transplant federation that will speak to the country and to Congress with one voice on the most critical issues in transplantation. Such a voice or united voices will be clearly heard in the halls of NIH, Congress, and the Executive Branch. Without such unity, we might become just another pawn on the large health care delivery system chessboard, a game that will go on for many, many years to come. We, as our patients' advocates, must keep on winning this game despite the heavy odds against us.

Since I don't want to leave you on this worrisome note, let me remind you that the Society remains strong and that we have made significant progress in the field of training and education of a new generation of transplant surgeons, that we are establishing an informatics network that will facilitate our future activities, that we are making progress in uniting some of the scientific efforts of the two societies ASTS and ASTP. Most importantly, we are beginning to speak with one voice to our regulatory agencies and to Congress; we are being recognized as important cogs in the health care machinery, despite our relatively small representation, because of our high visibility which we are learning to utilize wisely. We must make the policymakers in Washington understand that support for transplantation's academic and clinical efforts is essential in maintaining this nation's leadership in scientific innovation and high-quality medical care.

Again, I want to thank you all for placing your trust in me over the past year, and as I pass the reins of leadership of the Society into the capable hands of Dr. Tilney, our President-Elect, I am confident that we are stronger than ever and that he will steer us wisely into the future. To quote Churchill, "This is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning"—and a brighter and even more productive future is awaiting us.



1996 Presidential Address

NICHOLAS L. TILNEY, MD, 1995–1996



It is a tremendous pleasure for me to address you as President of the American Society of Transplant Surgeons. I am well aware of the singular honor you have done me; I am delighted, humbled, and appreciative.

This has been a dynamic year for our Society, for surgery, and for medicine in general. Since I have summarized much of our activities in my previous Letters, I won't repeat them. In addition, last year Mark Hardy told us in detail about the practical issues, problems, and limitations facing our field.

This year I will indulge myself in discussing a subject of long-standing interest to me (and, I hope, to others here): that of research in transplantation biology, about which this Society has much to be proud. Not only have we surgeons been the primary moving force behind the entire subject of organ

transplantation, we have contributed importantly to knowledge about immunosuppression, organ storage, host allo-unresponsiveness, the multifaceted physiology of rejection, xenografting, and other related subjects.

Because of the career satisfaction in combining academic and clinical work that many of us here have experienced, I would like to mention three mentors who particularly influenced me in becoming an “academic surgeon.” As Sir Arnold Klebs said in another context, “a scientist is not born—he has good teachers.” It was my good fortune to enter the Peter Bent Brigham Hospital as a young resident in 1964.

During that period, I worked extensively with Joe Murray in renal transplantation, then only three or four years after the use of the first chemical immunosuppressive agent, 6-MP.

Those of us in the Transplant Unit were faced with a horrendous failure rate of both grafts and patients at one year. Indeed, it became clear to me that I was working in a complex clinical laboratory, the aims of which were to salvage individuals terminally ill from renal failure by the few means available, or if those means were not good enough (which they weren’t), to invent new ones.

Thus, we went through a whole series of maneuvers in those days, none of which, in truth, worked particularly well. However, the occasional success (and there were some!) was striking and continued to stoke our collective enthusiasm toward subsequent ventures.

Francis D. Moore, MD, was the Chief, very knowledgeable, very enthusiastic, and very supportive. These men knew intimately both the clinical literature on the subject (such as it was) and the scientific literature, and were alert and receptive for new ideas in biology to bring directly to the bedside. In addition, there was a steady stream of notables in this new field coming through the Department to pique our imaginations, from Peter Medawar on down. And, as Frank Stuart mentioned in his Presidential Address a couple of years ago, the transplant laboratories at Harvard were populated with an astonishing array of surgical talent, all interested in this new science. Roy Calne had left, but had been replaced by Ross Sheil, Max Dubernard, Guy Alexandre, Gil Diethelm, Frank himself, Alan Birtch (also a resident), and many others.

The Vietnam War was heating up and most of us residents were coming and going via the draft. Following my military service, I left for the first of two sessions with Professor James Gowans at the Sir William Dunn School

of Pathology in Oxford, the foremost school of experimental pathology in the world at that time. My aim was to learn more about lymphocyte function, physiology, and the role of these cells in allograft rejection, subjects about which I was becoming increasingly interested based on questions raised by patient problems.

Jim Gowans had received his MD in London and had returned to Oxford in 1953 after a year at the Pasteur Institute. He went to work as a young research fellow at the Dunn School, with its Director, Howard Florey, a remarkable experimental pathologist who amongst many important studies on phagocytosis, arteriosclerosis, and inflammation, had transformed penicillin from a laboratory curiosity into the most powerful agent yet available for treating bacterial infections. The laboratory in Oxford already had a background of investigations into lymphocyte activity, and as Gowans recently told me, Florey had suggested that he study this cell, introducing him to the subject with the statement that it had “blunted the wits of a number of his colleagues, and he said he could see no reason why I should be spared a similar fate.” A heavy challenge for a young research fellow!

However, by 1964, in a wonderful series of experiments using transferred radio-labeled thoracic duct lymphocytes, Gowans had convinced most people that an important population of long-lived small lymphocytes recirculate continuously between blood, the lymphoid organs, and lymph. These cells were shown within a few years to be thymus-derived T cells.

The 60s were an exciting time in immunology. It is worth noting that until only a few years before, the only property of the lymphocyte about which there was general agreement was that this cell was motile. An oft-quoted remark during that time came from Arnold Rich, Pathologist at Johns Hopkins, who stated rather hyperbolically “that complete ignorance of the function of this cell is one of the most humiliating and disgraceful gaps in all medical knowledge.”

There was little in the literature to convince anyone that small lymphocytes had immunological function. Indeed, in his book *The Clonal Selection Theory of Acquired Immunity*, Macfarlane Burnet had written in 1959 that “an objective survey of the facts could well lead to the conclusion that there was no evidence of immunological activity in small lymphocytes.” However, ongoing work by several investigators, including Gowans himself, proved this cell to be critical in alloreactivity as well as in immunological tolerance. Recirculation was the body’s means to disseminate the local antigenic

message throughout the entire lymphoid system of the host, thus allowing him to marshal his entire repertoire of immunological defenses to destroy (or, depending on the circumstances, disregard) the foreign stimulus.

For a young surgeon without previous laboratory experience, working with a basic scientist like Gowans was a most instructive experience. The Dunn School was a large multi-center laboratory examining everything from macrophage physiology to cellular immunity to antibiotics; Florey and Chain's contributions to the production of penicillin had earned them the Nobel Prize in 1945; one of the other scientists, Abrams, had just discovered the antibiotic properties of the cephalosporins as I got there.

Gowans' smaller Cellular Immunology Research Unit was filled with Australians, Brits, and occasional Yanks, all working on various aspects of that young science. I learned several important things from him: 1) how truly difficult creative research can be; 2) that intellectual honesty is paramount—before one presents or publishes one's findings, they must be checked and rechecked and rechecked again, often from different approaches; 3) the question one asked and attempted to answer must be clear, simple, and definite. I think of this latter point not infrequently when some of the residents in our department present the fruits of their studies; these talented individuals have often worked with excellent scientists, using the most current techniques; however, when they show their highly complex data, I am sometimes not sure whether they really understand what the original question or premise was, much less the answer, or how their investigations fit into the overall picture.

My years with Gowans, coming in the middle of my residency, were intellectually my most exciting, a sentiment echoed by many surgical residents with similar laboratory experiences I have spoken to subsequently. With this in mind, I am delighted to announce that there will now be two new "surgical scientist awards" available for our Society, one through the kindness of Roche and the intrigues of Mark Hardy, and one via a new relationship between the ASTS, the National Kidney Foundation, and matching funds from Fujisawa, Ortho, and Sangstat. Particulars about these two-year, \$25,000/year scholarships, designed preferentially for residents in the midst of their surgical training, are currently in *The Chimera* and being advertised in *Transplantation*. Because they are two-year awards, they will be staggered; each will be awarded every other year. We hope that they may stimulate an interest in the science of transplantation, which may endure

throughout the entire careers of those who have gained them. I would also here recognize the continuing generosity and loyalty of those companies who have supported other scholarships and efforts of our Society for so long—Sandoz, Ortho, Upjohn, Fujisawa, Sangstat, and Syntex-Hoffman LaRoche.

At this point, I would like to review the evolution of research funding in the United States and the importance of the surgeon within that system. To emphasize that adequate funding has always been a problem, one might recall a remark by Thomas Henry Huxley, given when he was President of the Royal Society of London in 1862. He called for improvement in the lot of science, but warned sharply that the pursuit of such goals could earn a man praise but not pudding. Those of us with some of our salaries on soft money and without excess pudding can certainly relate to that. Put another way, one might consider a couplet penned by the British essayist and poet, Hilaire Belloc: “I’m tired of love, I’m tired of rhyme, But money gives me pleasure, all of the time.”

The scale, nature, and funding of scientific laboratory efforts have changed substantially during this century. Initially the institution itself paid for its own laboratory efforts, either out of general funds or from endowments. Over the past decades, however, an increasingly large share of funding has come from the federal government. In 1993, for example, 63 of a total of 161 billion dollars spent on research and development in this country (c. 40 percent) came from this source. Of that, 25 billion went to federal laboratories (of which there are more than 700) and 12 billion was allocated to universities. The federally funded portion of all research performed at universities was 55 percent.

Early government involvement in science stemmed, in the latter half of the 19th century, from agricultural interests, initiating a relationship between government and universities which aimed to develop science for the benefit of society. Agricultural research actually remained the only sustained effort until the Second World War. Subsequently, many investigations were driven by considerations of national security; at the same time, public support for study of the natural and social sciences increased because of the promise for improving human health and comfort. Burgeoning government involvement in aeronautics, energy, and space exploration created the National Science Foundation, and support for basic biologic science under the aegis of the National Institutes of Health was increased. Indeed, budgets for NIH grants grew by 500 percent during the 1950s. The Cold War provided even further

emphasis for interactions between universities and the government. Between 1983 and 1987, for instance, the NIH budget grew at an inflation-adjusted rate of 7.1 percent per year. However, since the end of the Cold War and the dissolution of the Soviet Union and with downsizing of our defense priorities, increasing skepticism has not only extended to defense-related research (reasonably enough) but to other research endowments as well.

As a result, between 1988 and 1993, the annual growth rate of the NIH budget fell to 2.4 percent per year (1.8 percent if research for AIDS is excluded). Basically, NIH budgets have remained relatively static or declining in real dollars, although this year was, in fact, better, despite the ongoing battle of the budget. There are still some in Congress, thank goodness, who understand the importance of continued support for science.

The relationship between industry and the universities has clearly flourished over the past years, particularly as academic institutions have become such a highly productive force in biomedical research. In fact, national growth revenues associated with products manufactured under licenses from all U.S. universities are about 9 billion dollars annually. University research, according to one estimate, has yielded four times as many patent applications per dollar as corporate research. As a result, corporate sponsorship of university-based research has been the fastest growing component of total research expenditures over recent years, increasing greater than 12 percent per year, and reaching 1.2 billion dollars in 1993. Such money, however, still cannot compensate for important Federal cutbacks. In addition, research via industrial funds is usually, by definition, product driven, unlike NIH funds which are designed for solving of basic questions in science initiated by individual investigators. And, as has been emphasized recently both by David Blumenthal and Steve Rosenberg in the NEJM, the growing relationship between universities and industries may pose great threats to the openness of scientific communications. There have been several recent examples of well-controlled data, unfavorable to a particular product, being suppressed or pulled from publication at the insistence of the sponsoring company. It is clear that profits must never interfere with truth.

A final and evolving variable in this discussion about research money is that income from practice plans, which used to be a potential source of start-up funds for young investigators or bridge money for those between grants, is now decreasing dramatically. As we are all too well aware, academic

pursuits are currently being hit by a double whammy: diminished Federal funding and reduced payment from clinical practice.

That people are living longer and better than ever before (at least in developed countries) has been in no small part due to the flourishing of biomedical research. In surgery, for instance, the advances have been remarkable and have crossed the entire spectrum of the discipline. In addition, the needs of surgery have driven other sciences forward: pharmacology, immunology, cancer biology, and biophysics are obvious examples. Indeed, our own specialty is a supreme example of all this, with its tradition of involved clinician-scientists investigating, defining, and often creating multi-faceted treatments for organ failure.

Despite it all, however, society has come to feel that it hasn't gotten its money's worth from research. Indeed, the public and elected officials seem increasingly impatient that all their ills cannot be cured and that they can't attain eternal youth besides. The sustained public outcry that AIDS and breast cancer haven't been solved, despite huge amounts of money and effort expended, exemplify this mindset. Take the increasing funds spent on AIDS, for instance. Possibly discouraged by all these pressures, the fewer than 2 percent of all physicians in this country who continue to be biomedical scientists are decreasing steadily in number.

For many reasons, not the least of which are the practicalities of life (Huxley's "praise but no pudding" theme), surgeons in particular who spend so much time and effort training in and practicing their specialty must often leave their early investigative careers to go into full-time caregiving. Despite all this, however, transplant surgeons have remained pretty competitive in garnering research funds. Steve Rose of the NIH tells me that 60 percent of transplant-related grants are processed via the NAIAD, the remainder via diabetes and kidney disease, heart, lung, and so on. The award rate is over 20 percent, holding relatively steady (it is up this year) and quite comparable to that of all first-time applicants in general. This is good, and we should be reasonably pleased.

In contrast, it is distressing that when the initial awardees (overall) try for a second or third competing renewal, the overall success rate has fallen from c. 25 percent in 1973 to 11 percent in 1993. It is also interesting that the number of yearly applications made by MD investigators over age 46 has increased; however, those by investigators less than 36 years old has declined. Bernadette Healey summed this trend up by suggesting that "new

physician scientists may have become an endangered species because they fail to compete rather than fail to succeed.” Indeed, she stresses that those who fail to compete self-select themselves as unlikely to succeed. An additional corollary (and danger) to all this is that those who have been consistent and funded contributors for years may continue their productivity but without producing functional progeny. This is especially distressing when one considers that one of the strengths of the American biomedical effort (and it is virtually unique to this country) has been the emphasis on support for young people to give them the chance to test their ideas independently in the laboratory.

So here we are, the ASTS, a group of talented individuals privileged to be in a particularly intellectually demanding and rewarding specialty. The positive side remains very positive: a still relatively new and exciting subject with important continuing ramifications in other biosciences; a Nobel Prize; highly recognized, successful surgeon-scientists amongst our ranks; and fellowship-trained young people doing very well indeed. The negative side is somber, not only for our specialty, but for academic medicine in general. We all realize the problems facing every medical and surgical specialty: too much manpower, increasing micromanagement, and reduced costs. The market may take care of manpower—indeed, some may have to change career plans and enter other areas. I have a feeling that the managers may decrease in number, smothering (one can’t help fantasizing) on their mission and vision statements. The cost-containment issue is probably with us for some time to come; reduced clinical and research funding is adversely affecting every department of surgery in this country. Although many of the disruptive changes occurring in medicine at the present time are in the name of cost containment, one feels they are perhaps more to do with corporate greed, responsibility to stockholders, and bloated executive salaries than with good patient care, teaching, and research.

The ability to perform one’s specialty may deteriorate in the face of primary care and capitation. Those specialists remaining may become even busier; indeed, important scientists are beginning to voice concern that the tremendous pressure for clinical services is precluding the time for scholarly reflection so necessary for the investigator. We all can relate to that. But, as Clyde Barker has suggested in a recent symposium on the impact of managed care on surgical education and research, new areas of study may well arise in our field which we cannot now easily visualize. Perhaps the critical

investigations in our subject should be delegated specifically to those with a real talent for research (indeed, these may be the young individuals who gain the research fellowships that this Society and its pharmaceutical allies have provided).

It must be emphasized that surgeons as a species have been consistently able to rise to challenges and adversity. And as we see from the fruits of this and related meetings, they have continued to perform well despite often large debts incurred throughout a decade of clinical training and increasing time constraints, both in applying for funding and in performing research. Thus, it remains critical that a coterie of such individuals, many of whom are reading this, continue to assume leadership roles in research enterprises and/or close participation with colleagues in related fields. The increasing relationship between the ASTS and the ASTP, for instance, may be helpful in this regard. As surgeons, after all, we can contribute skills that other investigators cannot.

In conclusion, the evolution of organ and tissue transplantation remains an outstanding example of what Joe Murray calls the *oneness* of science: clinical problems solved in the laboratory. Pasteur noted that no category of science exists to which one could give the name of *applied science*. Science and the application of science are linked together (he said) as a fruit is to a tree that has borne it. I would predict that many of our current difficulties will eventually settle and the public will again begin to demand, expect, and appreciate, as they once did, better scientific and medical solutions to their problems.



It All Began in Wisconsin

HANS W. SOLLINGER, MD, PHD, 1996–1997



Ladies and Gentleman, Members, and Guests:

Before I begin to tell you the story of Ray Owen, a name possibly unknown to many young transplant surgeons, I would first like to apologize for what seems to be a rather self-promoting title of this lecture. This was not meant to be so, but I rather wanted to stimulate your curiosity about whether I would talk about UW Solution, CellCept, or the Green Bay Packers.

First of all, it is my great pleasure to thank the membership of this Society for giving me the privilege to serve as your president during the past year.

My thanks also go to the members of my team in Wisconsin. They are my colleagues and friends, and make it fun for me to go to work every morning. In particular, my thanks go to the late Folkert O. Belzer, my former Chair and

mentor. Last, but not least, to my family—Mary, Niki, and Muffy are here today—I thank them for their love and support.

Now, let's walk down the campus of the University of Wisconsin. At approximately this spot here 50 years ago, you would have found the Institute of Genetics, a building which housed the laboratories of such great investigators as Al J. Kohl and M. R. Irwin and, of course, Ray Owen.

This is the building in 1997, beautifully restored and an attractive centerpiece of the School of Agriculture.

This is the young Dr. Ray Owen, at the time he performed his seminal experiments at the University of Wisconsin, which I would like to discuss with you today, and whose consequences have been so far reaching. Bernard Amos expressed it eloquently just last year: "A younger generation may be quite unaware of the tremendous impact Ray's observation and deduction had on biology. The implications of acquired tolerance led to three different Nobel Prizes: Medawar-Burnet, Snell-Dausset-Benacerraf, and Doherty-Zinkernagel."

Ray's comments at the time of his discovery were more characteristic of his very humble nature: "Several interesting problems in the fields of genetics, immunology, and development are suggested by these observations."

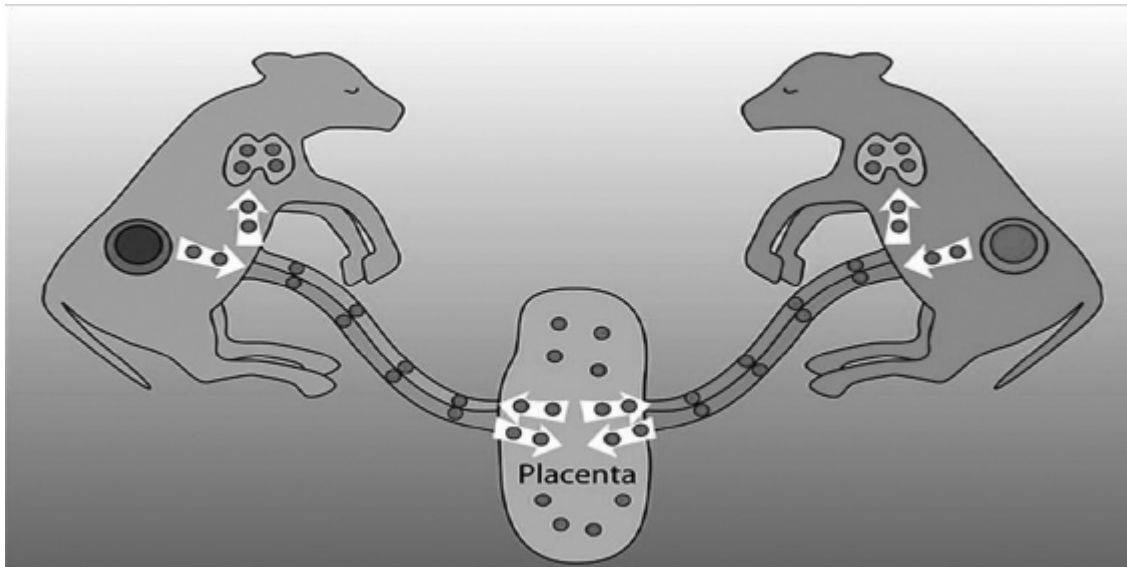
The very observation which stimulated Ray's interest in the discovery of red cell chimerism, however, is known by few, and I have to share this anecdote with you.

The events involved a Guernsey cow with twin calves. She had been properly mated to a Guernsey bull, but shortly afterward, a lustful Hereford escaping from a neighboring area got into the act. The color patterns of the calves showed clearly that the twins had different fathers.

The big surprise came with the blood group analysis. They had identical blood groups. This could not be explained by their being identical twins, for they were of different sexes, to say nothing of having different fathers.

The question arose, why should non-identical twins be identical for these blood groups, and how could a calf inherit blood groups from both fathers?

Ray, with his rural background, was familiar with the peculiar uterine anatomy of cattle, which facilitates crossconnections between the extraembryonic blood vessels, as demonstrated by Lilly as early as 1916. These anastomoses provide a ready opportunity for exchange of blood between the two embryos.



Further studies with cattle twins and their blood groups confirmed that non-identical cattle twins share red blood cells of the other twin, and these red blood cells remain in the animal's circulation for the rest of their lives. This observation resulted in the seminal paper in *Science* entitled "Immunogenetic Consequences of Vascular Anastomosis Between Bovine Twins."

What is not widely known is that Ray had initially submitted a much more detailed paper in which he extensively described the potential application of his observations for the field of immunology and transplantation. However, this paper was rejected and later reduced to the *Science* version.

The story moves now from Wisconsin to Australia, where Macfarlane Burnet and Frank Fenner were developing the concept of self and non-self in antigen recognition. In their 1949 book entitled *The Production of Antibodies*, they clearly recognize the significance of Ray Owen's observation. In their manuscript they write:

"There is interchange of embryonal cells, and these cells are capable of becoming established in the hematopoietic tissues of their co-twin hosts, and continue to provide a source of red blood cells distinct from those of the host, presumably throughout life."

From Australia we move to England, where Sir Peter Medawar, although having already written the classical paper on homograft rejection, was not aware of Owen's findings. In fact, it has been reported that in 1949, during a conversation with a Scottish veterinarian named Hugh Donald, who asked Medawar for a simple method to distinguish identical vs. nonidentical

calves, he replied, “Just exchange skin grafts between them, and if they get accepted, the animals are identical.”

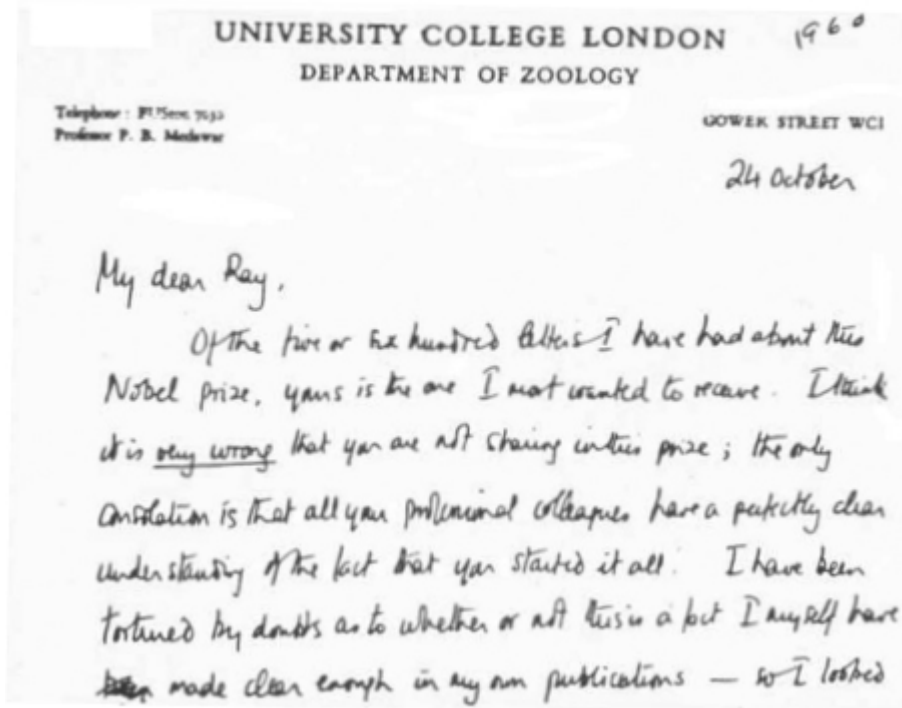
Here you can see a specimen of this surgical enterprise, and here, to the astonishment of their transplanters, these skin grafts were uniformly accepted. This was totally unexpected, as with an absolute statistical probability, only a few of these cattle could have been identical twins. The histology of the skin grafts was even more revealing.

As expected, a third-party skin allograft was rejected by a massive cellular infiltrate, while autografts, as expected, took perfectly well.

On a close look, however, while macroscopically skin grafts from nonidentical twins were accepted, in contrast to the autografts, there was a mild infiltrate. Possibly, this is the first indication that an active interchange between the graft and the host takes place to maintain the status of graft acceptance.

In 1951, when Medawar moved to London, his associate, Billingham, and student, Brent, went to work on their classical studies on the induction of tolerance in neonatal animals. Newborn mice or mice in utero were injected with donor cells and later grafted with the cell donor's skin graft. These grafts were accepted for a prolonged period of time, and were the first demonstration of actively acquired tolerance of foreign cells.

The subtitle of the paper emphasizes the first demonstration of the induction of specific tolerance to murine skin allografts. This manuscript contributed greatly to Sir Peter Medawar's receiving the Nobel Prize in 1960. In retrospect, it was obvious how the Billingham-Brent-Medawar experiment was influenced by Owen's observation, but this was not recognized by many.



However, Peter Medawar, in his letter to Ray Owen, written shortly after receiving the Nobel Prize, demonstrates that the Nobel laureate knew otherwise. The letter reads:

“My dear Ray, Of the 500 letters I have had about the Nobel Prize, yours is the one I most wanted to receive. I think it is very wrong that you are not sharing in this prize. The only consolation is that all your professional colleagues have a perfectly clear understanding of the fact that you started it all.... Yours ever, Peter.”

Medawar, at that time, did not seem to realize the implications which his experiment could have on clinical organ transplantation, and this anecdotal conversation has been reported on numerous occasions. Medical student Roy Calne: “Sir Peter, do you think your findings could have any implications for transplantation?” Medawar’s response: “Absolutely not.”

A precise account of the events which followed this seminal discovery is summarized in Leslie Brent’s recently published book, *A History of Transplantation Immunology*—a must-read for all involved in transplantation and transplantation biology. Many investigators have since contributed in attempts to induce tolerance on a clinical or preclinical level. I must apologize to all of those individuals who I will not be able to mention during the short course of this lecture.

One of the early pioneers utilizing antilymphocyte globulin and inoculation of bone marrow was former President Tony Monaco. Here, Tony is seen in conversation with Peter Medawar and Michael Woodruff.

The next giant who appeared on the scene was Dr. David Hume. As I was told, he called his young associates, Judy and Frank Thomas, into his office, and ordered them to initiate experiments which would ultimately lead to the long-term acceptance of allografts.

Unfortunately, Dave Hume died too early to enjoy the classical manuscript of Judy and Frank, published in 1987.

Frank and Judy and their collaborators could demonstrate that the combination of antilymphocyte globulin and donor-specific bone marrow infusion resulted in spectacularly extended graft survival in Rhesus monkeys, and even tolerance in some of these animals.

Walking through the poster session of the 11th International Congress of the Transplantation Society in Helsinki, Judy called me over to look at her poster. She pointed to a cluster-like aggregation of lymphocytes in these long-term accepted kidneys. I found the observation interesting; however, did not believe that any great deal of significance should be attributed to them.

Immunoperoxidase stains of the nodules with anti-donor sera obtained from Hans Ballner seemed to indicate that these nodules primarily consisted of donor type cells. However, as Judy recently indicated in a letter to me, staining techniques, as well as antibodies at that time, were crude, and it is possible that the quantity of donor cells was overestimated.

Nevertheless, they made the important observation that the presence of dense foci of CD8⁺ cells in the kidneys of long-term survivors was an unusual and fascinating finding of these studies.

Now, for a short while we seemed to have drifted away from Ray Owen's discovery. Nevertheless, there was one transplant surgeon—and possibly the only one—who had kept Owen's discovery in mind. Tom Starzl, as early as 1962 in the Surgical Clinics of North America, published this drawing of the Owen cattle twin experiment, demonstrating that he was very much aware of the significance of this experiment.

One of the crucial observations which Tom Starzl made came during his first Denver series of kidney transplants where a drug cocktail was used. He writes, "The fundamental observation was that something changed during the first weeks and months after successful kidney transplantation in the relation of the recipient to the graft. The pattern of recovery, in which the amount of

drug treatment often became progressively less, was the strongest testimony that such a host-graft change had occurred at an early time, allowing the lifetime rehabilitation of such patients.”

He noted that of the first 64 patients in the Colorado series, 16 survived for the next 25 years, with two eventually stopping all immunosuppression without rejection.

Starzl now drew a direct line between the Owen cattle experiments to Medawar, Billingham, and Brent, to the parabiosis experiments by Hasek and others, and arrived at a new concept entitled “The Two-Way Paradigm of Host-vs-Graft Reaction.”

In a letter to me, Tom insisted that the credit for this discovery must be shared with Noriko Murase, Jake Demetris, and Mauricio Trucco. In his by now classical drawing, he postulates that a not-so-defenseless graft, or cells within this graft, in interchange with immunocompetent cells of the host, if the balance is right, and as indicated by persistent long-term chimerism, might result in long-term graft acceptance.

Clearly, this observation was hotly debated and often questioned by scientists and clinicians of the highest caliber. The observation that patients who are chimeric reject their grafts and that non-chimeric patients seemed to do perfectly well suggested that chimerism is just an epiphenomenon of successful immunosuppression.

It was therefore of interest when Will Burlingham, here shown with Ray Owen, was able to identify a young patient who had received a kidney from his mother many years ago and had stopped immunosuppression for several years. Will isolated donor-specific cells from the blood of the recipient and demonstrated that addition of very few of these cells could reduce, or even abolish, donor-specific cytotoxicity. Thus, the functional capacity of donor-derived chimeric cells was first demonstrated.



Drs. Hans Sollinger, Ray Owen, and Will Burlingham, January 2005

Furthermore, biopsies obtained from this patient demonstrated lymphocyte clusters reminiscent of the ones the Thomases had shown us 19 years before. PCR analysis of these clusters was striking for a high concentration of TNF α , a highly potent apoptotic cytokine. This observation clearly points to the significance of the graft itself as the important component in the induction of unresponsiveness. This observation might well resolve the controversy between those who believe peripheral chimerism is of importance and those who don't.

I would suggest that in some cases, these apoptosis-inducing cells are present and can be detected in the circulation, and in some cases, they produce their potent function within the graft without being detected in the circulation. In any event, the end result—graft acceptance with no or minimal immunosuppression—is the same.

Our task now is to develop strategies to intentionally design protocols which allow this beneficial interplay between graft and host responses to take place, and to create a truce between host and recipient. Two of my colleagues, Stuart Knechtle and Allan Kirk, have recently developed protocols in MHC Class I and II mismatched Rhesus monkeys which have the potential to reach this goal. First, Stuart demonstrated that a short course of immunotoxin and donor lymphocyte resulted in long-term graft survival of kidney transplants in these animals. It is of interest that in Stuart's experiments, the administration of immunotoxin was followed by profound T cell depletion, lasting two to three weeks before recovery occurred.

In contrast, Allan Kirk, using the same experimental model, with the administration of two monoclonal antibodies, blocking costimulation to

CD28 and CD40, achieved an equally promising result. In his experiments, however, no T cell depletion was seen. However, in both of the long-term surviving animals, again, typical lymphocyte clusters were prominent on biopsy.

In summary, these primate experiments, the work by Starzl and his group, earlier courageous clinical series by Barber, Diethelm, Monaco, and others, now open the stage to the investigation of preclinical and clinical trials, possibly supported with enthusiasm by the National Institutes of Health, to enter the Holy Grail of transplantation biology—long-term graft acceptance without immunosuppression.

Again, we owe great respect and gratitude to a very humble, brilliant scientist, who showed us the way more than 50 years ago. I am personally delighted that he did it in Wisconsin.

Thank you very much.



1998 Presidential Address

RONALD M. FERGUSON, MD, PHD, 1997–1998



It has been one of the greatest honors of my career to have served the Society this past year as its 24th president. There are many to thank for their help over the past year: Hans Sollinger gave generously of his time and freely of his ideas; Josh Miller, your new president, gave the year a certain questioning stability; Katrina Crist, in her first year as our Executive Director, established a central office and a sophisticated communications hub for the Society; all of the committee chairs; and especially Avi Shaked, whose energy and work seem limitless, in ever improving our program, and Henry Desmarais, who holds a unique and special place in the history of our Society. I would like to thank my kids, Melissa, Jason, and Meredith, for those many years of being there and for forgiving the missed soccer games, hockey games, and tennis matches. They tolerated, yet still accepted and loved their father for what he is.

This is the year that was

or

“The future is all ahead”

– EARL BRUCE, OSU FOOTBALL COACH, 1982–1989

During his tenure as football coach at OSU, Earl Bruce was the Yogi Berra of college football.

Like Yogi, many of Earl’s truisms also contained truth. I am going to speak today about the future. It is “all ahead,” the future of our Society. It has been a busy year. A year that has forced change, transition, and controversy. When the times seem unsettled within an organization, it serves all well to look to the organization’s history and to clarify the core assumptions upon which the organization was built and see if those assumptions continue to fit the reality of changing times. To do this with the ASTS, we must look to our roots as a Society. History is never an objective recollection of fact. Perception of the needs of the present moment tends to influence our view of the events of the past. So it is, as we enter the 25th year of history of our Society and as we look back at the ASTS as viewed in the context of the events of 1998.

It all began in the winter of 1974. Transplantation was in its infancy and Congress had recently passed sweeping legislation that, for the first time, gave Medicare entitlement to a population with a specific disease and created, within Medicare, the End-Stage Renal Disease Program.

The times generated great expectations of the therapeutic benefit of renal transplantation despite its newness. Implicit in the discussions preceding the establishment of the ESRD Program, the Gottschlak report, for example, and within Medicare, there was a sense that transplantation could almost provide a “cure” for ESRD. In an effort to discuss the implementation of renal transplantation within the new End-Stage Renal Disease Program, the Social Security Administration called together a small group of surgeons involved in renal transplantation. Dr. Fred Merkel, then of Northwestern in Chicago, organized the meeting for the Social Security Administration. Also present were Aaron Bannett of Mt. Sinai Medical Center in Philadelphia and Russ Lawson, a urologist from the University of Oregon. The Baltimore gathering

stimulated in these three a real need to organize the transplant community in the United States.

At the time, only surgeons were involved in transplantation. There were no transplant physicians and enthusiasm for a new surgical society was limited. Drs. Merkel, Bannett, and Lawson were not the most prominent of transplant surgeons, but they were dedicated and they did have a vision in seeing the need for the new organization if the patients were to be served with transplantation within the End-Stage Renal Disease Program. A small organizing committee met at O'Hare Airport in the spring of 1974 to proceed with establishing a Society. Following this meeting, Aaron Bannett solicited members by mail and chaired a nominating committee to draw up the first slate of officers. Tom Starzl, the ASTS Pioneer Award winner of this year, was coaxed into accepting the first presidency. Apparently, Tom was not initially enthusiastic about a new Society. There were already many meetings and societies and neither time nor purpose seemed compelling at the moment. After several discussions with Bannett, however, Dr. Starzl accepted the offer from the nominating committee. Letters were sent by Bannett to those he knew were actively involved in renal transplant surgery. By August of 1974, 126 had responded affirmatively to join the new organization of transplant surgeons—the ASTS was conceived.

In October of 1974, the American College of Surgeons met in Miami, Florida. On October 21st at the Eden Roc Hotel, an organizing meeting of the new transplant Society was held. Invitations had been sent to all surgeons who had responded to Dr. Bannett's solicitation. Fred Merkel chaired the meeting. Russ Lawson had incorporated the Society in Oregon and a mail ballot of the charter members had adopted the name The American Society of Transplant Surgeons. At the same time, Dr. Bannett's nominating committee's first slate of officers had been nearly unanimously accepted. Dr. Starzl assumed the presidency and, at this meeting, Jerry Rosenberg was charged with writing the bylaws; Jerry Turcotte was asked to chair the membership committee and develop membership criteria for the Society. Dr. Tom Marchioro was to put together the program for the first annual meeting which was to be held in Chicago in the spring of 1975. Nearly 25 years ago, the ASTS was conceived in Baltimore, had gestation in Chicago and Miami, and was "born," as Dr. Starzl metaphored in his first presidential address, in Chicago in 1975. It is most instructive to review the debate and discussion of those early defining times of the American Society of Transplant Surgeons.

From the Miami meeting, the purpose of this Society was threefold: 1) to be the voice on transplant issues in the United States; 2) to develop national education programs to increase organ donation; and 3) to have an annual scientific meeting.

ASTS Purpose

Miami, 1974

- to be the voice of transplant issues in the United States
- to develop national education programs to increase organ donation
- to have an annual scientific meeting

In the reading of old minutes and correspondence of the transactions of the Society, three issues have tended to surface and re-surface again over time and create debate, discussion, and divergence of view within the Society concerning the role of each of these three issues in our mission. They are issues of membership, politics, and organ donation. Nearly every Council has dealt with one or another of these issues. Always with debate and controversy. Rarely with a resolve to change the status quo. Discussion of each issue over time can be described by key words: with membership, it was exclusivity; with politics, it was distance and reticence; with organ donation, it was ambivalence and perceived conflict of interest. In looking ahead, the future requires that we, as an organization of the transplant community, clarify our mission with respect to each of these issues. I should like to give you my thoughts about these three.

Issues constant in the history of ASTS

- membership—exclusivity
- politics—distance, reticence
- organ donation—ambivalence, conflict of interest

The identity of any organization is given by the sum of its individual members. At the first annual meeting in 1975, Jerry Turcotte gave the report of the membership committee.

Original membership criteria 1974

- transplant surgeon
- eligible for American Boards

- training or equivalent experience in transplant for one year
- clinically active in transplant
- one publication as first author dealing with transplantation
- sponsored by a member; endorsed by two others

There were six criteria proposed for membership in the ASTS. The Society was to be a society of surgeons, and therefore the membership criteria were defining as a homogenous and limited body. The criteria were members must be transplant surgeons eligible for American Boards of a surgical specialty related to transplantation. They must have one year of transplant surgery training or equivalent clinical experience and must be active clinically as part of a transplant team. They also must have contributed to the field by publishing at least one first authored paper dealing with clinical transplantation or transplant science. They also must be sponsored by one member and endorsed by two others. Surgeons had pioneered and developed all of solid organ transplantation. In 1974, surgeons were the only ones with the experience, expertise, and interest to carry forward transplantation, so it was reasonable, at that time, to endorse the surgically exclusive criteria.

In 1984, the membership bylaws were amended to require board certification instead of board eligibility by an appropriate surgical specialty board. It is interesting to note that, during the discussion at the first ASTS meeting concerning membership, Dr. Turcotte commented on the criteria by saying, “The intent was not to write these [criteria] in concrete forever. We are a new organization and we may want to change things in the future.”

There was discussion and divergence of views concerning non-surgeon members. “Associate” membership was proposed for discussion by the members of the membership committee. No decision could be reached and the issue of non-surgeon members was deferred by Dr. Turcotte, the consummate diplomat, saying “defer this decision [on non-surgeon members] until we see how the Society evolves and if we need an associate membership category.” Since 1984, the entire field of transplantation has evolved. It has expanded in scope and in the diversity of stake holders. One could reasonably ask whether our Society has evolved and adapted to the evolution and expansion of the field itself.

Subsequent councils of the Society were periodically faced with the same two issues of membership that could have changed the makeup and, therefore,

the identity of our Society. The discussions since the 1984 amendment have centered around broadening the criteria and making the Society more inclusive of all those actively involved in the field of transplantation rather than becoming more restrictive and surgically homogenous as the history of the first 10 years would suggest. In 1996, the last bylaws change on membership created the “surgical scientist” category to accommodate within our ranks non-surgeons whose scientific interests and careers have been in transplantation. To date, one individual has afforded himself the opportunity opened by this membership criteria change. One could argue that this was an adaptive response that was too little and too late. The ASTP, however, has experienced rather dramatic growth over the last several years, including in its ranks many transplant surgeons. A simple look at meeting registration numbers and the number of abstracts submitted and accepted for the annual meetings of both the ASTS and the ASTP over the past several years tells the story of a membership policy that is inclusive as with the ASTP or exclusive as with the ASTS.

Abstracts submitted to annual meeting

	ASTS	ASTP
1995	388	672
1996	401	896
1997	451	994
1998	422	1122

Abstracts accepted to annual meeting

	ASTS	ASTP
1995	68	672
1996	71	896
1997	314	994
1998	244	1122

Over the past three years, the ASTP has experienced a 67 percent increase in abstract submissions; the ASTS only 5 percent. In 1998, 700 more abstracts were submitted to the ASTP than the ASTS meeting. Many of these abstracts were from surgeons. This year, there were 508 more abstracts accepted at the ASTP meeting than the ASTS. Meeting attendance also

speaks to our position. In 1997, the ASTP had 1,063 more registrants than the ASTS. The ASTP has experienced an 83 percent increase in registration while the ASTS experienced a modest increase.

Registration annual meeting

	ASTS	ASTP
1995	768	1117
1996	797	1570
1997	985	2048
1998	*641 (20%)	*1,597 (4%)

*pre-registration

If we, as a Society, continue on our historical course, we will increasingly isolate ourselves from the rest of today's transplant community, including the transplant biologists, scientists, transplant physicians, and others. The inevitable consequence is that the ASTS will regress to a smaller scientific club with ever-decreasing interest in our meeting due to the larger and more diverse meeting alternatives that are available. Such an end might well be a laudable goal in itself if, in fact, that is what the membership desires. Such a status quo-driven course would not require a re-affirmation of purpose or mission. It would be an easy course for it would not necessitate change. There is another course, however. We, as a Society, could choose to review and clarify the core values and assumptions upon which our Society was founded and apply them to a more complex and diverse time and a larger transplant community, and partner only with those who share our values.

To establish such partnership, we must solidly articulate our own core values and again partner only with those whose values are consistent with ours. I personally would recommend that the membership follow the latter path and that we form a new order in the field of American transplantation, one that is inclusive and encompasses all of those whose scientific and clinical lives and careers are immersed in transplantation. It would be disciplined in design and governance structure. It would be a multi-purpose organization with a patient focus and dedicated to the three original tenets of the ASTS: to be the authoritative and respected voice of transplantation in the United States; to conduct a broadly based annual meeting of quality information and report important notes of progress in the field of transplantation science and medicine; and to provide a platform to promote

organ donation so as to maximize the benefits of transplantation to all of those who had entrusted us with their care.

The new order in American transplantation

- inclusive
- disciplined governance
- multi-purposeful
- patient focused
- established on the original three tenets of the ASTS

Over the past three years, we have begun a process to initiate such a partnership with the ASTP. The annual meeting was the initial partnership focus. Mike Abecassis worked hard and diligently to begin the combined program sessions of the annual meeting of the ASTS and the ASTP. Avi Shaked has continued and expanded that initiative to have an increasing portion of both societies' meetings shared, and to combine the post-graduate courses. The early steps of this partnership have worked extremely well to the benefit of the membership of both societies. We should recognize with thanks Drs. Abecassis' and Shaked's efforts.

Other initiatives over the last year have included the formation of a joint council of both societies to discuss more fully integrating the ASTS and the ASTP. A task force of members of the program committees is planning a single meeting for the year 2000. There are many details to work out, but the spirit of cooperation is gratifying and excellent progress is being made. Of concern to the leadership of both the ASTS and the ASTP is the maintenance of identity of each group within the larger organization. This is possible and several alternatives are actively under discussion to accomplish this goal and ease the fears that some may have. The benefits of forming a new organization along with our clinical and scientific colleagues are obvious. There seems to be no compelling reason of substance not to continue to move forward.

The second issue consistently in play and discussion from the beginning council of the ASTS is whether the Society had or has today a political mission. The answer is, of course, we are and, of course, we do. The ASTS was conceived in a political environment at the Social Security Administration. It was born during the implementation phase of the End-Stage Renal Disease Program. The ASTS guided and nurtured the National

Organ Transplant Act of 1984 and significantly influenced the expansion of UNOS and the acceptance by HHS of UNOS as the OPTN contractor. To deny a public policy function of the Society is indeed to deny a fundamental reason for our being. This is clearly stated in Article II of our bylaws originally written by Jerry Rosenberg in 1974:

“The Society shall collaborate with existing public and private organizations to promote and encourage education and research in transplantation surgery and will participate and assist in the coordination of efforts or formulation of programs by all physicians, agencies, and health personnel which will provide maximal efficiency and optimal benefit to recipients of organ transplants.”

Transplantation in the United States has grown from a scientific endeavor limited to a few academic departments of surgery into a socioeconomic and political phenomenon, only one part of which is science and surgery. To be leaders in the field of transplantation, we must be more than scientists and clinicians if we are to serve the needs of our patients and continually see progress in our field. We need also to be aware of societal and political realities. We function in arguably the most scrutinized public and regulated area of all of medicine. To ignore the politics of transplantation is to abdicate decision making and require us to accept the ideas and decisions of others about the future of our patients and of ourselves. I personally see this posture as incompatible with the surgical personality! We as a Society have always been a political body, yet we have consistently told ourselves and the world around us that we were not political, but merely a scientific organization. For reasons known only to history, we have resisted or been unable to accept the challenge and responsibility of effectively functioning in a sustained and meaningful way in a political arena. If, in the future, we are to be the respected voice of transplantation in the United States, we need to allow the maturation and evolution of that dimension of our organization that can effectively lead and influence public policy and public perception. We need not abdicate that responsibility but, in fact, as a Society, should engage the challenge and develop the tools and process so that public policy decisions concerning the difficult issues in transplantation can be strongly influenced by us with the dignity, depth, respect, and responsibility which such decisions deserve.

Since the contract was issued between the government and UNOS as the OPTN, members of the transplant community have viewed UNOS as their

political arm. UNOS provides a private statutorily mandated forum for the development of national policy in transplantation, but it should not be viewed as the transplant community's liaison with government. We need to participate in the deliberations and policy making functions of UNOS, but we also need to independently have a recognized and authoritative voice to Congress and HHS so that our views can be heard independent of any other agency or voice.

In 1998, the politics of transplantation reached a new height. As President, I was forced to decide whether the ASTS would take a stand or remain silent and ignore the political process.

We polled the Society and became active in speaking out for what were issues of substance and in need of response. I believe our actions have been sound and not only appropriate, but essential. In fact, they should represent only a beginning of how we, as an organization of transplant surgeons, can effectively speak as one mobilized force that can, indeed, influence policy.

The third issue that has woven its way throughout the fabric of our Society is an attitude and, I must say, ambivalence concerning organ donation. There is an aspect of the human experience that is unique to transplantation—the true human realization of the literal giving of a part of one's self for the life of another. For those who have experienced it, this becomes a powerful force of good. The altruistic gift of organ donation is the lifeblood of our field. The first Miami meeting of the ASTS realized this and pronounced as one of the fundamental purposes of the organization to “develop a nationwide educational program to help increase the number of organs available for transplantation.” It was then and remains today the single biggest issue in transplantation. Curiously, as a Society, we have been unable to rally the resources or energy required to fulfill this early defined purpose of our organization. This has been a frustration of past presidents. Jim Cerilli, President in 1981, commented he viewed his inability to mobilize the Society to make a meaningful effort toward increasing organ donation as a failure. Gil Diethelm in 1992 dedicated his entire Presidential Address to education in organ donation. Yet, as a Society, we have never translated a commitment to maximize organ donation in this country into programs in which to accomplish this, one of our primary core goals.

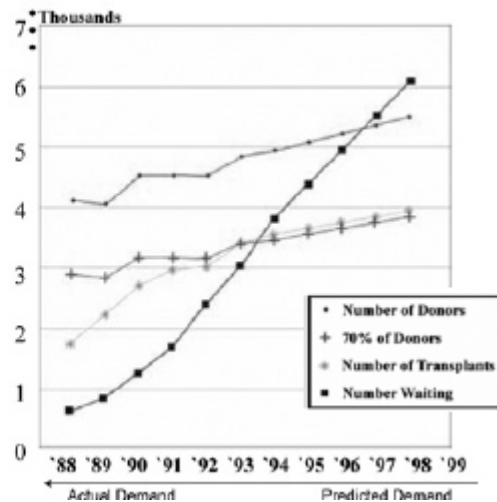
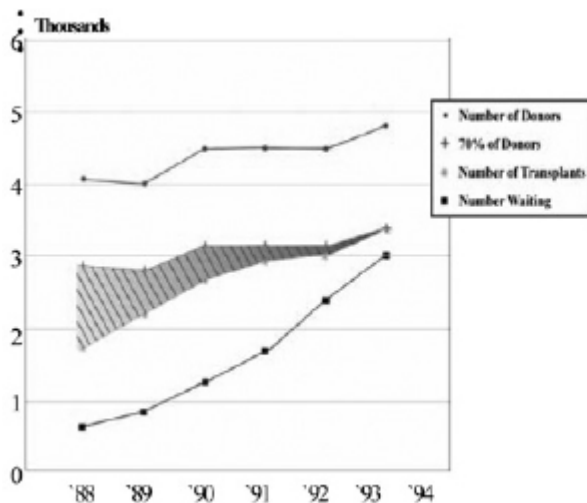
To stimulate thought, let us muse a bit at what transplantation would be like without an organ shortage: 1) we would be able to serve all of our patients in need in a timely fashion; 2) there would be no need for

government regulation; 3) we would have no arguments about allocation or rationing of organs; 4) the OPTN could be a scientific repository of clinical transplantation and a communications tool; 5) transplantation would not need to be political; and 6) we could be a pure scientific organization.

We are currently in a crisis. The need for all organs is great, but the demand for donor livers has so outstripped the supply that it has created a firestorm of multiple agendas.

The problem really began in 1993. Up until then, the ratio of potential patients listed to liver donors was greater than one. There was a reserve in the national donor liver supply that became exhausted in 1993 at a time when the number of liver transplant programs expanded. The lists grew, the number of patients exponentially increased, and the problem was compounded. We cannot immediately solve this problem, but we can and should manage it.

The only real solution is to increase the organ supply. Our goal, as a Society, should be to do what we can to realize the full organ donor potential in the United States. Until this benefit is realized, we must help manage the organ shortage to achieve the maximum benefit for the maximum number of our patients while, at the same time, ensuring equity in access for those in greatest need. The UNOS organ-specific committees are comprised of many of our membership. This is as it should be. All of our members who serve on these committees should focus not on the parochial interest of themselves or their centers, but on the application of sound fundamental principles in the making of good public policy for all. In addition, our Society should work directly with Congress and Health and Human Services to share with them our thoughts, our experience, and our expertise in carrying out their oversight and legislative functions in managing the organ shortage.



Finally, I would like to share with you a most exciting development of my Presidency—an initiative just begun in the closing days of my term that I am proud to bequeath to my successor, Josh Miller, to be nurtured and carried forward to what I believe is its enormous, ennobling potential in the weeks and months ahead. This initiative is a campaign designed to increase organ donation called the “ASTS First Family Pledge.” It’s really a simple idea, designed to add to and enhance the wonderful work being done by the Coalition on Donation, the Partnership, AOPO, the individual OPOs, the hospitals, and the many other organizations and individuals who have been laboring long and hard on this challenge. The idea behind the First Family Pledge is to get America’s leadership families—from the President and Vice President, on through the Cabinet, Members of the Congress, Governors, Mayors—to sign a pledge, a contract if you will, with their families, to donate their organs in the event of death to provide life for the loved ones of others.

Our hope is that a year from now, every American aspiring to public leadership will have joined in helping forge a long-overdue national consensus that being an organ donor is the most ennobling of human acts, and the right thing to do.

In launching this effort, nothing could make me prouder than to announce that the ASTS First Family Pledge Campaign will be honored by having as its honorary co-chairs two Americans who in recent weeks have received a small measure of the acclaim that they rightfully have been accorded in Italy, Reg and Maggie Green.

I am sure you all know the story. And the Greens, whose inspiring act of donation was the subject of the recent move “Nicholas’ Gift,” are here with us this morning to symbolically become the First Family to sign the ASTS First Family Pledge.

As I mentioned, in the course of the weeks and months ahead we are going to be asking Senators, Members of Congress, Governors, and all those aspiring to public leadership to sign the ASTS First Family Pledge. With us this morning are Secretary of State and Mrs. George Ryan. While this effort is totally non-partisan, and we hope to sign up every Democratic leader as well as every Republican, we are pleased to honor Secretary of State Ryan’s longtime leadership in the organ donation area by asking the Secretary, who is running for Governor of Illinois, and his wife to become the first elected family to sign the ASTS First Family Pledge.

In the weeks and months ahead, we also are going to be trying to enlist America’s leading companies as corporate supporters of the ASTS First Family Pledge Campaign. One of the things we are going to ask them to do—in addition to providing financial support—is to encourage members of their corporate family to sign the ASTS First Family Pledge. Because in our view every American family that has made the commitment to organ donation is one of America’s First Families—and we would like to honor that by giving every family the opportunity to sign the ASTS First Family Pledge. So I am pleased to announce that United Resource Networks, which is part of the United Healthcare Corporation, has stepped forward as a charter Corporate Supporter, and in the next week United will be calling on the parent company’s 30,000 employees all over the country and urging them to sign the ASTS First Family Pledge. We hope we will have a number of additional announcements to make in this area in the days ahead.

In closing, I hope you all share the great excitement I feel over how our Society is returning to one of its fundamental purposes in seeking to help lead the way to realization of the true organ donor potential in the United States.

It has been a tremendous year. I thank you all for the great privilege of leading the Society into this new endeavor, and I wish Josh godspeed on his journey through his Presidency.

Thank you.



The Era of the Chimera

JOSHUA MILLER, MD, 1998–1999



My dear colleagues,

When Hans Sollinger called my Chicago hotel room at 7 a.m. Wednesday two years ago, it was with the unexpected and frightening news that I was designated President-Elect of the ASTS. Unexpected, because I never considered myself as part of the ASTS establishment, and frightening because what immediately came to mind was the question of what in the world I would say in a Presidential Address two years hence.

Having heard all of the addresses from David Sutherland's charming flight of ideas about grafts in the plant kingdom, to the erudite and fascinating insights into our history by Clyde Barker, and by Hans, with Clyde's wonderfully close relationship with Bill Billingham, and Hans' scholarly history of Ray Owen's Freemartin calf chimerism work at the University of

Wisconsin in the mid-1940s. Then, going all the way back to the address of our first and most famous President, Tom Starzl, similar to Washington's farewell address to his Continental Army in 1783. Washington later had something to say about avoiding entangling foreign alliances, foreshadowing what is to follow in this talk. Tom's Presidential Address was delivered in the ballroom of the Drake Hotel, a place perhaps now somewhat analogous in our own Society's history to Washington's choice of New York City's old Fraunces Tavern.

So, I became part of our Society's establishment in a rush, with only a survey course of ASTS 101, hastily presented by Ron Ferguson last year and, for virtually two years, the question of what this address should be about has become increasingly terrifying. So, here it is.

It is entitled "The Era of the Chimera" and despite the obvious, that I am the least politically adroit person in this room, please resign yourselves to the fact that, seriously, with the real honor and duty of having been given the stewardship of ASTS this year, this is, and must be, a strong, if not pungent, political address that is not necessarily politically correct but is absolutely required in this place and this time.

What is a chimera? A mythical xenograft, each component of which functions as an integral part of the whole wondrous creature. Is our future unification with our non-surgical colleagues to be as seemingly impossible to create as the storied chimera and as illusive as Norm Shumway has suggested of xenografts, when he has said, "The future of transplantation is in xenografts and always will be"?

We now face, most unnecessarily, most redundantly, and most irritatingly the presence of two societies—the ASTS and the AST, that John Neylan, their President this past year, proudly proclaimed last December 21st:

"The designation of the American Society of Transplantation more suitably characterizes the diversity of our growing membership and underscores the collaborative interdisciplinary roles that physicians, surgeons, and scientists perform to advance the science and clinical application of transplantation medicine. The largest professional organization in North America that focuses on transplantation medicine, and immunology."

We now have two organizations representing to the public, the Federal government, the pharmaceutical corporations, and the NIH, among many others—redundantly and confusingly—clinical organ transplantation in America. We should not deny the existence of a group that we all know that

we need in transplantation. As physicians, even when they were the ASTP, they were not only our referring doctors, but as transplantation became more successful and we had more patients out there, someone had to follow the details of their long-term care. Now, most of us in our own centers work productively, effectively, and collegially with our non-surgical colleagues. We help each other. The rank and file of both societies, of which I hope soon to become again. But what can we do now to correct this confusing picture? To wake up from what has become a political nightmare that only affects us individually because it has affected us collectively.

It has become patently obvious that despite the crazy circumstances that I was thrust into, this should be my subject. At the outset I must make the point that although this is a Presidential Address, I express the views of none but myself. No political dogmas, no policies, no consensus positions—consensus that I have otherwise been religiously strict in adhering to in all other aspects of this presidency year until now. I have had an overly generous share of input from members of the ASTS, expressing deep concern—insecurity about the present, and frank despair about the future, purely in response to the proclamation of this new organization. The murmurings have also come from other officialdoms outside both organizations, with raised eyebrows as to who is leading what. You all recognize that I am not Abe Lincoln; but, at the outset I must clearly declare that such an entity divided will not stand. It must be crystal clear that this situation will not weather the test of time in this most public and political era of organ transplantation in America. *There must be a single society of transplant surgeons, physicians, and scientists that speaks with a single voice on issues critical to the future of organ transplantation in America.* How could I, who even at the outset of this, our 25th anniversary year, considered myself the wrong person at the wrong time, do what was best in this confusing time for our Society and for our patients? In my view, we were at a real crossroads in our history.

What can we, even now, do—you as my respected colleagues, the membership of ASTS and I, soon quite cheerfully to be an immediate past-president—to gather the scattered pieces and create a functioning chimera? I will describe two elementary components to the cure, one medical and the other surgical, that in my personal view need to be accomplished together to be successful.

But first, in order for us to clearly and confidently face the future of a new millennium in organ transplantation, we have to understand our heritage—

where we have been in the ASTS. We have to know where we are. We have to understand the present, and, though none of us is a prophet, we can then, at least, have a sense of confidence of how we must function and plan for the future as best as we can make it—a bright and certain future in our field for all of us: surgeons, physicians, and scientists. And make no mistake, this is our responsibility.

What is the history of the ASTS? And, what is the history of the dissidents, now called the AST, a.k.a. ASTP—who, with a clever, if simple, strategy have come to outnumber us by proselytizing to include some of us? More importantly, what is really happening and what should and has to happen? First, are we not and have we not been part of the problem? Or, as Pogo Possum said, “We have met the enemy and they is us.” Before we get into this analogy—the history of the AST and our ASTS contribution to their growth, let’s clarify the issues; let’s have a reality check about ourselves.

I hope to be forgiven by our former and future leaders for sinking into the next highly partisan down-and-dirty political segment of this address. As Mario Puzo said, “It’s really not personal; it’s business.” And so, I will paraphrase a former governor of Texas, Ann Richards, mocking the Reagan cabinet during the Iran contra scandal in her keynote speech at the Democratic National Convention in 1988 (“Where was George?”).

What has been our past in organ transplantation? It has been surgeon-driven and surgeon-funded, and it was the surgeons and their patients with whom they developed an unbelievable bond of trust, who paid the price so that we could all reap the rewards—the American transplant surgeons and their patients. Let us divide our earlier history into 12-year intervals until the present era: Joseph Murray, David Hume, Francis Moore, Tom Starzl, Keith Reemtsma, Jim Hardy—a great dawning of clinical transplantation (1954–1966). They created the methods. They created the tools, the technology, and the therapy. It was plain old hard work and stick-to-it-iveness. Azathioprine, steroids, cadaver organ transplantation, brain death (1954–1966). Where was the AST?

1966–1978: Tom Starzl, Tony Monaco, Paul Russell, John Najarian, and Richard Simmons, Norman Shumway, Oscar Salvatierra, Fred Belzer, and their patients—polyclonal anti-lymphocyte globulin, transplantation in the diabetics, liver transplantation, heart transplantation, donor-specific blood transfusions, organ preservation. Where was the AST?

1978–1990: Monoclonal antibodies, cyclosporine, pancreas transplantation, UNOS. Ben Cosimi, Tom Starzl, Nicholas Tilney, Barry Kahan, Ronald Ferguson, David Sutherland, Hans Sollinger, Robert Corry, John McDonald, and their patients. The ASTS developed the original organ retrieval teams and began to organize them into a donor organ procurement and transplant network. They created NOTA and pushed it through to law in the United States Congress. 1978–1990: Where was the AST?

1990 and onwards: What is the real present in organ transplantation in the United States? It is still surgeon-driven and surgeon-funded. Surgeons and their patients take the lead and pay the price. FK-506, mycophenolate, rapamycin, humanized monoclonals, stem cell and bone marrow infusion, chimerism, chronic rejection. Hans Sollinger, Ron Ferguson, Bob Kirkman, Barry Kahan, Tom Starzl, Nick Tilney, John Fung, and their patients. 1990–to date: Where is the AST?

Now, and into the new millennium—increasing organ donation and availability, and increasing the efficacy of really doing it operationally—improving organ retrieval and its technology. Split livers, xenografts, tolerance protocols, multiviscerals, anti-sense, molecular tolerance, anti-CD40 and its ligands, other anti-costimulatory pathways, anti-idiotypic therapy, islet transplants. Barry Kahan, Mark Hardy, Ron Busuttil, John Fung, Andy Tzakis, David Sachs, Hugh Auchincloss, Chris Larsen, Stuart Knechtle, Allan Kirk, David Harlan, Avi Shaked, Dick Thistlethwaite, Camillo Ricordi. 2000 and beyond: “Where will the AST be?” Our future lies in being surgeon-driven and it’s the surgeons and their patients who pay the price, and it is the surgeons, our surgeons of the ASTS, that our patients look to for leadership and for the salvage and renewal of their lives by organ transplantation. Where will the AST be? Lord Raglan said it best to his Brigadier in the Crimean War, “Charge, I am right behind you!”

So, we have a sick entity.

However, before proposing a cure, let’s get to the disease pathogenesis.

The dissidents—where did they come from? Lest we get to feeling too good about ourselves! Does the reality check really end here? How did the AST begin?

It began when we began to feel too elite. Did we really do it alone? Were we really that fantastic? What about 1954–1966—George Thorn, John Merrill, Peter Medawar, JFAP Miller, Gus Nossal, Macfarlane Burnet, Hitchings, Schwartz, Scribner, Kolff, Damashek, Thomas, Good, Terasaki.

Permanent hemodialysis, the pharmacological basis of immunosuppression, bone marrow transplantation, the new immunology and the thymus gland, tissue typing, the artificial heart, acquired immunological tolerance. Where was the ASTS when they did their seminal work? Where were we except to take advantage of it?

1966–1978: Fritz Bach, Ron Gutman, Bernie Carpenter, Caesar Milstein, Baruj Benacerraf, Paul Lacy, Jean Dausset, George Snell. Enhancement, passenger cells, hybridomas, genetic control of the immune response, autoimmune pathogenesis and diabetes, the mixed lymphocyte reaction.

Where were we when this work was done, except to use it? Where was our Society policy except to exclude them?

1978–1990: What about Calvin Stiller, Jean Borel, Tony Allison, Jim Southard, Rolf Zinkernagel, Henry Balfour, Sam Strober. Immunological monitoring, calcineurin inhibitors, other potent anti-metabolic pathways, better organ preservation, histocompatibility and the natural control of the immune response, anti-CMV therapy. Where were we, the ASTS, except to jump on a science express train? Where were we, except to ride their coattails?

1990 – today: What about Jeff Bluestone, Les Miller, Tom Gonwa, Jack Lake, Phil Halloran, Mo Sayegh, and John Neylan. Where were we when they asked, “What about our science?” Where are we when they ask, “What about our accomplishments?”

Who takes long-term responsibility for the created chaos of our overly broad brushstrokes, tempering them with medicinal doses of reality? Who conceives and introduces new basic science that we feed on?

We, the ASTS, thought ourselves an elitist club back then in the Drake Hotel, that the others could not join, and what went around came around, because they became the dissidents who made things easier, but who also recognized good science, even if it were produced by surgeons, and produced much of it themselves, so that to paraphrase Groucho Marx: “Any country club that would accept me for a member, I wouldn’t join.” Any science that was exclusively selected by the ASTS for presentations was not necessarily worth joining in, and some very good materials began to come out of ASTP meetings, presented by surgeons, seduced by the beautiful voices of sea sirens of the ASTP.

Were we, as some of us think of ourselves, the elitist keepers of the true faith, going to emasculate ourselves by our own scalpels? This is what we

were faced with at the opening of the ASTS year. If we withdrew into our exclusivity, we could not fight the right battles that so impact on society—when we were encased in a thick isolationist shell. The principles of the OPTN rule, organ donation initiatives, the First Family Pledge, the National Organ Transplant Act renewal, reimbursement for life-long immunosuppression, and when and how to institute xenografts, to name a few examples.

The last segment of this talk discusses what, to me, has become increasingly obvious over the past 12 months. There are only two take-home lessons that I would implore the membership to focus on—two components to the cure that the ASTS must embark on to arrive at a single, complete, functioning chimera in the next millennium.

The following is a significant part of the Mission Statement of ASTS developed after our Society this year by a vote of 240 to 12 decided to include qualified scientists and physicians in its regular membership:

“The American Society of Transplant Surgeons is the leadership organization of the surgeons, physicians, and scientists who have pioneered and continue to advance the frontiers of life-sustaining organ transplantation. Our society has taken the field from experimental trials to highly developed treatment modalities that increasingly offer a growing number of men, women, and children a new chance at an ever longer and healthier life.

ASTS members have the responsibility for directing transplantation surgery, medicine, and research programs at America’s major medical centers.”

Sound familiar? Would not the AST create the same statement? Why did we as a Council suggest to the ASTS membership to become more catholic in its make-up? Was there not another society doing exactly the same thing for the past 10 years? Were we not copycats, reinventing the wheel? Not quite! Let me explain why.

The cure to fixing this chimera—Part I has actually just been described. It is medicinal and nutritional. Mind ourselves, strengthen and nourish our ASTS. “Strengthen our society” should certainly be an overriding principle of your President and Council. It is really an age-old credo. The exclusivity of our ASTS needed to be abolished. That this should have happened more than 15 years ago did not make it any less certain this year, and by a bylaws change, our Society was strengthened to recognize respected colleagues doing equally important work with us, not just those, dare I say it, with

somewhat less pretentious qualifications. What this really means is that ASTS, with the inclusion of a broader cross-section of expertise, but only of those who have demonstrated a true career commitment to the field, has positioned itself to maintain its leadership and yet to have the counsel of those of our non-surgical colleagues whose advice we all deal with on a day-to-day basis. And, in that quality, there still lies the difference between us which we must emphasize so that the two societies can come together in an effective and mutually respectful way to act with one governing voice on issues critical to transplantation in America—whenever that day comes. By the way, there is nothing wrong with still calling our own organization a surgical one despite its new, more varied but qualified, makeup. That is what transplantation biology and pre- and post-op medical care is all about. It is how to make organ and tissue transplantation, nothing if not a surgical challenge, more successful.

This finally brings us to the cure Part II. It took me a long time to get there during the course of this year, but in a deliberate, if not agonizing decision, it became enlighteningly obvious. It is my strong personal belief that the quickest and most effective way of forming a single society is for ASTS members to relinquish their membership in the AST. To be clear and simple, to resign from the AST—those of us (myself included) who have been there, and I have resigned. The AST, G-d bless them, I personally believe that I had to leave them as they were represented by their leadership this year, in the hope of joining with them when we can work together again.

What was sad this year and caused our inability to reach accord with our AST counterparts was the assumption by their power structure and even by some of us that our ASTS was folding and would by crumbling rot become the fertilizer for the growth of this new and vigorous AST, which as I already quoted their president's words, is the "Largest professional organization in North America that focuses on transplantation medicine and immunology." I found that the reports of our demise had been greatly exaggerated. We have during the last three years that Avi Shaked and his team have been program chairman and committee increased our scientific abstract submissions to our yearly meeting from 270 in 1996 to 592 in 1999. Not too bad for a Society of some 700 members. I fervently hope that we will reach a closer working relationship with them, with their new governance.

However, the AST leadership perception this past year was if we as surgeons were already part of them, why not just have the others in the ASTS

come in to roost as well?

Let's look at the reality once more. These were the two proposed principles as a starting point of negotiation that were sent to the a.k.a. ASTP by our ASTS Council in the hope of eventually bringing us together in a mutually respectful process. Please note the timing and the reactions:

ASTS Proposed Statement of Principles on Process for a Mutually Respectful Creation of a Single Society (November 1, 1998)

The ASTS and ASTP agree that the interests of transplant surgeons as well as transplant physicians and scientists will be given equal weight in a new society, with the two groups holding equal or APPROPRIATE representation on the Council and all committees, and representatives of each group alternating in the presidency and other offices, for the first decade after formation of the society.

The ASTS and ASTP agree that as of November 1, 1998, in anticipation of combining in a new society, neither society will undertake any major new program or activity, including change of societal name—or incur any major new contractual obligation—that would become an inherited obligation of the new society without the concurrence of the other society. This includes launching a new transplantation journal.

Received by John Neylan, President ASTP, by fax November 2, 1998.
AST name change initiative: letter—to ASTP members, November 3, 1998—the very next day.

The surgeons of our ASTS would have been most gratified had these two principles continued to be discussed, and some kind of compromise reached. That very statement went with our fax. We would still be happy with some type of equal representation in a totally new society, since names can be changed and it is what is behind the name that is important. Can equal stature in a new society be accepted, even now, by our non-surgeon colleagues? I ask, can you accept equitably the voice of surgeons and non-surgeons in this new entity? Why have you not answered us since November of 1998? Our fax is still running. As Mrs. Goldberg asked Mr. Anthony, the Answer Man, on the radio in the 1940s, “Mr. Anthony, my husband left the house 20 years ago in the middle of supper without saying a word to me before I served the chicken soup. Should I still keep it warm for him?”

The rest of my message is devoid of humor and is as direct as I can make it. I must again say that this is a personal view and that I have made it a point of honor to impose it on no one, either within or outside of the ASTS establishment. Please, make no mistake. This issue, the future of transplantation in America, is our responsibility, yours and mine. We have committed our professional careers and our joint lifelong efforts to it. It has always required a team approach. We are not dealing with personalities here. There are no exclusive solos for what I am proposing. Otherwise, we are left with a cacophony of total chaos. What I have attempted to describe so far, and will in this last segment try to clarify to you, are not the voices of single individuals, not of John Neylan or Josh Miller, not of Jack Lake or Ron Busuttil, not of Mo Sayegh or Nancy Ascher, but the conclusions and the philosophy that has taken the 25 years of our existence and of theirs, the leadership of our non-surgical colleagues last year, that reached this critical point in time, and it seemed to me that critical, and that we had to act while we had the opportunity.

Here is the reality. More than 90 percent of all transplant programs in the United States are directed by surgeons in 1999, with a similar amount of clinical and applied basic science research directed by transplant surgeons, many of whom are the leaders of your ASTS.

Here it seemed to me was the AST leadership perception: But if the surgeons are already part of us, why do we have to merge with them? Have we not already formed a single new society, the AST?

Here is the reality. It is the surgeons that do the transplants for end-stage organ failure. This cannot be accomplished by giving more dig[oxin] or less dig[oxin], more dialysis or less dialysis, more interferon or less interferon, more insulin or less insulin, more oxygen or less oxygen. This is what will always separate organ transplantation from any other clinical area in which medical specialists and scientific specialists relate to surgeons. It is not a question of the alternative medical treatment. Organ transplantation cannot be done by hypnosis and the direction of immunosuppressive protocols is still an integral part of transplantation surgery.

Here is the plain, obvious fact that may not have been emphasized enough. With a single meeting planned from the year 2000 and onwards made up of surgical and non-surgical program committee members with ASTS and AST in equal representation (this single program committee is already in action by the way), and with a single blinded abstract form, there is only one science

that will be presented—no dissident groups, no Pharisees, no Sadducees. No redundancy, just good science. We, the ASTS, have demonstrated that we are prepared to abolish our exclusivity and to join with our non-surgical colleagues. We removed the requirement of surgical training from our bylaws. We even voted in another ballot to face a new future with our non-surgical colleagues in a totally new society.

Here it seemed to me was the AST leadership perception: But if they are sending in abstracts as AST members, why does there even have to be ASTS contributions to the combined meeting? Maybe they ought to have an evening surgical club meeting for “technical discussions.”

It is plain as day that we must continue to work cooperatively and productively with our non-ASTS colleagues on joint policy and new transplant science to avoid a wasteful duplication of effort and confusing external perceptions in this period of confusion, and for all of the reasons that the recounting of our joint history in the last part of this 20th century has brought to mind. But it is just as plain that this cooperation must be mutually respectful and, above all, not undermined by our own schizophrenia.

Here might be an AST leadership perception: Why in the world should non-surgeon physicians and scientists join the ASTS when you say you are leaving us?

But here is the reality. Many of you non-surgeons were always part of the ASTS and we were just too slow to recognize it. You were and are our non-physician scientists and our physicians, as we are your transplant surgeons. We wish above all to join with you to lead transplantation into the 21st century. We wish to be equal partners and to share this responsibility together, and not to become lost like a thin prophetic voice in a whirlwind of humanity, your membership. This would be a disaster for organ and tissue transplantation in America. To lose this, our ASTS voice, in the vastness of some numbers game is to lose the heart and soul and (please give us credit) at least half the brains of our work together. We are not in a recruiting war. We are just trying to do what is right.

To those of you in our ASTS who have the false perception that this talk and these actions are too little and too late, let me again emphasize the reality to you. You are still the leaders in our field, you are still in charge, because no one else can do it. No one else has the commitment and the confidence and trust of our patients and the American public. It is up to us as to whether this prescription for a cure will work. It was always up to us.

And I therefore express to you now my personal view, if surgeons were going to continue to be in this leadership and if the explosive progress in organ transplantation is to carry on in the future as it has in the past and continues in the present in America, this is the obvious path that I had to choose. I must for the last time emphasize that this conclusion is a personal one that has neither been endorsed nor denied by the ASTS Council since I have made it a point that this should not be policy, but personal. As your president this past year, I think I am entitled to this last hurrah. To me, it is an objective decision arrived at by years of personal observation of events and the conclusions that one can draw from them.

My personal prescription for Part II of the Cure was therefore surgical. It is an explant of myself from the AST, an excision of what might have been inaccurately perceived by me earlier as a working remnant of our crumbling former glory. I had to square my actions with my conscience in the hope that I could emerge together with the non-surgeon physicians and scientists in whatever organization we all choose to call ourselves, in an equal partnership in this totally new creature of the new millennium. This is not Machiavellian, nor is there any innuendo. To me, this is just simple logic. To me this is as plain and as clear as a sunny day in May in Chicago.

The AST, G-d bless them; I had to leave them for their own good, so that I could eventually join with them for the universal good in The New Era of the Chimera. Transplant surgeons, physicians, and scientists of America.



The Ripple Effect of Transplantation

RONALD W. BUSUTTIL, MD, PHD, 1999–2000



Ripple effect: “A spreading effect or series of consequences caused by a single action or event.”

My dear friends and colleagues,

It has been an enormous privilege and honor to serve as your President for the past year. I stand at this podium as a consequence of the support and inspiration of my teachers and colleagues. These include my mentors Drs. Elmo Cerise, the late Ted Drapanas, James Fisher, William George, Louis Ignarro, and Dr. William P. Longmire. Dr. Thomas Starzl, our first President, taught me the art and craft of liver transplantation. The friendship and

guidance of Nancy Ascher, Josh Miller, Milton Benjamin, Gail Durant, the ASTS Council, and all of our members have been essential. I wish also to recognize my transplant fellows, who have made me a better surgeon and scientist, and my wonderful transplant team at UCLA. Finally, to my wife, JoAnn, and our daughters, Amber and Ashley—your unwavering support, understanding, and love mean more than you can imagine.

In choosing a topic for this Presidential Address, I could not help but reflect upon the way that I entered the field of transplantation, as my route was certainly unconventional by current standards. Those standards were developed by Dr. Najarian during his presidency and appropriately require formalized fellowship training for a career in transplantation, reflecting maturation of the discipline into a full-fledged surgical specialty. But 17 years ago it was possible to simply hop the fence, and I did that—I became a student of transplant surgery after six years of academic practice as a vascular and liver surgeon with a particular interest in the surgical treatment of portal hypertension and end-stage liver disease. My research at the time was focused upon mechanisms of host defense and ischemic injury, and while the clinical applications that we studied were related to infectious processes in the surgical patient rather than allograft rejection or acceptance, the relevance to transplantation is obvious. Coming to a career in transplant surgery from a background in general and vascular surgery, critical care, and pharmacology, my personal journey perhaps mirrored the way that a series of nontransplant disciplines formed the foundation for the field of transplantation.

Today I intend to rotate the prism and reflect on the reverse process—the effect of transplantation and of transplant surgeons on the practice of surgery and allied disciplines, the refinement and expansion of existing disciplines because of the influence of transplantation, and the creation of new disciplines for which transplantation may take credit. I hope to show you that this ripple effect is quite extensive. I also wish to speak about the multi-disciplinary team approach, another product of transplantation. I will describe its importance to my year as ASTS President, to our Society, to our profession, and the way in which we are viewed.

Basic Scientific Discovery

The field of clinical organ transplantation from its birth has been irrevocably intertwined with scientific discovery in the areas of immunology,

pharmacology, histocompatibility matching, and genetics.

The seminal observations which propelled transplantation from an experimental to a clinical discipline were the demonstration by Medawar in 1943 that allograft rejection was an immunologic event and 10 years later in 1953 that tolerance could be induced in neonatal mice by injection of immunocompetent cells from adult animals. One year later, in 1954, the first successful transplant between twins was performed by Murray, Merrill, and Harrison. Despite their success, it was soon recognized that genetic incompatibility would preclude allografting unless the body's natural defense to foreign antigens could be inhibited. Investigative study of rejection phenomena led to the development of an entirely new field, known today as transplantation biology, which has been responsible for enormous progress in our understanding of tolerance, allograft and xenograft rejection, use of immunosuppressive drugs, ischemia-reperfusion injury, T-cell activation, and molecular signaling. These fundamental advances have greatly improved patient outcomes after transplantation.

But they have also led to critical discoveries in other areas. Among them are included the identification of auto-antibodies in the pathogenesis of a number of diseases such as thyroiditis, scleroderma, and rheumatoid arthritis; the treatment of hematologic malignancies with cytoablation and bone marrow transplantation; and the development of new anti-neoplastic agents. The application of principles gained from organ preservation research has spawned strategies used in the treatment of vascular thrombosis and myocardial infarction. The deciphering of genetic defects causing inborn metabolic errors successfully treated by solid organ transplantation has paved the way for gene therapy protocols attacking the fundamental molecular defects themselves. Furthermore, with a better understanding of the mechanisms of action and intracellular molecular effects of the calcineurin inhibitors cyclosporine and tacrolimus, a whole new set of indications for these drugs has been established.

Cytokine Research

Our understanding of molecular cytokines expanded dramatically after early observations in the field of transplantation. The initial era of cytokine research, extending from the 1950s through 1970s, involved the description of multiple protein factors that were thought to be immune mediators and discovery of fever-producing pyrogens and macrophage associated factors.

Transplant immunologists led the golden era of cytokine research in the 1980s with a tremendous avalanche of information about the individual cytokines as well as discovery of new ones.

During the past decade, transplant research has paved the way for investigations which have categorized cytokines in the induction and maintenance of inflammatory responses, antiproliferative stimuli, and ischemia-reperfusion injury. This work has stimulated others to explore the role of immune mediators in a wide variety of pathological conditions, including hematologic disorders, immune deficiency syndromes, sepsis, catabolism, wound healing, pancreatitis, ARDS, angiogenesis, and burns.

Kidney Transplantation

Kidney transplantation is duly recognized as the pioneer discipline in solid organ transplantation—the stimulus for the development of transplantation immunobiology and a model for discovery and evaluation of many immunosuppressive drugs and strategies. The procedure also has influenced development of vascular reconstructive techniques.

At the outset, kidney transplantation provided a strong impetus to further improve and refine dialysis techniques for support of patients with acute and chronic renal failure. The new therapy gave rise to the field of nephrology, a new medical specialty. Early on the nephrologist viewed the transplant surgeon with ambivalence. But in time a synergistic relationship was forged, and it is that relationship which has served as the model for multidisciplinary team care of the transplant patient, with profound effects on many other disciplines.

HLA Antigens

With the discovery of the first HLA antigen by Dausset and the demonstration of HLA antibodies in pregnant women by Van Rood and Payne, histocompatibility matching of kidney donors and recipients using HLA identification became a new tool that would have far-reaching implications in other fields of medicine, forensics, and anthropology.

In medicine, the further discovery of HLA associations with numerous disease states has been a major advance in our understanding of the genetics of these diseases. Although these associations have failed to provide hoped-for breakthroughs in etiology and treatment, there are now over 500 diseases

associated with HLA, which have been confirmed in tens of thousands of patients.

In forensics, HLA haplotypes as markers of biological individuality have changed paternity testing over the past 25 years and replaced blood testing procedures, which are far less accurate. Newer techniques utilize monoclonal antibodies to the HLA molecule, as well as DNA testing.

In anthropology, HLA has been used for genetic analysis of populations and their relationships and helps to verify Nei's hypothesis of the origin of man in Africa. Additionally, the HLA system can tell us about man's global wanderings—indeed quite a far-reaching influence of transplantation research.

Bioethical Considerations

As the kidney is a paired organ, the concept of live donation, of which the first is shown here, became a reality and provided the framework for many of the medical and ethical guidelines which have been established for other solid organs and for bone marrow transplantation. The envelope has been pushed further with current use of adult-to-adult living donor liver transplantation, about which the ASTS has taken a leadership position and developed a white paper, and will be pushed further still with use of xenografts in the future.

And then there's Dolly, the first cloned mammal. Ethical questions regarding cloning have particular immediacy because of transplantation, which provides a potentially immediate use for cloned organs. What are the long-term consequences to humans who receive cloned animal organs? Are we headed toward human cloning? Should industry be permitted to patent genes and DNA, the basis of life? Transplant surgery has helped to generate these tough questions, and we have an obligation to continue to provide leadership in the search for answers.

Pancreas Transplantation

The discovery of insulin by Banting and Best in 1922 radically changed diabetes from a uniformly fatal disease to one that could be managed. Pancreas transplantation evolved as a means to achieve physiologic glucose control which would substantially prevent the longterm complications of diabetes.

Despite the benefit of whole organ pancreas transplantation, there is significant morbidity with the procedure, and the search for alternatives has stimulated development of a new field—cellular transplantation, which has demonstrated putative advantages over whole organ replacement. Evolving technology for cellular transplantation has been applied to a variety of unrelated diseases including acute hepatic failure, atherosclerosis, Parkinson’s disease, and spinal cord injury. Moreover, pancreas islet cell transplantation has paved the way for the development of new cellular encapsulation technologies.

Cardiac Transplantation

The first human heart transplant was performed by Barnard in Capetown on December 3, 1967. One month later, the second recipient became a long-term survivor, although repeated success with the procedure was still 15 years in the future. In recent years a crucial shortage of heart donors has produced a need to develop alternative therapies for end-stage cardiac disease, in particular ventricular assist devices. These devices now play an important role in the treatment of patients with a variety of severe cardiac conditions, including myocardial infarction, myocarditis, and advanced heart failure.

With these devices, which would not likely have been available without heart transplantation, approximately 90 percent of patients with Class IV CHF leave the hospital and can be returned to an improved status often without the need for a heart transplant—hence the concept of a “bridge to myocardial recovery.”

Endocardial biopsy and intra-coronary ultrasound imaging are two additional techniques which were developed for evaluation of heart grafts and have found major applications in treatment of non-transplant cardiac disorders. Intra-coronary ultrasound imaging, developed for evaluation of heart grafts, provides clear images of the layers of the coronary wall and permits quantitation of internal thickening which has been shown to be highly predictive of subsequent luminal stenosis and death from coronary artery disease. This technique has direct applicability to non-transplant coronary atherosclerosis.

Transplant cardiology is a discipline fueled by cardiac transplantation. Its practitioners have provided novel insights into the pathogenesis and treatment of diverse non-transplant cardiac diseases and have collaborated

with heart transplant surgeons on the development of the artificial heart which will soon be in clinical trials.

Liver Transplantation

Since Tom Starzl performed the first liver transplant in 1963, liver replacement has had a widespread impact on the surgical disciplines from which it has grown.

Liver Growth and Regeneration

Experimental studies in liver transplantation were essential to our understanding of liver growth and regeneration. Discovery of the first hepatotrophic factors derived from the splanchnic venous circulation demonstrated the absolute necessity for portal perfusion of the liver.

More recent investigations have identified gene expression of other hepatotrophic factors produced within hepatocytes as well as the effects of calcineurin blockers on liver regeneration. The field of segmental and lobar transplantation has stimulated investigation of the mechanisms involved in liver remodeling. This is research driven by liver transplantation which has already shown potential applicability to treatment of patients with loss of liver substance from a wide variety of causes, including cirrhosis, trauma, and surgical resection.

Operative Techniques and Liver Resection

The principles of total hepatectomy and implantation of the hepatic allograft have taught the general surgeon that total exposure of the upper abdomen may be achieved via a transverse upper abdominal incision with substernal extension. Through this incision, the most complex liver resection can be accomplished without utilizing the highly morbid right thoracotomy, which in the past was considered essential for major hepatic resections.

During the past 25 years, developments in liver resection and liver transplantation have been intertwined. The transplant surgeon's intimate familiarity with segmental liver anatomy was further strengthened by the use of lobar and segmental transplantation, which in turn has facilitated liver resection for benign and malignant processes. For example, surgical treatment of caudate lobe lesions, once considered extremely complex and hazardous, is now performed with ease, the consequence of lessons learned

from exposure through the gastrohepatic ligament, hepatectomy with caval preservation, and use of segment II, III grafts in pediatric transplantation.

Extensive hepatic resections, in the past fraught with the potential to precipitate postoperative liver failure, are now performed successfully after a volumetric assessment shows sufficient residual liver mass. Derived from its use in partial liver transplantation, volumetric assessment has given us a parameter by which to judge the extent of safe hepatic resection in patients with normal livers and as well as those with cirrhosis. Moreover, new resection techniques and novel technical refinements borrowed from liver transplantation have improved the surgical approach to challenging liver tumors. These include use of portal clamping with or without caval occlusion to decrease blood loss and ex-situ or extra-corporeal bench procedures for resection of tumors otherwise deemed untreatable by conventional means.

Liver Trauma

Experience in liver transplantation has greatly facilitated the surgical approach to major liver trauma. Retrohepatic vena caval and hepatic venous injuries are devastating in part because of the difficulty in gaining rapid access to the privileged portion of the inferior vena cava between the renal and hepatic veins. Both donor and recipient operations illustrate the proper approach with rapid and complete mobilization of the right lobe and dissection posterior to the retrohepatic vena cava, allowing control of the supra and infra hepatic vena caval segments. Although these maneuvers are conceptually simple, many surgeons are unfamiliar with them and may be reluctant to perform them or only do so partially. In certain situations, venovenous bypass, born from liver transplantation, may be employed to provide adequate preload for patients who cannot tolerate clamping.

Anesthetic Management

Principles of anesthetic management required for rapid volume resuscitation in the coagulopathic liver failure patient with portal hypertension have direct application to patients with major hepatic, multi-visceral, and vascular trauma and have contributed significantly to the improved outcomes now seen in these difficult circumstances. Finally, for major liver injuries with massive parenchymal destruction or uncontrollable porta hepatis injuries, total hepatectomy with orthotopic liver transplantation can be lifesaving.

Clearly, a collaborative relationship with the liver transplant team provides the trauma service with a valuable resource.

Hepatology

As with kidney and heart transplantation, liver transplantation has contributed to the growth of a major medical subspecialty. Hepatology has now undergone a metamorphosis to encompass not only the diagnosis and pathogenesis of liver disease, but also molecular characterization and epidemiologic assessment of liver disorders and analysis of long-term outcomes following liver replacement.

Surgical Education

Experience on a liver transplant service is a crucial component of surgical education. The multi-organ procurement procedure exposes the student to key relationships of the foregut, visceral vasculature, kidneys, aorta, and vena cava. Lessons learned have direct application not only to liver surgery, but also to such varied operations as esophageal procedures, aortic aneurysm resection, and pancreatectomy. The value of this single operation is so substantial that it should be an absolute requirement for completion of the general surgery residency.

With the current application of minimally invasive surgical techniques to many general surgical procedures, most common biliary operations are performed laparoscopically, and training of open biliary surgery is in jeopardy. Rotation on a hepatobiliary service which performs liver resection, complex biliary reconstruction, and liver transplantation provides a balance between open biliary surgery and the laparoscopic methods. Finally, education in surgical critical care through management of liver failure patients is unmatched. These patients demonstrate the widest spectrum of multi-system organ dysfunction, and their care demands an extensive theoretical and practical knowledge of all target organ systems which are affected by hepatic insufficiency.

Multidisciplinary Team

Perhaps transplantation's most profound and far-reaching contribution is the emphasis on a multi-disciplinary team approach both to patient care and to research. The team model, a virtual prerequisite to creation of a successful transplant program, has been applied in some form by virtually every clinical

and investigative specialty. The ultimate goal of the team approach, simply stated, is “the best” in patient care, scientific discovery, and education. It is a mandatory goal for our profession and one that has been emphasized repeatedly in prior presidential addresses by Starzl, Belzer, Najarian, Corry, McDonald, and others.

And that leads me to the final portion of my address. I wish to provide a brief review of my personal experiences as President over the past year and to show you how teamwork has been essential to our accomplishments.

ASTS 1999–2000

Upon assuming the Presidency, I set three goals for the Society and myself. Let me give you a brief progress report and a few editorial comments on each of these in turn.

Recruitment and Enfranchisement of Young Members

The first goal was to fully integrate the younger members of our profession and Society into our activities, direction, and vision. To accomplish this, we initiated a focused campaign to recruit younger members into the Society, and we created a new standing committee, the Vanguard Committee, comprised of members who had been in the ASTS for less than three years.

Under the leadership of Ken Drazen, with mentorship by Jim Schulak and Dick Thistlethwaite, this Committee has provided a much-needed dose of Geritol (some would say Viagra) for the ASTS. Its members have articulated a direction for the Society; doubled the number of young surgical recruits and basic scientists; planned the first ASTS Winter Symposium on living donor transplantation (slated for February 2001); and begun an analysis of the academic and clinical activities of our junior members which will guide future educational and training activities for the ASTS. By all measures the Vanguard Committee has been a winner.

Relationship with AST

The second goal was to re-establish a relationship with the AST, with the aim of moving towards a new joint society in the future. I have been fortunate this year to have had the opportunity to work with Jack Lake, the AST President, on this and other issues. Together we made substantial progress on a number of cooperative initiatives and important ventures. We have agreed on a joint scientific meeting through 2005, of which the current one is the

first. We have established the *American Journal of Transplantation*, a new official journal of our two societies. We have endeavored to foster a sense of inclusivity and camaraderie among our respective members.

But these measures are not enough. If we are to realize our full potential, we must reach beyond the artificial boundaries that differentiate us as surgeons, medical specialists, and research scientists. We must shed any mantle of parochialism, embrace our common goals, and speak with a unified voice on the many contentious issues of public policy that we face today. Separate and divergent, we will struggle and falter and almost certainly we will fail.

Transplant Politics

The third goal was to continue my prior efforts as president-elect to broker a consensus between DHHS and the transplant community on the thorny issue of organ allocation. For the past 20 months, I have been actively involved in deliberations with various Congressional and DHHS committees on behalf of the ASTS. The aim of my efforts was to support a balanced organ allocation policy which kept medical decision making in the hands of transplant doctors. The results of these discussions could best be characterized as bipolar— at times encouraging and hopeful and at other times disappointing and frustrating.

Despite our eleventh-hour attempt for a compromise with DHHS on the issue of Secretarial authority and the composition and functions of the Independent Review Board as proposed by the IOM, we were unable to reach a final written agreement—hence the frustration. Just the same, I am convinced that our discussions and negotiations demonstrated the absolute need for ASTS involvement in transplant policy formulation, and furthermore that our efforts helped to ensure DHHS support for a bill to reauthorize NOTA which was drafted by Senators Frist and Kennedy. As you know, this role of the ASTS—immersion in the governmental politics of transplantation—has always been a part of our history.

The ASTS was born in response to the U.S. Department of Health, Education, and Welfare, which sought input from the transplant surgeons regarding Medicare reimbursement for end-stage kidney disease in 1974. In 1978, ASTS members were involved in the establishment of a national computerized registry of transplant recipients called UNOS. In 1984, NOTA was enacted to create a national system for donor organ distribution and

allocation. ASTS provided strong commentary on this legislation, and many important contributions were made by past presidents Belzer, Ferguson, Kahan, Monaco, Starzl, and Williams. The 1990s were no less fractious politically.

Organ Allocation

By 1995, transplant recipients on the waiting list far outnumbered the available donors; this, coupled with the proliferation of transplant centers, ignited the allocation war, which has continued to rage, pitting colleague against colleague, center against center, and unfortunately even patient against physician, so that the trust, the mutual respect, the teamwork which are the cornerstones of our profession have been injured severely. Furthermore, the contentious public displays of divisiveness within our ranks have very likely decreased organ donation, which is dependent on a spirit of trust, sharing, and altruism. Talk about counterproductive!

For me this was drawn into such stark relief just two months ago, when Mrs. Julia Fernandez lost her son on the liver waiting list. Mrs. Fernandez is a petite, endearing woman with unwavering faith in her doctors. How severely that faith must have been challenged for her to ask me, “Is it true that my son did not get a liver in time because doctors are fighting over donors?”

Let Mrs. Fernandez’s painful query be our wakeup call. The fighting and bickering have got to stop, because the chaos created by factional support of competitive pieces of allocation law, coupled with states’ rights initiatives to lock organs within state lines, are confusing to patients, destructive of collegiality among physicians, and demeaning to our profession. Let’s cool the rhetoric, amalgamate the best of evidence-based options on organ allocation, apply these to set a uniform policy, and make that policy work. We are on the right track with our support of the Frist-Kennedy bill to reauthorize NOTA. This legislation may not be perfect, and it may have to be modified. The same is true of current organ allocation policies, which may need revision as new outcome data become available. All of that we will address in due time. For the present, let’s focus our attention where it belongs—to heal the rifts which divide us and to rekindle our team spirit, which we must do if we are to increase organ donation, advance scientific inquiry, and provide the finest in patient care.

How else to sustain the tradition of unique accomplishment derived from transplantation about which I have spoken today? How else to push forward

with work which will have profound and far-reaching influence, not on transplantation alone, but on all of medicine? Is that not what we strive to contribute? By the quality of that contribution—that's how we will be remembered. That's how we will be measured. And that's how we should be measured.



Christian Martyrs

NANCY L. ASCHER, MD, PHD, 2000–2001



Today I'd like to review with you some of my favorite Christian martyrs. But first I need to express my deep gratitude to ASTS members for allowing me to serve as your President. I am particularly indebted to Past President Ron Busuttil and President-Elect Marc Lorber for their counsel, other executive council members Avi Shaked and Dick Howard and the entire Council and committee chairs. I am also grateful to Mo Sayegh, Larry Turka, Bill Harmon, and other AST leaders for their support. I want to thank Gail Durant and her administrative staff for their commitment, understanding, and hard work.

And I am particularly obliged to UCSF colleagues, a cohesive group who are my friends, make up a great team, and have been extremely supportive this year.

Over the past year ASTS has fortified its strength at the same time that it has made great progress in continued and growing cooperation with AST and other key groups. Our own membership has grown significantly in the last year, with a major increase in the targeted groups of cardiothoracic physicians, surgeons, and scientists. Council member David Follette has been extremely helpful in this endeavor. He has successfully expanded our educational mission to include review and accreditation of cardio-thoracic transplant training programs and forged important educational exchange with the major cardiothoracic organizations. Tom Peters and his Awards Committee received a record number of award applications this year. They expanded support for middle level faculty, developed a new award for cardiothoracic transplant investigation, and added a grant for cooperative trials, further echoing our commitment to scientific cooperation.

We have come together with AST to launch the *American Journal of Transplantation*, for which we are extremely grateful to Phil Halloran and his talented group of editors. The Joint Transplant 2001 reflects our continued enthusiasm and commitment to joint projects and shared scientific interests. We have worked on collaborative projects in living related transplantation; developed a joint white paper on the issue of compensation for donor organs; and are developing a position paper on the maximum utilization of donor organs. Both societies are grateful to Frank Delmonico for his wise leadership in these projects.

ASTS has successfully engaged our young members through the Vanguard Committee. This group led by Ken Drazan organized a lively meeting this winter covering the technical, ethical, and medical issues of live donor kidney and liver transplantation. Next year's ASTS Winter Symposium, planned for late January, will address the theme of ischemia reperfusion injury of grafts and cells, a topic that goes beyond preservation to tissue injury and regeneration.

The ASTS sponsored a mayorathon to generate interest in organ donation with participation of mayors and civic leaders from California to Washington, DC. The mayorathon ended on August 14, 2000, at the Montgomery County Agricultural Fair outside Washington. We also brought industry, government, and interested ASTS and AST members together to strategize organ donor initiatives; this initiative is ongoing and will benefit from the avid interest in this area by the current administration. A fresh look at governmental issues through the able leadership of Peter Thomas, Jeremy

Allen, and colleagues at Powers, Pyles, Sutter, and Verville will keep ASTS positioned in Washington.

The ASTS set up the live donor liver registry through the leadership of Mark Adams, and we recently initiated a web-based split liver registry organized by John Renz. Bob Merion and his ASTS Informatics Committee have worked hard developing a new ASTS website this year to provide more information for members and the public. To the same end, Mike Abecassis and his committee have revised the *Chimera*. Paul Kuo and the Scientific Studies Committee are working with FDA staff and AST to revise transplant study designs.

But now let's get back to the issue at hand—the Christian martyrs. The rationale for this discussion is severalfold. First I thought it would be stimulating and educational for my friend and colleague, AST president Dr. Mohamed Sayegh, in his understanding of Judeo-Christian thought. Second, the spiritual underpinnings of our society have greatly influenced how we live and how we practice medicine and transplantation. Third, in my own surgical career I have found the study of Christian martyrs to be inspirational. When I first came to Minnesota in 1974, Dr. Najarian still believed that interns made the best retractors. I think he enjoyed and valued the audience that we provide, and the exchange across the OR table. As I became adept at surgical retraction, I passed the time by doing a silent mental review of the Christian martyrs. I knew them by heart and used to recite them in alphabetical order.

Finally, there is a rich connection between life-threatening illness, the transplant surgeon, transplant physician, donor and recipient—a covenant of sorts—a bond which is a rich tapestry through which we are committed, woven through duty, hope, and promise. We are bound by our duty to do the right thing, we are bound by the hope that we have, and that our patients have in us that we will make things right, and we are bound by the promise of return to health—a second chance at life.

So my purpose today is not solely to regale you with ancient tragic tales—religious stories which may sound like fairy tales—but to use these allegories to describe what I think are some of the religious and spiritual and cultural bases for transplantation. In case you have wondered, the difference between a saint and martyr is important. A saint dedicates his or her life to serving the church, while a martyr is an individual who sacrifices his or her life to that commitment. A more secular definition of a martyr is one who

chooses to suffer death rather than renounce principles. People who are experts in religious study know that the church has strict requirements for saints and martyrs—like how many miracles an individual has performed—but these details are not essential for the present discussion.

Information regarding the lives of the martyrs can be found in the *Golden Legend*, Eusibus' *History of the Church*, and Foxe's *Book of Martyrs*; the books were the basis of my study. There are also extensive references in various books on art and philosophy. The age of the martyrs refers to the early four centuries of Christian persecution, chiefly by the Romans. Later martyrs can be found among other Christian sects who had diverged from the church; these martyrs actually suffered at the hands of the Catholics within the church and without question, if you reflect on it, every ethnic and religious group has suffered martyrdom at some time or another.

So the theme of suffering for your principles and achieving spiritual peace in the face of disaster is universal. One of the interesting features of the martyrs is that in spite of being tortured, in a wide variety of ways, under a wide variety of circumstances, the martyrs were very hardy and invariably survive many of these tortures only to eventually die by the sword. A little bit like cartoon characters who bounce back when they get hurt. There are exceptions of these general martyr rules. More important than how the specifics of the martyrs die is the serenity with which they meet their fate—calm in the face of hardship or disaster. Calm in the face of disaster, as we all know is a central theme for the transplant team, the donor whether cadaveric or alive, and the transplant recipient.

The first Christian martyr, known as the protomartyr, was Stephen. He was actually persecuted by the Jews and not the Romans and died around 35 AD. He started as a devout Jew. At first he was a vocal critic of the teachings of Christ but incurred the anger of the Jewish legislative council when he publicly renounced his previous beliefs as he became convinced that Jesus was the son of God—he is said to have had a vision of Jesus at the right hand of God. He was driven out of the gates of the city. His final prayer before his death is for forgiveness to those who would harm him: “Lay not this sin to their charge.” In art, an attribute is a graphic symbol through which you can identify an individual. Stephen's attribute is the stone—the agent of his martyrdom; so when we see a figure being hit by stones, we think of Stephen. When Stephen's grave was discovered in 415 AD his body was taken to

Rome where it was placed in the tomb alongside St. Laurence. In art as well, St. Stephen is often shown in St Laurence's company.

Laurence was a Christian martyr of Spanish birth. As Pope Sexton II was about to be martyred himself, he asked Laurence to give away the church treasures. When the Roman prefect called upon Laurence and insisted that the riches be given to him instead, Laurence gathered the poor and sick around him and told the prefect that they, the sick and the poor, were the true treasures of the church. His attribute, and the source of his death, is the gridiron. His fate was to be roasted. He met his fate with notable calm, observing, "See I am done enough on one side, now turn me over and cook the other."

Many of the martyrs were women whose fidelity to the church and Christ put them at odds with the carnal world. Margaret of Antioch, Catherine of Alexandria (the patron saint of education), Agatha, Barbara, and Lucy were examples of chaste maidens who were sacrificed rather than renounce their faith and get married. Margaret of Antioch innocently refused the advances of the prefect of Antioch, telling him she was already committed to Christ. She was thrown in a dungeon where Satan appeared to her in the form of a dragon and devoured her. Using the cross in her hand, she burst out of the dragon and was delivered safely, at least temporarily. Her safe deliverance from the dragon has made her the patron saint of childbirth. She was subsequently beheaded. In this panel, she is shown standing on the dragon over whom she was victorious. Catherine of Alexandria, a woman of great wealth and education, also refused to renounce her faith. She was tortured on a wheel prior to her beheading.

Agatha, a popular image, rejected the love of a Roman emperor who subjected her to many tortures including the severing of her breasts. This injury was healed by St. Peter. She is often pictured carrying her recently severed breasts on a saucer and modestly covering her wounds. Her image of serenity in the face of this bodily assault has served as an inspiration to breast cancer sufferers.

Barbara's attribute is a tower where her father had planned to imprison her. The original plan was for two doors which were to be guarded. But she convinced the workmen to create another entrance through which the priest could enter so she could take her vows of chastity. Her father became so enraged at her conversion that he betrayed her to the Romans and beheaded her himself.

Lucia or Lucy was the virgin martyr of Syracuse. She died around 300 AD during the reign of Diocletian. Her mother had been cured of some malady at the shrine of St. Agatha—this moved Lucy to devote herself to the church and rid herself of riches. She suffered many tortures and eventually was stabbed through the neck. Lucy's name refers to light or enlightenment—her attributes are a lamp or two or more eyes. She is said to have plucked out her own eyes in response to a suitor who persistently praised their beauty. She is a symbol of spiritual truth.

Cosmos and Damian have long been known to us as the patron saints of transplantation through their miraculous transplantation of a Moor's leg onto a Christian—these two noblemen were better known for their compassionate treatment of plague sufferers. They are often depicted with heads bowed or kneeling together about to be beheaded. Sometimes they are shown with stigmata of the bubonic plague.

The imaginative, often gruesome forms of martyrdom made for sensational subjects of the art of the time—kind of like a medieval *National Enquirer*. Sebastian pierced by arrows (which miraculously avoided all major organs and were removed by Irene, the first nurse). Mark dragged through the streets, John the Evangelist immersed in a vat, Clement weighted down by an anchor and thrown overboard, Laurence roasted on a gridiron, Bartholomew flayed, and Erasmus who was disemboweled. Wild images; what myths are made of. Of course the church officially abandoned many of the martyrs in 1969—some of my favorites such as Margaret of Antioch were eliminated from the martyr list because of insufficient data supporting their existence. But what do these people or myths mean to us, the transplant community—we who strive for a variant of immortality either for us, for brilliant discovery, or for our patients through the miracle of cheating death—perhaps indefinitely?

The martyrs were, by and large, undistinguished folks—not necessarily the famous, or the smartest, or the people in charge—people who went from obscurity to immortality with their acts of legendary martyrdom based on a surrender to faith. Not unlike our cadaveric donors who gain a measure of immortality by giving life to a dying recipient. Of course, the cadavers do not willingly sacrifice themselves for this—their families make the choice—but in some way the donors do go on living. Many of the cadaveric donor families give accounts of moving discussions that had previously taken place, during which the person destined to be a donor expressed a strong desire to

pass on life through donation; families cherish the generosity of the deceased and see it as a triumph of sorts. You may have observed that many of the martyrs I've shown you are pictured with a palm leaf which is a universal sign of martyrdom. Though the palm was originally a symbol of military victory, the church adopted it as a symbol of Christian victory over death.

William Alger, the 19th century theologian, said, "The wealth of the soul is measured by how much it can feel." So the cadaveric donor lives on through a selfless act of family and loved ones and in some ways transforms a senseless death into a symbol which transcends the death; the palm is an apt symbol—a victory over death. Soul, as defined in Webster's Unabridged Dictionary, is "a) the principle of life, feeling, thought, and action in man, regarded as a distinct entity separable from the body and commonly held to be separable in existence from the body; b) the spiritual part of man as distinct from the physical part." In some way, the donation process liberates the soul and liberates living organs from the lifeless body.

I recently participated in a discussion in Washington led and organized by the new Secretary of Health and Human Services, Tommy Thompson. From around the table, people representing various transplant interest groups were in turn called upon to give him advice about increasing organ donation. When it was the turn of a donor mother whose son had died some years before, I was struck. She told us that the transplant community should not ask for more from her, as all had been taken from her son and thus from her—but instead we should offer the opportunity for her son to live on—in the spiritual sense by the use of his organs in transplantation. Though the act of donation does not change the inevitability of death, the individual's fate in history is altered from oblivion to remembrance.

Over the past 20 years there has been an interesting juxtaposition in terms of the relationships of the parties involved; the transplant surgeons and physicians who played an active role in interacting with donor families are now purposely removed from the donor process for fear of conflict or exploitation. Others now give comfort. In addition, whereas donor families and recipients were kept apart in the past, now they commonly contact and celebrate with one another. Donor families talk about the life force—the spirit being passed on. And what about the live donor? Although some family members and friends decline the opportunity to be a live donor, more and more people have embraced this role. Many tell us they know they are "the one." They know it is a privilege to really help someone else. They know it

is a privilege to be a hero and to save another. Legions of living donors who suspend reason and put themselves at risk for the benefit of their loved one—or even more fantastic, for a stranger, someone they do not even know. A virtual “leap of faith” as they put themselves in our hands for safe keeping.

The new phenomenon—the good Samaritan donor—tries our comprehension. We have difficulty understanding the motivation of strangers who are willing to endure pain and risk of death. Do they do it to revive their spirit and achieve a measure of greatness? If so, they succeed. Do not these donors parallel the martyrs who gladly walk into harm’s way for their faith, or for their loved one, or even for a stranger? Sister Wendy Beckett of the Notre Dame order, a noted art historian, tells us, “Holiness can so easily appear as something remote ... yet to be a saint is a wholly practical and realistic growth into our own truth. It is what we are all meant to become.”

If not modern day martyrs, then legions of live donors are certainly modern day heroes and saints. A quote from the book *Great Religions of the World*: “To a pagan calling for blood, such readiness to lose it seemed madness. Not to Christians. Martyrdom was better than baptism, for it washed away sin at the moment when a man could sin no more. Steeled by the prospect of instant sainthood, the martyr endured their agonies often with a bravery that moved jaded pagans to embrace such compelling faith. From the account of Polycarp’s death ... each year they hailed with great gladness and joy the birthday of his martyrdom.” So here is a celebration of the day of martyrdom or rebirth. It brings us full circle to the recipients who with their families face incredible odds to achieve renewed life and health—a test of their faith in us. How often do recipients christen their transplant date as their new birthday?

And what of us and our part? If the cadaveric donors and recipients and live donors are contemporary martyrs and saints, what does that say for the transplant surgeons, physicians, and other transplant professionals? Just what is our place in all of this? Maybe some of us strive for our own immortality either through a new idea, a new procedure, or through our part in the transplant procedure itself. We are the catalyst—the agents of change—we make it happen. We are central to the covenant. We are the judges, forced to make anguished decisions that pit donor advocacy against the reality of short supply of a precious resource. This may seem an impossible task. Just as martyrs and saints had moments of doubt, so do we. We must provide clarity and calm in desperate situations which have no solution.... And at the times

for which there is no miracle, when our best decisions are met with failure, the wrong operation, the wrong timing, the wrong patient, our disappointment with the betrayal from a patient we expected to cherish their gift. Sometimes our patients don't appreciate their transplant; sometimes our patients are not grateful to us; sometimes the patients die. Failure is a part of our life. Transplantation transfigures the failure—the untimely death of a loved one, the diagnosis of an inexorably fatal illness—into something positive, a light that continues to shine, but sometimes transplant doesn't work.

Ayn Rand conveyed the message that life is about choice. Living requires action. Martyrs made choices, people make choices, families make choices, and so do patients. The transplant team makes choices possible. We give hope and promise a chance.

We are fortunate to be agents of change, to refine techniques and approaches that make transplantation a real live treatment that works. The mysticism and strong religious connections so apparent in the stories and art of the Middle Ages have been changed and challenged by a new reliance and appreciation of scientific discovery. The contrast of Galileo's scientific discovery with his daughter's religious commitment is a rich one. Her father suffered a kind of martyrdom while she prayed from her convent. Galileo remained faithful to his truth—foreshadowing modern science. Another quote from *Great Religions of the World*: “More and more science dominates areas once reserved for priests.” If science is a new church, then we are the clergy; our researchers, the prophets.

But perhaps, we are just people trying to do our best—whose participation in the miracle of transplantation allows us a little latitude in dreaming about the angels.



Transplantation: Looking Back to the Future

MARC I. LORBER, MD, 2001–2002



Friends and Colleagues:

I stand before you feeling tremendous pride in our organization, and the honor to serve as your President this past year has been one of the highlights of my professional career.

Like you, I have listened, usually politely, to many addresses given by outgoing Presidents over the years. They are usually interesting, and some have been inspiring. Some have been educational, some have been tedious, some have been boring, and some have been quite controversial.

Until a year ago, I thought little about how my predecessors arrived at their subject. As you know, there are no rules, the topic is open ended, and

obviously there is no prospective peer review.

However, there is a form of peer review that comes immediately at the conclusion, at least for a few minutes during the inevitable post delivery critique, and believe me...it is that daunting thought which has occupied a substantial amount of my time, at least recently.

Now that it is my turn to stand before you, I have also learned, THANKFULLY, that few of you will remember a word of what I say...

...except those of you who are also afforded the great honor to serve as President. You will remind yourself when you read each prior address, as you struggle to identify a worthy subject when your turn comes...and that it will!!

For a couple of reasons, I will spend a few minutes describing some personal reflections on my path to this day.

First, for the young in the audience, perhaps this may encourage one of you to select a career that will be as exciting and rewarding for you as mine for me ... and

Second, it allows me an opportunity to publicly thank some of the people who have been especially important to me during this journey.

Some of you have heard me describe my introduction to the ASTS, and our remarkable field of transplantation. I held a part-time job during medical school working as a perfusion technician in our fifth President's, Fred Merkel's, lab. As many of you know, Fred has been widely acknowledged for his important role in the founding of our Society. This was during the middle 1970s; clinical transplantation held tremendous promise with growing success in renal transplantation. However, results with liver and cardiac transplantation were more problematic. There were only two active liver programs, one at Colorado under the leadership of our first President, Dr. Thomas Starzl, and the other in Cambridge led by Sir Roy Calne. Similarly, Dr. Norman Shumway led the only active cardiac transplant program at Stanford. Nevertheless, the science was exciting, and the future for this evolving academic field was obviously bright in the eyes of an eager medical student, seeking an academic career in surgery.

ASTS—The Early Years

I was also privileged to attend the initial two scientific meetings in Chicago; I ran the slide projector!! I recall excitement, I remember the animated discussion, and I was particularly moved by the vigorous debate. It was

during those sessions that my interest in this field was solidified...and I suppose this also allows me a pretty solid claim that I have worked my way through the ranks.

My introduction to transplantation was important, but my surgical training at the University of Michigan, under our sixth President, Jerry Turcotte, then Chairman of our Department of Surgery, provided me with the background, skills, and perhaps most importantly, the mindset to focus my career. Jerry, I am indebted to you and the Michigan Faculty for providing me the chance to join the rich Coller Surgical Heritage. You have been an important mentor, role model, and friend.

My Michigan teachers were many, and I am grateful to each, but in addition to Jerry, I want to mention two individuals who have been especially important to me. Dr. Darrell “Skip” Campbell, Jr., with whom I served on the ASTS Council a few years ago, was my first chief resident. Skip, since that first night on call at the County, you have been an advisor, mentor, colleague, and most of all a fabulous friend. This is a photo given to me as a gift when I left Ann Arbor in 1984. The setting was a party thrown by Don Dafoe who you know as an outstanding transplant surgeon and Chairman of Surgery at the Jefferson Medical College in Philadelphia.

The other individual, Dr. John Niederhuber, an outstanding immunologist and surgical oncologist, then on the Michigan faculty and presently at the University of Wisconsin, was for me the consummate surgeon scientist. John ignited my enthusiasm for Immunology research, and he taught me that high-quality clinical surgeons can, with determination, engage in meaningful scientific research. John also introduced me to Frank Fitch, who was soon to become my immunology mentor.

This was during the late 1970s, a truly exciting time in cellular immunology. Although the structure and function of immunoglobulin genes had recently been identified, the elusive “T” cell counterpart was a hot topic, and several controversial theories were still in play. The Niederhuber lab was quite active, working in the area of MHC immunogenetics, and John was advising me about options for my upcoming postdoctoral research fellowship. He called one day to urge me to attend a seminar to be delivered by Frank Fitch of The University of Chicago. The topic was “T cell Cloning,” then a newly described, powerful technology whereby monoclonal lines, deriving from a single cell, each sharing identical properties, could be propagated for the study of T cell behavior. Frank’s lab was specifically

interested in alloreactive, cytolytic T cells, a subject of obvious relevance to an aspiring transplant surgeon. Frank allowed me to join his lab, and I was extremely fortunate to work during the peak of the enthusiasm over this new technology. My years at The University of Chicago were truly exciting. I learned about alloimmunity, T cell cloning, flow cytometry, and most importantly about hypothesis-driven research. While at The U of C, I was also fortunate to establish what has become a deeply valued, enduring professional friendship with Frank Stuart, our 20th President. Frank, I thank you for your advice, your guidance, your many important contributions to our field, and also for your friendship over the years.

My other mentor, Dr. Barry Kahan, the 16th ASTS President, allowed me the opportunity to begin my academic career with his group at the University of Texas in Houston. I don't believe Barry is here today, but suffice it to say that I am deeply grateful for his mentorship, advice, and loyal support over the years.

There are many, many others whom I have not specifically mentioned, but each of you have been extremely important to my career. I am sure you know who you are ... certainly I do. Please accept my heartfelt thanks, and my apologies that I did not mention each of you by name.

ASTS 2001–2002

This year began with high hopes for scientific, educational, and perhaps even political progress for our field and for our organization. My tenure began as an outstanding second successful joint ASTS/AST annual meeting concluded. We heard Secretary of Health Thompson deliver a refreshing and powerful message of support for our field, as he challenged us to focus our energies with him on the goal of improving organ donation.

Relations between our organizations, the AST and the ASTS, were strong, largely the result of efforts from each organizations' leaders during the past couple of years, seeking to emphasize our common goals and our common vision. We also enjoyed the successful launch of our journal, the *American Journal of Transplantation*, under the able leadership of Editor Phil Halloran and his able editorial staff. Ron Busuttil, Jack Lake, Nancy Ascher, and Mo Sayegh deserve special thanks for their important efforts in this regard. And you, the ASTS and AST members, deserve a hearty pat on the back for your hard work and dedication. You are the heart and soul of our field, and our outstanding organizations.

Attack on Our Nation

Our agenda was set this year, after an active summer of planning, during our third annual ASTS Strategic Planning retreat on September 9th in New York City at the Waldorf Astoria. The Council and Committee Chairs enthusiastically gathered for a day of reflection, discussion, and planning for the coming year. The mood was upbeat, and the discussion was lively, as an ambitious agenda for the year was established.

No one could imagine that, only two days later, on a bright, sunny morning, life was going to change horrifically and dramatically for each and every one of us. I expect that each of you remember exactly where you were and what you were doing on September 11, 2001. I was finishing a case in the operating room when the first plane hit the World Trade Center. I was walking to visit with waiting family members when, as I walked through the OR lounge, I glanced at the crowd, then up to the television as the second Tower burst into flames. Then, a short time later, the Pentagon, right here in Washington, DC, was struck as well.

As most of you know, Yale-New Haven Hospital is only about a 90-minute drive from Manhattan. Consequently, an emergency meeting was convened, as many of us were alerted that we would likely be called upon to help with the care of New York City victims. Although it was not certain whether we would travel to New York, or alternatively that victims would be triaged to New Haven, preparations were underway. However, time passed, but nobody came. We now know that survivors were few in number, but death and destruction were great. These events shocked and for a time paralyzed our nation, and they have occupied our thoughts and actions ever since.

I suppose too, it follows that my remarks today have been shaped by reaction to those events. I would like to think that the aftermath of September 11th might serve as a wake-up call, not only to the realities of danger that these terrorist actions pose, but perhaps also to the danger of our society's complacency regarding many aspects of our modern lives.

Collapsing Infrastructure during a Time of Plenty

Sunday, we heard Francis Collins deliver an eloquent address outlining the potential for translating results from the human genome project to meaningful clinical benefit in the very near future. We are now positioned to answer many among the most challenging questions facing human biology and

medicine. Also, recent and continuing growth in the NIH budget, as well as private sector funding for research, promises to offer continued opportunities for scientific and technologic progress.

It is also significant that forward-thinking people at the NIH and JDF have provided considerable resources to the Immune Tolerance Network. This exciting initiative, under Jeff Bluestone's direction, will hopefully emerge from its early growing pains to provide a meaningful platform for progress in our collective quest to achieve clinical tolerance after transplantation.

Just look around; I think you will agree that the science, basic and clinical, in our field, transplantation, is alive, well, and the best is being reported here this week!

Dr. Thomas Starzl, during his inaugural ASTS Presidential Address, referred to the 1962 T.S. Kuhn treatise, "The Structure of Scientific Revolutions."

Kuhn stated, "...a great advance (in science) necessitates the overthrow of an established dogma, and when that occurs the advance itself becomes the new dogma to which advocates flock. It is natural for those disciplines to become protectors instead of improvers of the status quo, guardians of the past instead of seekers of the future...."

Dr. Starzl issued this warning to the ASTS as a fledgling organization; perhaps we should consider those words today. We have entered a period where scientific discovery has placed us in the position to effect major changes in the way we practice medicine, and for that matter in the way we live. However, it is important to recognize that our ability to effectively translate the considerable promise to actual clinical care has proved challenging. Certainly, our partnership with colleagues from the pharmaceutical industry has delivered substantial progress in our field of transplantation. However, unfortunately, a recent *Time* magazine (April 22, 2002) cover page and lead article provided a shockingly negative view of the complex realities and potential pitfalls of the clinical research process. Risk cannot be eliminated from clinical investigation; it is proper for us to debate the manner in which our society elects to share that risk. Certainly, it includes full disclosure, the principles of informed consent, as well as proper safeguards and results monitoring. The dialogue should involve all of the stake holders, including scientists, clinicians, ethicists, lawyers, as well as other interested members of our community. However, unless we are content to accept medical practice in general, and transplantation in

particular, as it exists today, and I do not believe we as Americans are, clinical investigation must move forward. We are the stewards of this enterprise, and we must accept the responsibility to engage in what will hopefully become a constructive albeit, I expect at times, contentious dialogue.

Beveridge in his 1980 monograph, “The Seeds of Discovery,” observed that major discoveries often occur when individuals working on problems from varied perspectives come together to identify new dogma-shifting paradigms. An interesting approach, but how might we get there?

Most in transplantation work in academic, University-owned or -affiliated Medical Centers, where certain forces, mostly economic, have threatened our ability to remain at the forefront of progress. I doubt anyone here has been successfully protected from the considerable negative influences of our present health care delivery environment. Our hospitals and our practices must participate in the intense competition for shrinking health care dollars, and unfortunately the playing field is not level. As a group, our patients tend to be more seriously ill, often with substantial, serious co-morbidities, and because an important part of our mission includes educating medical students, house staff, and fellows, we tend to be somewhat less efficient. Additionally, we increasingly find ourselves responsible for solving financial implications associated with increasingly more complicated, under- or un-funded mandates levied by payors and/or our governmental institutions under the “mantra” of accountability. Consequently, at a time when we should be directing our efforts toward improving our translational research infrastructure, we have become distracted. Those of us who focus on clinical problems (surgical and non-surgical) are pulled farther away from the laboratory, and those who are engaged in hypothesis-testing research have increasingly less contact with their clinically oriented colleagues.

“Why Johnny Can’t Operate” was the cover caption of an issue of the *New Republic* last fall, and it accompanied an article written by past Editor of the *New England Journal of Medicine*, Dr. Arnold Relman, entitled “The Collapse of Medical Education in America.” I believe it sounds another type of alarm! Although my remarks today are not focused specifically on our educational system, even the most dedicated among our colleagues has undoubtedly felt an erosion in enthusiasm as the struggle to limit work hours, maintain clinical experience at a level that will maintain the outstanding level of care we, as members of American society, have grown to expect, has

become increasingly more challenging. Time- and work-intensive fields such as transplantation seem particularly vulnerable, as concern rises that new graduates are seeking less demanding career pathways. What has changed since those enthusiastic early years?

Back to the Future

Perhaps a brief look back may help us understand, or at least may provide us perspective from which we might move forward. In his Presidential Address to the ASTS, Starzl offered his view that:

“...we (the ASTS) exist mainly for the development and exchange of accurate information and informed opinion...”

“... that we should work with those in health planning who seek our advice...”

“... that we should work to establish how and how many transplant surgeons should be trained...”

“... and we should develop standards of professional care...”

Modified to include the important progress we have enjoyed through collaborations with our AST colleagues, I trust you agree that these words have important relevance to our discussions today!

I also remember the late Dr. Fred Belzer, our second president, from those early ASTS meetings. He would eagerly rise to the microphone, usually after a well presented paper, to aggressively, albeit in the spirit of good debate, challenge a particular hypothesis. Arguably, it was those spirited challenges to the dogma of the time which provided one of the most important ingredients, creating the atmosphere conducive to the eventual successes in clinical transplantation we continue to enjoy today.

During his Presidential Address, Belzer too offered his vision for the ASTS—or perhaps any society. He admonished us:

1. To stimulate progress
2. To make known the progress through scientific exchange and publication
3. To stimulate young physicians to enter the field and make contributions to it
4. To provide leadership in securing financially sound and optimal patient care

Don't those 4 simple statements continue to ring true today? He continued...

5. To stimulate young physicians to enter our field
6. To work with our colleagues in the medical (he said nephrology) disciplines
7. To support those who have the same basic goals as do we
8. To reduce post-transplant mortality
9. To eliminate the effects of steroids
10. To work to increase the number of donor organs, the lifeblood of our field
11. To encourage senior members to reach out to junior colleagues as mentors and as friends

Still relevant today? I think so!

And so it went, as Najarian established the principles for training programs in transplantation, laying the foundation that became so permissive of our growth and maturation. A succession of progressively better annual scientific meetings followed, where the most up-to-date information on transplant science, basic and clinical, was presented. Our field, transplantation, grew as results became increasingly more acceptable.

Things really began to change when, after an inauspicious beginning, cyclosporine was successfully introduced into clinical transplant practice, setting the stage for transplantation to move from a promising, largely experimental therapy to assume its place today as the first-line treatment for irreversible organ system failure.

I spoke about the early years of the ASTS and my personal attachments to this pioneering organization. However, it is important to acknowledge there were shortcomings as well. As I reflect on those exciting early years, recognition of the seminal contributions by many physicians and scientists, who with dedication, foresight, perseverance, and tremendous talent were also instrumental in this remarkable story of an interesting scientific curiosity growing to become mainstream clinical reality, should not be overlooked.

I am referring to a long list of people, only some of whom I will name as examples: In no specific order, they include names like Burnet, Damashek, Schwartz, Merrill, Medawar, Bach, Terasaki, Hitchings, Kohler, Milstein, Gutman, Carpenter, Strom, Benacerraf, Lacy, Dausset, Snell, Fitch, Sachs, Stiller, Borel, Kerman, Milford, Sayegh, Rubin, Southard, Zinkernagel,

Strober, Bluestone, Miller, Gonwa, Norman, Helderman, Lake, Halloran, Turka, Lucey, Harmon and the list goes on and on.

And PLEASE, if I didn't mention your name or your favorite physician or scientist, I am sorry. It was not meant as a slight; the list was by no means inclusive, the real numbers are very large.

To be sure, it took a bold group of determined, focused, and courageous surgeons to drive our field from the laboratory to the operating room, and recall this was often over the loud objections of many. And I am proud to count myself among their progeny, but I again emphasize this did not happen in a void.

Beyond all else, it is essential for everyone to understand that WE ARE IN THIS TOGETHER; we always were, and it is clear to me that we always will be.

Collectively, we are the stewards of a very important enterprise, our field of transplantation.

As we seek solutions, our organizations, the AST and ASTS, must provide leadership, and I believe we have made important progress, addressing many of the challenges facing our field. Beyond our annual joint meeting, the American Transplant Congress, and the success of our journal, the *American Journal of Transplantation*, we have worked effectively together. We have opened the dialogue that will lead to solutions for several of the vexing problems facing our field including organ donation, living and cadaver; financial incentives; generic pharmaceuticals; the growing waiting list, and more. We must continue this journey together, with determination and the resolve to accept the challenges. Assuming we do so, I am convinced that in time we will develop the tools to successfully provide transplant therapy to those in need, with increasing efficacy, in a well-tolerated and timely manner.

Please don't forget that WE are the surgeons, physicians, scientists, transplant coordinators (nurses, PAs, technicians), OPO leaders, and the dedicated labs. We are the leaders in our hospitals, medical schools, and graduate schools. On behalf of our patients-recipients, live donors, and donor families we must accept our responsibility to sustain progress toward our goal of providing this remarkable therapy for all who are in need.

A New Organizational Construct

Our current organizational constructs seem inadequate, and I am convinced we must seek alternatives. Available resources seem insufficient to meet the growing demand. We must work through a confusing morass of poorly understood, seemingly underfunded, and inadequately administered mandates, and we must recognize that we are in the midst of change. It seems appropriate to consider whether the traditional administrative and organizational constructs that have worked in the past should continue.

By example, I will describe an approach we are working to establish in transplantation at Yale, my institution. Together with my valued collaborator, colleague, and friend Dr. Jordan Pober, this vision began to take shape during the latter months of 1999 and early 2000. The goal was to encourage the considerable expertise within our faculty, to self-identify as stake holders in transplantation, and to establish a programmatic structure that would encourage their contributions and support.

Toward that goal, we proposed to establish a new interdepartmental research program in Vascular Biology and Transplantation (VBT) directed by Dr. Pober. The VBT will act as an umbrella program for collaborative research projects, supporting basic, pre-clinical, and, together with its clinical counterpart the Interdisciplinary Program in Clinical Transplantation (IPCT), facilitate application of research discoveries to the bedside—yes, true translational research! Presently, approximately 20 investigators from many Yale departments, including Surgery, Medicine, Pathology, Dermatology, Pharmacology, and Immunobiology, have elected to participate in the VBT. The VBT seeks to foster new research in vascular biology and apply the results to clinical transplantation and related fields. The program will also train scientists in these disciplines.

During this process, I have led an effort to similarly re-organize our clinical efforts. The IPCT will serve as an umbrella organization for clinical transplantation at Yale. As with the VBT, it is the goal of the IPCT to facilitate opportunities for the various stakeholders from different departments and interests to participate meaningfully in programmatic growth. The IPCT seeks to expand clinical volume, facilitate clinical and translational research and training in organ transplantation by consolidating renal, pancreas, and liver transplant efforts into cohesive, comprehensive, and focused organ-specific programs. The IPCT will provide complete transplant and support services for patients suffering irreversible organ failure, emphasizing new strategies for improving care through results-

oriented analysis, clinical research, and translation of basic discoveries. The IPCT will also provide an environment to foster training in clinical and transplant science. As most of you know, Dr. Fadi Lakkis recently joined us as co-director of the IPCT; additional recruitments are actively underway.

It is our shared vision that these parallel and inter-digitating programs will attract and support outstanding faculty. Interactions will facilitate basic and clinical research, as well as outstanding clinical care and training in transplantation. The goal of these programs is to establish a model for advancing outstanding patient care through translating relevant discoveries into clinical practice.

Our third ASTS President, Dr. Thomas Marchioro, suggested:

“... our destiny is to increase the store of knowledge...”

“... if we are found wanting, others will take our place and we shall be consigned to the dustbin of history...”

“... progress has been achieved by unremitting hard work, countless experiments, dashed hopes, and above all the courage to fail...”

Marchioro challenged us accept our job, to educate ourselves, our colleagues, our students, our patients, our Society, the public, and the government.

He reminded us of the need to “muster once again the qualities of heart and mind that were necessary to prove that organ transplantation was possible....”

And he quoted Teddy Roosevelt:

“It is not the critic who counts, not the man who points out how the strong man stumbled, or where the doer of deeds could have done them better. The credit belongs to the man who is actually in the arena, whose face is marred by dust and sweat and blood; who strives valiantly; who errs and comes short again and again; who knows the great enthusiasms, the great devotions; who spends himself in a worthy cause; who, at the best, knows in the end the triumph of high achievement, and who at the worst, if he fails, at least he fails while daring greatly, so that his place shall never be with those timid souls who know neither victory nor defeat.”

Before closing, I wish to acknowledge and thank my colleagues at Yale for putting up with my quirks and idiosyncracies and to thank you for accepting my time away from Yale this past year with equanimity. However, more importantly, thank you for your individual and collective dedication to our mission of outstanding clinical care, new knowledge generation through

research, and education of our future colleagues. First, to my partners in our Section of Organ Transplantation and Immunology, Giacomo Basadonna and Amy Friedman. Although this thank you seems inadequate, I hope you know how much you are appreciated. Also, our coordinators, inpatient and outpatient nursing staff, as well as our clinical and laboratory research teams; two of our ever growing crew are here today, Jennifer Nikolich and Noelle Sowers. Thanks. Thanks also to Dr. Lisa Geiselhart, who supervises the outstanding technical staff in our histocompatibility and immune evaluation laboratory, and who is also a deeply appreciated and valued research collaborator. I am also fortunate to work with an outstanding group of medical colleagues including Peggy Bia, Rich Formica, David Rothstein, Alan Kliger, Tom Eisen, Doug Smith, and far from least the most recent tremendous addition to our team, Fadi Lakkis.

I am also delighted that members of my family have joined us today.

To my parents, Elaine and Jerry, without your guidance, patience, and probably most of all perseverance, it is not likely that I would ever have been afforded this opportunity!

And to my wife, Kathy, who many of you know also, because of her outstanding efforts with our clinical research program ... what can I say? You are always there for advice, guidance, support, and frequently a little (or sometimes perhaps a lot of) reality testing.

To my children, David and Beth, who have also joined us. You too have made many sacrifices, as I have tried to balance my work with your needs. You have been patient and understanding, and I appreciate that very much. I am also very proud of both of you! And Beth, thanks for sharing your graduation week with me!!

Finally, I want to again reiterate how special the ASTS has been for me. I hope you can understand what an honor it has been for me to serve as your President this past year.

Thank you.



The Transplant Team: An Expression of Gratitude

JAMES A. SCHULAK, MD, 2002–2003



Fellow members of the ASTS, friends in the AST, and transplant colleagues from around the world, it is a great honor and privilege to address you today as the president of the American Society of Transplant Surgeons. The ASTS means very much to me and has been an integral part of my professional life right from its beginning 29 years ago. As a resident and transplant fellow at the University of Chicago I enjoyed many benefits, not the least of which was a proximity to the annual meeting of the ASTS and the good fortune of being invited to attend it each year by Dr. Frank Stuart, our 20th president.

In those early years the ASTS meeting was a very intimate affair, held yearly at the Drake Hotel in Chicago. It was usually comprised of about 30

papers, all of which were presented in plenary sessions. As an aspiring transplant surgeon it was an exciting experience to listen to the scientific papers; have the occasional opportunity to be introduced to the giants of our profession like Tom Starzl, John Najarian, or Folkert Belzer, to name a few; and to meet and mingle with other budding transplant surgeons who are now my colleagues and friends. I'm sure that many of you remember those early days as fondly as do I. With this perspective, it is easy for me to say, that without question, having served this past year as the 29th President of the American Society of Transplant Surgeons has been the pinnacle of my professional career and I am grateful beyond words for having had the opportunity to do so.

One cannot achieve a career milestone such as this without the help, support, and guidance of mentors. I have been very fortunate to have had several such individuals encourage me to pursue a career in transplantation, help me to get started, and show me how to succeed. As a medical student at the University of Chicago I'll never forget the first operation I scrubbed on as a third-year clerk in general surgery way back in 1972—a kidney transplant with Frank Stuart. Frank, I was hooked from that time on. Dr. Stuart, a gifted surgeon and respected researcher, was my role model during both medical school and post-graduate training. He also gave me the opportunity to begin my research career in his laboratory working with Dr. Craig Reckard on islet cell and pancreas transplantation. Craig was also very supportive of my research and always made the effort to introduce me to everyone he knew in the field, a gesture for which I am also most appreciative. Frank and Craig, I thank you both very much for getting me started in this wonderful profession.

Upon completion of my transplant fellowship, I followed the advice given to many young men and moved west, to Iowa City, that is, where our 13th president, Dr. Robb Corry, gave me my first job. Robb was both my boss and “big brother.” He showed me how to succeed by setting lofty goals; he gave me plenty of leeway on the clinical service so that I would develop the confidence to become successful and taught me to have the courage to do things a bit on the edge. Even after I left Iowa City for Cleveland, Robb continued to support my career with help and advice. Robb, like many in this room, I miss you, and thank you for being my friend and teammate.

Now it's time for me to “switch gears” and try to say something that you might find informative, useful, or at least entertaining; or perhaps more importantly, as our Past President Marc Lorber advised me, to say something

that won't embarrass me. Many of my predecessors used this occasion to review and comment on the current political or scientific "state of transplantation." Others have chosen to discuss topics that were only variably related to the field of transplantation, such as Dave Sutherland's treatise on plant transplantation or, more recently, Nancy Ascher's enlightening story of the Christian martyrs. After some contemplation, I have chosen to talk to you about a phenomenon that has impressed me right from the beginning, that is, the evolution, composition, and maturation of the TRANSPLANT TEAM.

Webster's Dictionary defines a team as "a group of persons associated together in work or other activity." We all are familiar with the team concept as it pertains to sports, but it is also becoming a widely utilized construct in business and in the professions as well. In their book *The Wisdom of Teams*, Katzenbach and Smith define teams as "people with complementary skills who are committed to a common purpose, performance goals, and approach for which they hold themselves mutually accountable."

It is this latter definition that pertains to the transplant team. In order to be successful, organ transplantation requires the cooperation, collegiality, and mutual respect of many professionals from all walks of medicine. Surgeons work with internists and pediatricians. Clinicians collaborate with scientists. And in doing so, all of us interact with nurse coordinators, research assistants, organ procurement specialists, social workers, and hospital administrators; each providing unique skills and knowledge while working together with the common goal of bettering the lives of patients with end-stage organ disease.

Transplant surgeons work together in coordinated teams to procure organs, to preserve and allocate them, often for centers thousands of miles away, and to perform the actual transplant operations. I suspect that transplant surgeons were among the first surgeons to learn to depend on each other and to operate with each other while performing transplant surgery. With the current strict rules governing resident work hours in this country, I believe many other surgical specialists will soon be exploring the feasibility of developing surgical "teams" comprised solely of fully trained transplant surgeons to accomplish their clinical tasks as well. In my 22-year career I have had the great pleasure of having many talented and dedicated surgeon partners, who are listed on this slide. I have learned much from each of you and have

greatly enjoyed our shared practices. I wish to take this opportunity to thank each one of you for your friendship and support, and for being a valued teammate.

Transplant surgeons also work together to administrate our profession. There is no better example of this than our own professional society, the ASTS. We have accomplished much over the years but it is the past year that I would like to review with you now. During this time the ASTS has embarked upon several new and important endeavors. We have been granted a seat on the American Board of Surgery, an accomplishment that gives credibility to our surgical specialty and will give us the opportunity to have an important voice in designing the direction that surgical training will take in the future. In addition, being part of the ABS will allow the ASTS to initiate the process of developing an examination that will lead to the award of a certificate of added qualification for transplant surgeons, much like what already exists for our colleagues in vascular and critical care surgery.

The ASTS has also been invited by the American College of Surgeons to appoint one of our members to each of the Advisory Councils for General Surgery, Urology, and Thoracic Surgery. This will give the ASTS the opportunity to help shape ACS policies as well. Moreover, we have also been granted a seat on the all-important ACS Committee on Professional Reimbursement, thereby giving us a direct voice in determining appropriate procedure codes and reimbursement rates for the work we do.

The ASTS has also embarked upon a unique partnership with the National Institutes of Health by co-sponsoring the important “adult to adult living liver donor cohort study.” In turn for our financial contribution, the ASTS has been given an important role in carrying out this study and has opened the door at the NIH for development of additional similar partnerships in the future. I’m sure we will be hearing more about this in the coming year from our next president, Avi Shaked, who, I believe, will be making an expanded relationship with the NIH one of the priorities of his term.

Overall, over the past several years, the ASTS has made big strides in its quest to bring meaningful value to its membership. All of these accomplishments were due to the hard work, dedication, and diligence of the “ASTS team,” the recent past presidents, councilors, committee chairs, and officers in our Society, and particularly to the Executive Director of the ASTS, Ms. Gail Durant. On behalf of the entire ASTS membership, I wish to thank you for serving our Society and I wish to express my deep appreciation

to all of you for helping me in this past year and for being good and loyal teammates.

As transplant surgeons we also work daily with our colleagues in medicine and pediatrics to provide the comprehensive care required by our patients. It has been said that “no man is an island” and that certainly holds true for our relationships with our medical colleagues. I have had the good fortune of learning this lesson very early in my career at the University of Iowa where a multidisciplinary team approach to transplant management was fostered by Dr. Corry. There I had the pleasure of working with Larry Hunsicker, Tom Gonwa, and Nancy Goeken, all before their days as presidents of the ASTP. This collegial and productive experience clearly molded my attitude toward professional collaboration in a very positive way.

My years at the University Hospitals of Cleveland have also been blessed by having a partner and friend manage the medical side of our program. Don Hricik, who is well known to many of you in this audience, deserves as much or more credit than I for anything we may have achieved in our program over the years. Don, I am very pleased to have this opportunity to thank you publicly for being a talented colleague, a warm friend, and loyal teammate. Needless to say, there are many thriving partnerships between surgeons and physicians throughout our profession. Right now I’m sure that many of you can look to your right or left and see someone whom you similarly value as a teammate. We must not take these relationships for granted, as they are unique and valuable, and would be sorely missed, not only by us, but also by our patients, if they did not exist.

The ASTS has also benefited by teaming up with our colleagues in the AST. This partnership, which just a few years ago was passionately chronicled by our 25th president, Josh Miller, as one that was on the brink of collapse, has, in the past several years, prospered and is responsible for several very evident successes. The first has been unveiled before us over the past several days, the American Transplant Congress. This meeting, which is the outgrowth of the “back-to-back” meetings of the ASTP and ASTS, is now one of the largest and most successful scientific meetings of transplant professionals in the world. Likewise, our journal, the *American Journal of Transplantation*, has become one of the most successful new scientific periodicals in the history of medical literature. In addition, our two societies have partnered with each other, as well as with others, to support and conduct numerous consensus conferences that have and will make

significant differences in the way we carry out our clinical missions. Without question, the consensus opinions developed at the Crystal City conference on extended donors, the endpoints conference, the waitlist conference, the recent conference on humeral rejection, and the upcoming conference on pediatric transplantation will shape transplant policies in the future. I am certain that I express the sentiment of the ASTS leadership in saying that it has been a pleasure to work with our colleagues in the AST, with the Joint Council of our two societies, and in particular with Bill Harmon, the outgoing AST president. On behalf of the ASTS I wish to sincerely thank the AST for being our teammates.

The concept of transplant teamwork was previously emphasized several years ago by our 26th president, Ron Busutil, who in his Presidential Address said, “Perhaps transplantation’s most profound and far-reaching contribution is the emphasis on a multi-disciplinary team approach to both patient care and research.”

I too believe that we as transplant surgeons and physicians would not have achieved the unparalleled success that we have without the help of our non-physician teammates. I would like to spend the remainder of my time talking about these important members of the transplant team because I believe we often take them for granted, and certainly rarely offer them the kudos and thanks that they deserve. To whom am I referring? They are the members of three very important transplant societies that play an integral role in clinical transplantation: The American Society for Histocompatibility & Immunogenetics, better known as ASHI; The Association of Organ Procurement Organizations, or APO; and last but certainly not least, The North American Transplant Coordinators Organization, known to all of us as NATCO. Because I suspect most of the ASTS membership, and probably that of the AST as well, know very little about these organizations, I believe it is fitting for us to take a brief look at them.

ASHI

The discovery of HLA antigens and the realization that they determine the ability of transplant recipients to either accept or reject their organ transplant is one of the stanchions of our field. Many of us remember the pre-cyclosporine days when perhaps a “good match” was the best predictor of graft acceptance as it was at least as important as the immunosuppressive agents of the time in influencing whether a graft was accepted or not. Today,

while HLA matching has lost some of its importance, the presence of donor-specific antibody continues to be a significant impediment to successful organ transplantation, and its accurate measurement and characterization is often crucial to achieving organ engraftment. It is our colleagues in ASHI that we rely on to help us sort this out.

ASHI came into being in the mid 1970s as The American Association for Clinical Histocompatibility Testing. The AACHT was an outgrowth of the NIH Tray Users meetings and group that called themselves the Cooperative Regions Against Bureaucracy, or CRAB. The first meeting of the AACHT was held in Birmingham, Alabama, in 1975. Among the topics discussed were the Serology of HLA by Paul Terasaki and Effector Cell Mechanisms by Bernie Carpenter, clearly setting the tone for the mission of the organization, namely the study of histocompatibility and immunology in transplantation. Within four years the organization grew to over 600 members, was holding annual scientific meetings, and was clearly establishing its role in providing education, in setting laboratory standards, and in developing national policy in regard to histocompatibility testing. In 1983, in recognition of the importance that histocompatibility genes play in other aspects of immunology, the name of the organization was changed to the American Society for Histocompatibility and Immunogenetics, or ASHI as we now know it.

In the past 30 years, ASHI has grown to become an international organization with over 1,000 members. It provides an essential quality assurance function by accrediting facilities and procedures in all histocompatibility laboratories in the United States. It is also responsible for credentialing personnel in these laboratories through its subsidiary organization, the American Board of Histocompatibility and Immunogenetics. ASHI holds a yearly scientific meeting and conducts regional meetings for the purpose of providing educational opportunities for its membership. ASHI publishes the highly respected scientific journal *Human Immunology*, the “ASHI Laboratory Procedure Manual” which provides current protocols for test procedures and information about quality improvement practices, as well as numerous books and brochures for the education of both professionals in the field and the public at large. Overall, ASHI has evolved from an informal meeting of those interested in helping the early transplant efforts by sharing histocompatibility trays to an organization that, without question, has become one of the integral cogs in the machine of organ transplantation. On behalf of

the American Society of Transplant Surgeons, I wish to thank ASHI and all of our colleagues in the field of histocompatibility and immunogenetics for being very valued teammates.

AOPO

The sine qua non for organ transplantation is to have organs to transplant. Although this statement is quite obvious, it does underscore the extreme importance we in transplantation must and do place on the endeavor of organ procurement. Many of us remember the early days when most organ procurement activity was accomplished through the auspices of hospital-based programs. This often consisted of one or two dedicated nurses or laboratory technicians who accompanied the transplant surgeon to procure organs from donors in hospitals that had been recruited into that particular transplant center's stable. This frequently led to squabbles over organ ownership between centers in geographical proximity and clearly was an impediment to the fair and unbiased treatment of our patients. For example, just 20 years ago, there were almost twice as many hospital-based OPOs as there were independent ones. It was the latter, however, that organized themselves by establishing the Association of Independent Organ Procurement Agencies in 1984.

Over the next four years the organization grew both in numbers and stature, culminating with having its standards adopted by the Health Care Financing Administration to serve as the requirements for federal certification of both independent and hospital-based OPOs. In recognition of this, in 1988 the association dropped the word "Independent" from its name and became the Association of Organ Procurement Organizations, or AOPO as we know it today. AOPO prides itself as being a professional organization dedicated to the special concerns of all OPOs, and is best described by its mission. This is to "represent and serve organ procurement organizations through advocacy, support, and development of activities that will maximize the availability of organs and tissues and enhance the quality, effectiveness, and integrity of the donation process."

In its short history AOPO has made several noteworthy contributions to the field of transplantation. These include: the development of a voluntary accreditation program for OPOs, a process in which, I may add, all of our OPOs feel obligated to participate; the development of the "Medicare Hospital Conditions of Participation" policy which gave to the OPOs the

responsibility for organ, tissue, and eye donation in the United States; and most recently, aiding Congress with passage of the major OPO certification reform legislation enacted in 1999.

In addition, AOPO has developed a self-help program for OPOs with substandard performances. This voluntary process, called the Technical Assistance Program, promotes the evaluation of such programs by peers from successful OPOs who can in turn provide performance-enhancing advice. Having witnessed this process first hand in my own regional OPO, I can attest to its usefulness. Of perhaps even more importance, AOPO is now embarking on a project in conjunction with the U.S. Department of Health and Human Services, UNOS, and Roche Laboratories to develop a better tool for accurately estimating the number of potential donors for each OPO service area so that meaningful determinations can be made regarding individual OPO efficacy. With this new program, AOPO hopes to identify best practices that will lead to the achievement of superior rates of donation throughout the country, a goal to be applauded by all of us here today. In parallel efforts, AOPO is also conducting a national retrospective death record review to help determine the real extent of the missed opportunity in organ donation and is leading in the effort to “consider missed medically suitable potential donors and lack of timely referral as serious medical errors, to be treated by hospitals no differently than other adverse healthcare events.”

AOPO, its member OPOs, and their many hundreds of dedicated procurement and preservation specialists are essential and valued members of the transplant team and as such deserve our deepest gratitude for a job well done. On behalf of the American Society of Transplant Surgeons, I wish to thank AOPO and all of our colleagues in the field of organ and tissue procurement for being our teammates.

NATCO

Where would we be if it weren't for the dedication, hard work, and untiring availability of our transplant coordinators. These nurses and physician's assistants work daily by our side to help identify, evaluate, counsel, educate, list, locate, call in, perform in-hospital liaison, and then follow our patients after transplantation. Needless to say, we would “be up the creek without a paddle.” These thousands of individuals have their own professional society, the North American Transplant Coordinators Organization, or NATCO, an

organization that I also suspect is unfamiliar to most transplant surgeons and physicians.

NATCO also had its beginnings in the mid 1970s when a group of 25 transplant coordinators met to discuss the need for a professional organization that could meet the educational needs of those in the profession. NATCO was officially incorporated in 1979 and held its first meeting in Chicago in that same year. Since that time the NATCO membership has grown to nearly 2,000 individuals, and the organization has made many very important contributions to the field of transplantation, one in particular I suspect most of you are not aware of. In 1982, recognizing the need for transplant coordinators to process donor information quickly in order to match recently procured organs with patients in need, it began to develop its “24-Alert Organ Acquisition System” as a voluntary and informal means to expeditiously allocate organs. Over the next several years, NATCO perfected this system and in 1984 established the “24-ALERT” national telephone hotline to be used by its members and also began to accrue statistics from its use. So impressive was this system that it was adopted by UNOS in 1986 and eventually evolved into the national computerized organ allocation system we all use today.

NATCO’s primary goal is to provide education for its membership as is reflected in its mission statement which is “to provide educational programs and assistance to the transplant coordinator in the performance of his or her role.” To this end, in 1982 NATCO began conducting biannual educational forums particularly geared for those new to the field. In addition, NATCO, along with the American Association of Critical Care Nurses, developed a certification examination to be taken voluntarily by all transplant coordinators that would lead to earning the title “Certified Clinical Transplant Coordinator” or “Certified Procurement Transplant Coordinator.” This evaluation process, which first began in 1988, is currently performed under the auspices of the NATCO subsidiary organization, the American Board for Transplant Certification.

NATCO also publishes a scientific journal, originally called the *Journal of Transplant Coordination*, which first appeared in 1991. The journal has recently changed its name to *Progress in Transplantation*. Finally, NATCO fosters research, is expanding its mission to include the families of organ donors in addition to transplant patients, and is an important contributor to the development of public policy as it pertains to the field of transplantation.

Words cannot adequately express the gratitude that all transplant surgeons and physicians feel toward NATCO and its thousands of members, for without a doubt, we would not be where we are today if it weren't for you. On behalf of the American Society of Transplant Surgeons, I wish to thank all of our transplant coordinators for being loyal and dedicated teammates.

Needless to say, each of these three organizations, ASHI, AOPO, and NATCO, have accomplished much more than I could describe in the time allotted for this address and I trust all of you in the audience are aware of their indisputable importance to us as colleagues. As a demonstration of our collective gratitude, I ask all of you to give these three organizations an ovation of appreciation for being our trusted and invaluable teammates in transplantation.

Family

Before I conclude my remarks, I would be more than remiss if I didn't acknowledge my most revered teammates in life, my family. Barbara, my wife of 31 years, has stood by me from my early days in medical school; through the years of residency and fellowship when there was no 80-hour limitation on the work week; to the many years that followed when it seemed like I was always "on call"; to the present, with its never-ending list of out-of-town trips. Andrew and Laura, I know I missed some important events in your life as well. Please be assured that my heart was always with you and that I am very proud of the adults you both have become. I thank all three of you from the bottom of my heart for being my most valued teammates in life.

In closing, I wish to leave you with the charge that we all must strive to be better teammates for each other. We must learn to respect each other for the dedicated efforts and unique knowledge that we all bring to the field, and to foster the growth of each of us in our own disciplines, all for the betterment of the transplant team. For as the old sports cliché states: "There is no I in team!" We must all recognize this and work together for the wellbeing of our patients, not in opposition to each other because of traditional rivalries, turfs, and prejudices. The days ahead are not going to be easy, particularly as our programs continue to be stressed by the shrinking health care dollar. We must continue to work together as true transplant teams because to do otherwise will most certainly lead to the undeserved detriment of our patients.

Finally, I'd like to quote from perhaps one of the quintessential teammates of all time, Yogi Berra of the New York Yankees, Bill Harmon's favorite

baseball team, who said, among other things, “It ain’t over ’til it’s over!” For me, however, it is over. Last night the ASTS leadership passed to Dr. Avi Shaked of the University of Pennsylvania. Avi, I am very pleased to hand over to you a Society that is alive and well, and getting stronger each day. I wish you the best of luck for leading us through another successful and prosperous year. I greatly appreciate the help and guidance you have given me this past year and I thank you for being my teammate.

Thank you all very much for being my teammates.



Transplant Revolution

ABRAHAM SHAKED, MD, PHD, 2003–2004



In the past 14 years of my career as a transplant surgeon, I have been privileged to participate in an exciting and ongoing revolution, a revolution whose mission is to improve and expand the field of transplantation. Perhaps it is appropriate that this very year we are celebrating the 50th birthday of our clinical profession, and for many of us, the young and the old, the revolution is still going on.

Some assume using the term revolution in reference to our profession is somehow inappropriate, maybe even grandiose. However, our past and our future are marked with great change, shifts that resulted in a more exciting understanding of the way we are able to take an organ out of one individual and place it in the body of another, the function of the human immune system in the setting of allograft transplantation, how organs function, and how organs can be built to function. It is my belief that the pace changes have

occurred over the last 50 years make the field of transplantation truly a revolution.

From my viewpoint as a surgeon, I am still fascinated to see an organ reperfusing— functioning in a new and different environment, even though that environment does not easily accept the new, albeit better, machinery.

It is still fascinating how the host attempts to reject this life-saving organ, recruiting all in its power to resist the new organ. Our ability to arrest this process of rejection without killing the host, by using a few pills given over the lifetime of the patient, is a continuing revolutionary achievement.

In a historical-political context, the word revolution is defined as a toppling of the status quo in a state and society. A revolution brings about drastic and far-reaching change in the ways people and societies think and behave. It is characterized by the need for “a sudden, radical, or complete change.” When the demand for progress or the need for change cannot be met by existing channels, revolutions are inevitable.

This differs from evolution, a gradual process in which something changes into a different and usually more complex or better form. Evolution is the process of gradual development that is part of a set of ordered movements. It is usually a slow process, and in a biological sense, is associated with heritable changes in a population spread over many generations. Similarly, an evolution in the development of ideas also takes many years.

I have always believed that the field of transplantation should be considered revolutionary. I may be somewhat biased, but I say with confidence that the rapid changes in our field have revolutionized medicine. There are plenty of examples to support this claim: It is important to remember that immunology as is understood today is based on observations in the setting of alloimmune response. It should be recognized that modern surgery of the liver is based on knowledge gained from liver transplantation. It is inconceivable that the fields of heart failure and artificial heart devices would have developed to their current state of science without the ability to perform heart transplantation. In this and other ways, organ transplantation continues to revolutionize medicine.

I like to view myself as a revolutionary to better understand transplantation as a revolutionary profession. My past set me up for that; growing up in the Holy Land of Israel in the 60s was a perfect setting for revolutionary ideas. Today, it is just natural to compare events and progress

in our profession to what we observe in times of social revolution. I find that viewing ourselves as revolutionaries is quite attractive.

The reverberations from revolutions in medicine and science have far-reaching social and political implications. It may be claimed that social and scientific revolutions have often a common pattern:

- Social and scientific revolutions are usually not linear in their progression. As we look back on them, we can see that they traverse a series of distinct phases. However, these phases are rarely pre-planned; the fervor of a revolution causes the escalation of action to go through many manifestations, but in an unpredictable way.
- Social revolutions begin because there is passionate unrest across large segments of the population. They do not necessarily know what they want from the future, but they do agree that their present system needs to be overturned. Similarly, in a scientific revolution, the current paradigm of science is overturned in favor of a better future, even if the nature of that future is largely unclear. It may be claimed that social and scientific revolutions have often a common pattern.
- Social revolutionaries are associated with the traits of romantic zeal, enthusiasm, and single-minded devotion to a cause. The revolutionary sees the issues at hand and can think of little else. This is an accurate description for the prototype personality disorder of a transplant surgeon, physician, or scientist.
- Inevitably, new political factions are forged in the fire of revolution. These factions often lead to permanent changes in the political structure of a nation in the form of new political parties. In a scientific revolution, new groups of scientists join forces to bring about the change that they desire, and once that is complete, these collaborators are able to delve into the new fields of research that exist.

Perhaps the most striking example in which social revolutionaries mirror their scientific partners is in the fact that they are both forced to make difficult decisions. These decisions would never have to be made under ideal circumstances, but circumstances are inherently not ideal if a revolution is taking place. The rapid change characteristic of revolution leaves little time to fully analyze all the possible repercussions of decisions that must be made. Social revolutionaries must choose what institutions are worthy of existence in their future state and which have no place in their brave new

world. These decisions are sometimes nearly impossible to make, but the revolutionary must make them.

The work of a transplant surgeon is that of a revolutionary. An individual who is thrust into a role in which he or she must wield the power of god, determining who will live and who will die. Maybe it was inevitable because transplant surgeons save lives that society would afford such extreme privileges to the transplant surgeon, or maybe it was just a natural extension of the surgeons' individual personalities. Regardless, it is the individual surgeon, separate from the organ allocation and distribution systems, who is forced to judge whether a patient will be an appropriate candidate for organ transplantation.

How often are we placed in a position to determine whether transplant outcomes that result in higher survival in one older individual are more or less justifiable than placing the same organ in a younger, but more problematic, candidate? Not only are we forced to choose which one of the numerous and needy candidates should be the one chosen recipient of the life-saving transplant, we may be condemning some of the rest to die. It is not uncommon for a transplant surgeon to be called on to make such godly decisions. A young parent, dying of alcoholic hepatitis, needs a transplant; the transplant surgeon must judge whether they are worthy of transplantation or deserve to die because they were consuming alcohol until arrival at the hospital. No other physician or surgeon would be forced to make such a decision; if the same patient was brought into the hospital after being in an accident in which he was responsible for the deaths of innocent bystanders, no physician would question providing the patient with treatment necessary to save his/her life. However, unlike other physicians and surgeons, transplant surgeons are charged with the allocation of an incredibly limited resource, an ongoing debate in bioethics.

Consequently, like a revolutionary, a transplant surgeon is left in a position that requires him or her to make radical decisions. In order to achieve our mission of saving our patient's life by performing an organ transplant, we must determine the value of life.

Is a 40% five year survival in one individual less worthy than an 80% survival in another?

Is one day of my life more valuable than a day of yours?

Am I therefore more deserving of that organ? Why?

Transplant surgeons are forced to determine what makes someone morally worthy and which patient deserves another day to live.

Although initially forced to make such judgments because of the shortage of organs compared to the number of people awaiting a transplant, this obligation has been extended to transplant surgeons even when organ supply is not an issue, such as living donor transplantation (by itself, another continuous revolution). It is we who determine whether the survival of the recipient justifies risking the life of the living donor by removing his/ her kidney or a lobe of his/her liver or lung. The transplant surgeon is similar to the social revolutionary in that both are placed in a position “above society.” We base our decisions on survival rates and other criteria conveniently invented by the transplant community to justify our own decisions. At times, these decisions contradict the wishes of the both the living donor and hopeful recipient. Historically, social revolutionaries have assumed such g-dly roles, some of whom succeeded, but some have failed.

Social revolutions often lose momentum and can eventually fail as the new or revolutionary ideas become normalized. What was once radical thinking will eventually become the status quo. Explosive but short-sighted innovation is not worthy of our energy. For our revolution to succeed, we must have a clear vision of the new world we are building.

To spend a lifetime without the vision and the capacity to build the new world is a waste.

Do we in our profession risk the potential for failure, and the fate of an unsuccessful revolution? For example, are we at risk of becoming just another business entity for the health care system, or entrepreneurs in a business corporation?

As individuals, we are always at risk of steering our course in the wrong direction. History gives us examples of successful and unsuccessful revolutions. For example, a revolution led by Ché Guevara in Central and South America was ultimately a miserable failure. Guevara was a physician who joined the Cuban revolution with the aim to improve society. In the due course of history, the means he implemented to achieve his goals were proven to be wrong. In that revolution, the failure may have been the inability to recognize that a better society should be established on ethical and social values that would withstand the test of time, without the presumed necessity of guns and violence.

In contrast, in this country Abraham Lincoln led a successful revolution to save the Union and abolish slavery. His ethics changed the course of history as this country grew. This shows just how far reaching the effects of a revolution can be.

In the world of transplantation we have our own truly successful leaders. This success may be attributed to the prevalence of ethical questions regularly addressed by the transplant revolutionary, thus indicating that the true desire of transplant leaders is to distinguish right from wrong. When ethical questions are not asked, the revolutions are at risk of doing wrong. It is the awareness of the responsibilities to our patients, our donors, and our society that should always guide us towards higher ethical goals. A strong moral foundation will help ensure the success of our scientific revolution.

At times we risk slowing down the pace of advancement. We risk creating structures which drive the medical advancement in ways that might be considered “more safe” but actually arrest the fast forward progress. It may be that the counter-revolution is back. We are at risk of being completely taken over by committees, by IRBs, HIPPA rules, etc. At times it appears that the communications between us and “them” is a struggle for who has the right to dictate the rules, rather than a discussion concerning what the right direction is and what can be achieved. I must admit that it is always a problem for the social revolutionary to perform under the auspices of a committee. This is the arena in which social and transplant revolutionaries must meet. In our past history the transplant community has been able to demonstrate that it is responsible, that it can and will utilize new technology with care and high ethics.

The enormous growth of science during this current period of transplantation engendered many to presume that all the major scientific discoveries had been made and that all that remained was the working out of minor details. This attitude must be shattered, and this will only be accomplished by continuous revolutionary discoveries.

Participation in revolutions in the field of transplantation is not restricted to individuals who are in our profession. From the beginning of this era we have been fortunate to be joined by many individuals who are significant participants in the journey of revolutionizing medicine. It was in late June of 1995, just upon my arrival at the University of Pennsylvania, when an OPO coordinator called me, asking whether I would consider proceeding with procurement of organs from a 17-year-old non-heart beating donor. I was

told that the mother insisted that her son's organs be retrieved and considered for transplantation, and that it was her son's wishes that this be done. It was the first liver case of its kind in the Philadelphia region, and it resulted in the successful transplantation of an individual who is still alive and doing well. The procedure revolutionized the approach to non-heart beating donation in our region. Mrs. Susan Dillon, the mother of that very donor, is with us today, and as a transplant revolutionary continues to contribute to our field via many of her national activities.

The Secretary of Health, Tommy Thompson, is another excellent example of an individual who is a true participant in our ongoing revolution. Years ago, the chairman of the University of Wisconsin Department of Transplantation primed Thompson to believe that transplantation is a true form of social revolution. He was recruited to change laws in favor of transplantation in the state of Wisconsin during his tenure as governor. More recently Thompson has been a relentless supporter, from providing grant programs to promoting transplantation to our field during his current tenure as Secretary of DHHS. Tommy Thompson, like Mrs. Susan Dillon, is a transplant revolutionary.

Our revolution will continue. The mission is far from complete. It is interesting that in the setting of social revolution, there is no example of "permanent" or "continuous" revolution. Chairman Mao tried and failed. However, in our field, we are far from achieving the goals we set for ourselves. Although thousands of lives have already been saved through the use of donor organs, we are still far from providing the best outcomes in every situation.

Immunosuppression must be further improved, and we should never give up the goal set by pioneer revolutionaries: the ultimate aim is to achieve an immunological tolerance between donor and recipient, eliminating entirely the need for immunosuppressive drugs.

We must expand the possibility of a healthy future for those on transplant waiting lists. To accomplish this we must equip ourselves with technologies that enable us to use organs from sources other than humans alone. Opportunities exist today in bioartificial organs, embryonic and stem cell research, all of which serve to further open the field for more advancement in organ and cell transplantation. Exploration in genetic modulation, proteomics, and metabonomics must be encouraged and supported. It is sometimes painful to see that other fields of surgery and medicine are taking

the lead while we are at risk of staying behind. We should never let our rapid past success turn our profession—our revolution— into a slow and gradual evolutionary process.

On a personal level, I must state that I will be there. I do not intend to quit either today or tomorrow. I still like to view myself as a soldier of the revolution, and it is fun to participate. There is simply no way to stop this revolution from happening.



Let's Continue the Revolution

RICHARD J. HOWARD, MD, PHD, 2004–2005



Last year in his presidential talk Avi Shaked talked about revolution and evolution. Let us continue with the revolution. Let's consider reorganizing clinical transplantation in academic medical centers. Clinical organ transplantation began just over 50 years ago. Medicine in general and surgery in particular have seen revolutionary improvements during these 50 years, and these improvements will continue. Some examples of major improvements that have contributed to the advancement of surgery include such diagnostic techniques as CT and MRI scanning. Advanced computer programming has made 3-D reconstruction possible for calculating liver volumes and determining the arterial supply of the kidneys so that standard angiograms are no longer necessary. Many technical advances such as those of transplantation, cardiac surgery, endovascular surgery, and minimally invasive surgery have made possible previously unimaginable

operative procedures. And advances in non-surgical therapies such as immunosuppressive agents, ventilator care, antibiotics, intravenous nutrition, and pharmacologic therapies for sepsis and cardiovascular instability have added greatly to our ability to care for patients. We stand on the threshold of robotic surgery, and the promises of gene therapy, stem cell therapy, genomics and proteomics, nanotechnology, tissue engineering, the widespread use of new biologic agents, and other advances we cannot yet imagine. Perhaps someday we will even have easily achievable tolerance and xenografting.

A surgical Rip Van Winkle who went to sleep at the time of the first successful kidney transplant would barely recognize many surgical diagnostic and therapeutic techniques if he suddenly were reawakened today, just as we will be amazed at what surgery will be like 50 years from now. These advances we have seen have permitted the development of complex tertiary care, of which transplantation is a prime example. And yet we are trying to provide modern complex medical care with an organizational structure that has barely changed in 500 years. We need a structure for the 21st century—especially for delivering complex tertiary care. There is a better way to deliver medical care, and transplantation may be the best field on which to model a new organizational structure.

For complex tertiary care we must move from a horizontal, department-based structure to one that is vertically integrated and will bring together all the individuals who interact in the care of the patient, in this case the transplant patient.

And yet that is not how we are currently organized. We are still organized for the most part around traditional basic science and clinical departments. This departmental structure keeps apart those who participate in a patient's care, like the separated pieces of a puzzle, separate and without form. We need a structure that will allow all the pieces to come together into a coherent whole. Administrators commonly call this new structure, based along diseases, organs, or areas of the body, a "product line," "service line," or "center of excellence." For lack of a better name, I will call it a center. There are other areas of medicine where a different type of structure would be also beneficial for the patient, patient care, and quality—cancer, cardiovascular disease, gastrointestinal disease, and neurological diseases come to mind—but transplantation is perhaps the best example.

Academic medical centers and their departmental-based structure have a long history that has served patients, physicians, and other employees of the medical center well for a very long time. It is not lightly that we should consider disturbing the current organization. And this structure is appropriate for much of medical care. Still, the current departmental arrangement can lead to inefficient and disjointed care for patients, delays in treatment, poor patient satisfaction, dissatisfaction by referring physicians, and increased costs for those patients who have complex medical problems—in other words, to low quality. We need a vertical structure that will put the patients' needs and convenience at the forefront.

Transplantation is a revolutionary field. Cooperation among specialists from various fields occurred from its very origin; it was always multidisciplinary. It grew up outside the normal departmental structure. Patients view us as members of a transplant center. They and their referring physicians usually don't come to us because we are outstanding surgeons or physicians. CMS, UNOS, and payers view transplantation as a separate organizational structure. They contract with medical centers for transplantation that includes all elements, physician and hospital. It's time that we view and organize ourselves the same way. We have the best opportunity to do this because of the history we have. We have an opportunity to prove this model.

What do we want from complex tertiary health care? We want quality: good outcomes, high patient satisfaction, high physician satisfaction, efficiency, no delays, ease of access, and low cost. Making ourselves into a true transplant center will lead to: (1) better patient care; (2) better outcomes; (3) better coordination of care; (4) greater efficiency; (5) less expensive care; (6) increased patient satisfaction; (7) increased satisfaction by referring physicians; (8) increased satisfaction of participating medical personnel; (9) increased academic productivity; (10) a better research environment; (11) a better educational environment; and (12) increased accountability. In other words, high quality. No matter what structure we have for a medical system, we must keep in mind that the main goal is to better people's lives—mainly that of our patients, but also that of our colleagues and fellow workers. We must never lose sight of the covenant we have made with the patients whom we have the privilege to treat. To accomplish this we should put the patient at the center of what we do. But to achieve this goal successfully we will have to make a revolutionary change

about the way we are organized. The care of transplant patients requires complex decisions involving many specialists and others from different backgrounds. These physicians and other health care providers often interact more with each other than they do with members of their traditional departments. These specialists share common interests in several areas: clinical care, research, and education.

Transplantation requires the input of a broad spectrum of health care providers including physicians, surgeons, pediatricians, clinical and laboratory pathologists, anesthesiologists, clinical psychologists, social workers, transplant coordinators, dietitians, pharmacists, financial planners, transplant administrators, and others from both the medical school and hospital. To get individuals from all these disciplines working together to benefit patients most, we must develop an organization around how we think about disease and treatment.

The main goal of this new structure is to put the patient at the very center of how we deliver medical care and to actually organize ourselves in such a way that achieves this goal. We must have an organizational structure that reflects how we think about disease and actually practice medicine. The basis of a center's organization should be clinical disease and not the traditional departments. Besides putting the patient at the center, this vertical structure will allow the best from each individual. In the end, of course, it isn't even the system per se; it's the individuals who make it up. A center type structure will create a system that doesn't get in the way and allows the best in individuals to come out.

The center will also foster getting the hospital's and medical school's interests into better alignment. The current departmental structure and division between the hospital and the medical school does not currently provide for the greatest efficiency.

The center organizational structure should have a physician responsible for the administrative and organizational details. The success of the center structure will depend on getting the best individuals into leadership positions. This structure should ensure accountability. The goals must be clearly delineated.

Responsible physicians would be accountable for all aspects of the center. They would be responsible for outcomes, patient and physician satisfaction, education, research, coordination of care, and fiscal integrity of the center. But with responsibility must come authority to make changes in such a way

that will achieve the goals of the center. Responsibility without authority is a recipe for failure. It must be a true center in fact, not in name only. It should not merely be a marketing tool. Ultimately it means fiscal integration. Some institutions are already developing a center type structure.

The leader of the center would report to the CEO of the hospital and the dean of the medical school. They would ultimately be responsible for the performance of the leader and the service line.

To create a true transplant center will require the support of the leadership of the academic medical center, which usually means the dean and CEO of the hospital. Without their support, it is unlikely it will come about. There will be a lot of built-in opposition from departmental chairpersons if the new arrangement dilutes their authority or power. Many cogent arguments will be used to avoid change: it's too difficult; we have too many other issues to deal with; it's not the way we do things here; the residency review committee will object—as if we should base patient care around how we educate rather than the reverse. Without forward-thinking leadership who would be willing to give a new organizational structure a try and a chance at success, it is unlikely to happen. But those centers that do institute such changes will serve patients better and will have a competitive advantage in the marketplace over those that do not. Therefore, in the end, these changes may be forced on academic medical centers in any case. And I believe they will eventually come about. But most important, patients will do better and we will do a better job of caring for them and taking care of each other. It will be up to us, the current and future leaders of transplantation, to accept this challenge of reorganizing transplantation. But it can be done.

First of all, I would like to thank all of you for allowing me to be President of the American Society of Transplant Surgeons. It is truly a great honor, and I am grateful. There are many individuals who deserve my gratitude. If fact, it would take me the entire allotted time to express my thanks properly, so I will have to be brief. My wife and family deserve special appreciation for their understanding throughout the years of my missing too many dinners, baseball and soccer games, school performances, and, occasionally, even birthdays. As we know, transplantation is a demanding profession.

I am also grateful to the ASTS Council, committee chairs, and committee members, and members of special task forces, and all those who have worked so hard and with such devotion for the ASTS, often with inadequate recognition of their efforts. Anything that has been accomplished this past

year is largely due to their effort. Because of time I cannot mention all of the committees. The membership committee under the leadership of David Mulligan has increased membership, so that the ASTS now has more than 1,000 members. The Vanguard Committee, which is limited to members in their first five years of ASTS membership and is led by Elizabeth Pomfret, is responsible for the ASTS Winter Symposium. This past January we had a successful symposium titled, "The Science and Art of Immunosuppression." Two hundred seventy-nine members and fellows in training attended the meeting. In conjunction with that meeting, we had sessions on the ethics of organ payment. NATCO and UNOS also held meetings in conjunction with our Winter Symposium.

The ASTS through its Legislative Committee, under the leadership of John Roberts, has been an advocate for patients in Washington, DC. Last month and in June 2004 we visited the offices of members of the House and Senate appropriations committee seeking funding for the Organ Donor Bill. Those who were in Washington met with HHS Secretary Tommy Thompson and presented him with an ASTS award thanking him for his support for transplantation. We also met with Dr. Jim Burdick, a member of the ASTS, and Director, Division of Transplantation in HRSA, to emphasize our continuing interest in seeking funding for this bill in the current Congress. We also met with Dr. Carolyn Clancy, Director, Agency for Health Research and Quality, to enlist her interest, since part of the Organ Donor Bill is administered through the AHRQ. She was very receptive and suggested we propose a conference on the state of the art on the technical aspects of organ recovery and preservation. The Legislative Committee has also advocated for increased medical coverage for post-transplantation immunosuppression.

The ASTS provides funds for 15 awards for young faculty, fellows, and residents to enable them to take time out of their clinical activities to enhance their research skills. The Awards Committee led by Kim Olthoff is responsible for making these awards from the many qualified applications. Our partners from industry sponsor many of these awards, and we at the ASTS believe providing these awards is one of the most important things we do.

The ASTS working together with the AST established a task force under the leadership of Mike Abecassis to respond to the newly proposed CMS Conditions of Participation: Requirements for approval and re-approval of transplant centers to perform organ transplants. This joint effort produced a

thoughtful document that is now being considered by CMS. Dr. Abecassis also leads a joint task force to respond to ever-increasing requirements for data submission by transplant centers. He has also worked with the RUC to get new transplant-related codes for back-bench work.

The Ethics Committee under the leadership of Doug Hanto has had to respond to the many difficult ethical issues raised by transplantation. This work of this committee has required the members to take time out of their normal activities to respond in a timely fashion to various issues.

All the ASTS Committees, their chairs, and members have done yeoman work for the Society. And I certainly appreciate their efforts.

Our Executive Director, Katrina Crist, has provided the glue for the Society and facilitated the work of the members. We are thankful she has chosen to come back to the ASTS after being away for several years. Shelli Adams-Crosswell and Joyce Williams have also provided great support for the membership at the ASTS office. Please go by the ASTS booth and thank them.

We should all thank Pam Ballinger and her colleagues at Association Headquarters Incorporated for again arranging for an outstanding meeting and facility. She has seen to the millions of details that require attention which we cannot even imagine. The American Transplant Congress is now the largest transplant meeting in the world. As of this morning more than 5,000 individuals were registered at the meeting and there are 115 industrial exhibits. This meeting provides the greatest forum for sharing the newest information about transplantation there is. The program committee of the ATC has had the Herculean task of sorting through thousands of abstract submissions and selecting the best for presentation and then arranging the sessions, symposia, special lectures, poster sessions, and other presentations into a coherent whole. I am in awe of what they have done.

This meeting is a joint effort of the American Society of Transplantation and the ASTS. Dr. Jay Fishman, president of the AST, has been easy to work with, and our two societies have cooperated in every way. I appreciate his being so congenial. I believe this is the first year that the ASTS and AST held a common presidential dinner, and it symbolizes the ever-increasing cooperation of the two societies. As we say, he is a real “*mensch*.” Together with the AST, the ASTS established this American Transplant Congress. Our organizations together own the *American Journal of Transplantation*, which has been more successful earlier than we had anticipated. Under the

leadership of Dr. Phillip Halloran and his board of editors, the AJT was indexed by the National Library of Medicine at the earliest possible time. It currently has the highest impact factor of any transplant journal and is only second among surgery journals. For those of you who want to know how the impact factor is calculated, talk to Dr. Halloran.

My colleagues at the University of Florida deserve my gratitude for their understanding of my frequent absences while traveling on behalf of the ASTS this past year. I appreciate they were willing to cover for me during this time.

We should all be grateful to our teachers who helped develop our knowledge and skills. I am certainly thankful to all the instructors at the University of Minnesota where I was a resident and transplant fellow, but especially to Drs. John Najarian, Richard Simmons, two former presidents of this Society, and to the late Robert Good for teaching me so well about the basic science and clinical aspects of transplantation.

Finally, and by no means least, we are also extremely grateful to our supporters in industry. Without their continuing generous support this meeting and much of the other educational activities we do, such as our winter meeting and the consensus conferences, would not be possible. We thank Astellas, Roche, Wyeth, Novartis, and our newest industrial partners, Genzyme and Bristol-Myers Squibb.



2006 Presidential Address to the World Transplant Congress

A. BENEDICT COSIMI, MD, 2005–2006



It has been my great fortune to be elected the 32nd President of the American Society of Transplant Surgeons. I am grateful to all of my colleagues for the privilege of serving as the spokesperson for our more than 1,000 surgeons, physicians, and scientists for the past year. Certainly, one of the greatest honors an individual can receive is to be selected by his peers to a leadership position in an international society of such prominence. With the receipt of such a responsibility, the first question that crosses one's mind is: "How can I help to maintain this Society's traditions of leadership,

education, and camaraderie?” This is closely followed by: “What can I possibly say in my Presidential Address that is worth saying?” Typically, Presidents seem to reminisce regarding their own lifetime experiences or those of previous giants in their field. I have chosen to recall for you the four Nobel Prizes in Medicine that have been awarded to eight physician-scientists who were recognized for their contributions to the field of transplantation (Table 1). Although several other Nobel Prizes have been awarded for more broadly inclusive medical discoveries that have proved to benefit transplant patients as well, these will not be reviewed here. Such prizes are the 1984 Award to Jerne, Kohler, and Milstein for their production of monoclonal antibodies and the 1988 Award to Black, Elion, and Hitchings for drug treatment discoveries, including some of the cytotoxic drugs that have been used for immunosuppression of allograft recipients.

Table 1. Nobel Prize for Contributions to Transplantation

LAUREATE	LIVED	AWARD	TOPIC
Alexis Carrel	1873–1944	1912	Vascular/Tx Surgery
F.M. Burnet	1899–1985	1960	
P.B. Medawar	1915–1987	1960	Fetal Distinction of Self vs Nonself
G.D. Snell	1903–1996	1980	
J. Dausset	1916–	1980	
B. Benacerraf	1920–	1980	MHC/Tissue Typing/Ir Genes
J. Murray	1919–	1990	
E.D. Thomas	1920–	1990	Organ and Cell Tx

The Nobel Foundation

The Nobel Foundation was established when Dr. Alfred Nobel, a Swedish engineer and inventor, prepared his will in 1895. The pertinent provision stated that:

“...The whole of my remaining realizable estate shall be dealt with in the following way: The capital shall be invested in safe securities by my executors and shall constitute a fund, the interest on which shall be annually distributed in the form of prizes to those who during the previous year, shall have conferred the greatest benefit to mankind...”¹

The award was to be divided into five equal prizes, recognizing the most important discovery in the fields of chemistry, physics, literature, fraternity between nations (peace), and physiology or medicine. A sixth prize for economics was instituted in 1968 by the National Bank of Sweden.

The responsibility for selecting the annual awardees was directed to several institutions with the prize for medicine to be awarded by the Karolinska Institute in Stockholm, Sweden. Until 1977, the process was handled by the Institute's entire professional medical staff which initially numbered only 19 members. However, with the growth of the medical faculty, it became difficult to conduct the complicated discussions that are required for the selection of Nobel Laureates. In addition, new Swedish laws were being introduced at that time that made documents of state institutions, which include the Karolinska Institute, open to the public. This would have made it impossible to keep secret the deliberations of the Nobel Committee. For both of these reasons, a new organization, the Nobel Assembly, was instituted in 1977. Though this Assembly is strongly connected with the Karolinska Institute, it is legally and financially independent of the Institute itself as well as of the State.

The initial Nobel Prizes were awarded in 1901. Since then, 184 Nobel Laureates in Medicine have been named. Before reviewing the contributions of the eight extraordinary individuals who were awarded the Prize in our field of transplantation, it is of interest to recall a bit of the life of Dr. Nobel himself.

Alfred Nobel

Alfred Bernhard Nobel was born in 1833 in Stockholm. He was educated primarily by tutors in Leningrad where his father worked as an engineer and inventor. Around 1850, he left Russia and ended up working in the United States for several years under the direction of another Swedish engineer, John Ericsson, who incidentally is best known for having built the ironclad Civil War ship *U.S.S. Monitor*.

Alfred Nobel is primarily remembered for his invention of dynamite. Unfortunately, as with many scientific projects, his preliminary results were not as anticipated, resulting in his factory blowing up causing five deaths, including Alfred Nobel's youngest brother. At this point, the Swedish government forbade rebuilding the factory and Nobel became dubbed "a mad scientist." Nevertheless, he stubbornly resumed his work on a barge in a

nearby lake. Eventually, he was able to perfect the development of dynamite (a discovery undoubtedly worthy of a Nobel Prize itself) and subsequently other even more powerful explosives. The worldwide demand for this novel discovery, plus his shrewd investments in the Baku oil fields of Russia, brought this creative inventor an immense fortune, the bulk of which was left to the establishment of the Nobel Prizes.

Alexis Carrel

In 1912, Alexis Carrel became the first “transplant surgeon” to be awarded the Nobel Prize “for his work on suturing of vessels and transplantation of organs.” Carrel was born near Lyons, France in 1873. He went to medical school at the University of Lyons, graduating in 1900.²

Carrel’s interest in vascular surgery was initially stimulated by his observation as a student in 1894 of the care of Sadi Carnot, President of the French Republic. An assassin’s knife had severed Carnot’s portal vein, whereupon the best surgeons in France had concluded that it would be impossible to repair the vessel. The young Carrel voiced his opinion that Carnot’s life could be saved if surgeons had perfected blood vessel suturing techniques, a view that hardly endeared him to his surgical superiors.

In 1903, Carrel witnessed another dramatic event that proved to play a significant role in his subsequent career development. While attending to the sick making pilgrimages to the Shrine at Lourdes, he encountered a woman dying of tuberculous peritonitis. The following day, after being anointed with water from the pool, the woman made a remarkable recovery and went on to live another 34 years. When Carrel reported this apparent miracle to his surgical colleagues, he was ridiculed for his gullibility, and he was subsequently failed twice in his exams for a full faculty appointment to the surgical staff. Frustrated by this lack of acceptance at his own alma mater, Carrel left France in 1906 and moved to the Rockefeller Institute of Medical Research where he pursued his studies over the next 33 years.

The first contribution acknowledged in Carrel’s Nobel Prize introduction was his perfection of a reliable method of suturing vessels, using the famous triangulation technique in which he

“...enlarged the opening using three retaining stitches located at equidistant points which converted the round opening into a triangular one... This method proved to be reliable and effective insofar as it protects against post

operative hemorrhages and embolisms, but its greatest merit was that it did not produce any stricture...”

Carrel immediately recognized the potential of his newly perfected suture methods and went on to transplant whole organs (initially thyroid gland and kidney) as either autografts or allografts. He even extended these studies to limb reimplantation. These discoveries were recognized as well in his Nobel Prize award.

Carrel later summarized his observations,³ as he had in his Nobel acceptance speech, as:

“...concerning homoplastic transplantation of organs such as kidneys, I have never found positive results to continue after a few months, whereas in autoplasmic transplantation, the result was always positive. The biological side of the question has to be investigated very much more and we must find out by what means to prevent the reaction of the organism to a new organ.”

His insight in recognizing the failure of the transplant as rejection of nonautologous tissues would have to wait 30 years for the Nobel Laureates Medawar and Burnet (see below) to clarify the nature of these biologic events resulting from the host's immunologic response and 40 years for the first successful transplantation of homoplastic organs (allografts). (See J. Murray, below).

Carrel remained at the Rockefeller Institute until his forced retirement in 1939 at age 65. Angered by this, he returned to France where he hoped to establish a new Research institute. France, unfortunately, was occupied by the Germans one year later, and when Carrel continued his plans for the Institute with the consent of the pro-Nazi Vichy government, he was accused of collaboration with the enemy. Following the liberation of France by the allied armies, Carrel was relieved of his position at the Institute. He died shortly later on November 5, 1944, having been unable to clear his name.

Peter Brian Medawar and Frank Macfarlane Burnet

The next Nobel Prize in medicine for contributions to the field of transplantation was awarded jointly in 1960 to Drs. Medawar and Burnet “for the discovery of acquired immunological tolerance.”

Medawar was born in 1915 in Rio de Janeiro. At the age of only 17, he went to Magdalen College, Oxford, to study zoology. He immediately became interested in research in several fields of biology related to medicine, including tissue culture, regeneration of peripheral nerves, and

mathematical models of the changes that occur during development. However, it was the outbreak of the Second World War that proved to be the catalyst for his most important observations. At that time, Medawar was asked by the Medical Research Council to investigate why skin from one human being would not form a permanent graft when placed on another.⁴

Medawar, together with Rupert Billingham and Leslie Brent, in a series of incisive studies of normal tissue grafting, was able to show that the graft reaction is an immunologic response similar to the tuberculin reaction and that the cellular immunological pattern is an expression of the individual's genetic constitution. Their observations of dense lymphocyte infiltrates in the allografted tissue ushered in the era of cellular immunology. The most significant contribution was the demonstration that allograft rejection was completely prevented in mice if living cells from the future allograft donor were introduced into the recipient during foetal or neo-natal life. This was the first clear demonstration that the immune system is not pre-programmed to distinguish between self and non-self, but learns to do so as a result of exposure to self antigens during early development. Most importantly, the immunological barriers to the transplantation of foreign tissue and organ grafts—till then thought to be insurmountable—could be overcome by immunological interference, which opened up a vast field of scientific endeavor.

When the Prize was awarded to Medawar and Burnet in 1960, it was noted that:⁵

“This observation has now been amply confirmed and expanded in various directions. Experimentally produced tolerance has developed into a biological research tool of great usefulness. Application in practical medicine is still in its very early stages. Naturally it has been close at hand to attempt to apply the laboratory experience gained in the field of surgery, where the problem of substitution of defective or damaged, vitally important organs not infrequently presents itself.... The first successful operations of this kind were recently reported, and there are reasons to await the future development with confidence....”

How prophetic was this prediction, as we now witness thousands of successful transplants being performed worldwide every year.

Medawar had been named Professor of Zoology at University College, London, in 1951, at the age of 36. In 1962, shortly after receiving the Nobel Prize, he became Director of the National Institute for Medical Research. He

continued his studies, either personally training or greatly influencing the careers of many of our transplant community. Unfortunately, at the age of only 54, while reading the lesson during Sunday services at the cathedral, he suffered a massive cerebral vascular accident which left him seriously handicapped for the rest of his life. Nevertheless, he remained extraordinarily active, continuing to pursue his research, now more in the field of cancer, and to publish a widely read stream of books and essays such as “Advice to a Young Scientist” in 1979 and his widely acclaimed autobiography, *Memoirs of a Thinking Radish*, in 1986, only one year before his death.⁴

Macfarlane Burnet was awarded the Nobel Prize in 1960 jointly with Medawar. Burnet was born in Victoria, Australia, in 1899. At the age of 24, he went to the Walter and Eliza Hall Institute of the University of Melbourne, where he worked essentially continuously for the rest of his life. Burnet’s early research was primarily in the field of viral infections and the host response to the virus, which provided a naturally occurring phenomenon to study immunologic reactions. He is credited with first speculating on the concept of “self” vs “non-self” and for developing a unifying hypothesis regarding the overall nature of the immune response as a major defense mechanism for survival of the species and of the controlling reactions that prevent autoimmunity.⁶ He concluded that allograft rejection resulted from the same immune response as that directed to viruses and postulated that individuals could be treated in order to accept grafts as self. As noted above, it was Medawar, then, who proved the validity of this speculation. Thus, the Nobel Committee recognized Burnet together with Medawar for the discovery of tolerance, making Burnet the first Australian to receive a Nobel Prize. Like Medawar, Burnet continued his prolific research, producing numerous scientific publications almost until the time of his death in 1985.

George D. Snell, Jean Dausset, and Baruj Benacerraf

The third Nobel Prize awarded for contributions to transplantation science was in 1980 when Drs. Snell, Dausset, and Benacerraf were cited “for their discoveries concerning genetically determined structures on the cell surface that regulate immunological reactions.” In the presentation speech for their award, it was noted that “starting from three different directions” their individual studies led to an understanding of the major histocompatibility

complex (MHC) and its importance as a surveillance system for the preservation of the species.⁷

Dr. Snell was born in Bradford, Massachusetts, in 1903. He became interested in genetics while studying at Dartmouth College, an interest that led to his lifelong work. In 1935, he joined the staff of the recently founded Jackson Laboratories in Bar Harbor, Maine, where the world's first inbred strains of mice had just been produced. Over the succeeding 30 years, Dr. Snell manipulated these unique experimental models to determine the role of genetic factors, initially in the acceptance or rejection of cancers, but soon afterwards he extended his studies to the rejection of normal tissues. Snell concluded that the immunologic response against non-cancerous tissues was regulated by what he termed "histocompatibility genes" and he identified the MHC of the mouse to be the H-2 region.⁸

Dr. Dausset was born in Toulouse, France, in 1916. As with many of his generation, Dausset's discoveries were, in large part, related to his experiences in the Second World War. While assigned to the fighting forces in North Africa, he observed that recipients of multiple blood transfusions often developed leukocytotoxic antibodies that reacted with donor white blood cells but not with their own. This initial observation led to his intensive post war studies in Paris, as well as at Children's Hospital in Boston, in the rapidly developing field of immuno-hematology. Although he couldn't pursue his studies in an elegant inbred model as was available for Dr. Snell's work, Dausset began extensive family analyses. From these, he concluded that the immune response to incompatible white blood cells was determined by a single gene complex, the first product of which he identified in 1958 and is now known as HLA-2. Dausset's studies emphasized that the MHC of man, which he initially termed Hu-1 and was ultimately named Human Leukocyte Antigen locus A or HLA, was analagous with H-2 in the mouse.⁹

The dissemination and application of Dausset's observations rapidly required the establishment of histocompatibility laboratories for support of clinical transplant centers around the world in order to help select compatible donor-recipient combinations.

Meanwhile, Dr. Benacerraf was pursuing a different line of investigations that would lead to definition of another important MHC locus, the immune responsiveness or IR complex of genes.

Dr. Benacerraf was born in Caracas, Venezuela, in 1920. His initial education was in France, but the outbreak of the Second World War forced his family's return to Venezuela and then New York. Amazingly, despite his excellent academic record and his ultimate accomplishments, he always reported that he had some difficulty in gaining admission to medical school. He entered the Medical College of Virginia in 1942, from which he graduated three years later. After a two-year Army Medical Corps tour in postwar France, Dr. Benacerraf returned briefly to Columbia University, then back to Paris in 1949, and ultimately to New York University. It was here that his studies led to the seminal observations that outbred animals, all immunized to the same antigen, appeared to segregate into responder or non-responder groups.¹⁰

Benacerraf postulated that the intensity of an individual's immune response to a particular antigen is controlled by specific genes which ultimately have come to be termed immune response (Ir) genes. Over the next 15 years at New York University and later at the Laboratory of Immunology of the NIAID in Bethesda, Benacerraf's studies systematically clarified how the area of the MHC containing these genes regulates immune responsiveness.

The individual studies of Snell, Dausset, and Benacerraf, therefore, all led to a single region on one chromosome in mice and man. These observations served to identify and clarify the biological system (MHC) that is responsible for cell recognition, immune responsiveness, and transplant rejection. As such, their combined work was recognized as an indivisible discovery by the Nobel Assembly in 1980.

Dr. Snell retired in the mid-1980s, 50 years after the discovery of H-2, and he died in June of 1996. Dr. Dausset has continued his extensive studies of the polymorphism of the HLA complex and is still Chairman of the France Bone Marrow Grafts. Dr. Benacerraf was President of the Dana-Farber Cancer Institute until 1992 and continued his active research and publication career until the early years of this century.

Joseph E. Murray and E. Donnall Thomas

The most recent Nobel Prize for transplantation was awarded in 1990 jointly to Drs. Murray and Thomas "for their discoveries concerning organ and cell transplantation in the treatment of human disease." Dr. Murray was born in Milford, Massachusetts, in 1919. He received his Medical Degree from Harvard Medical School in 1943. Following an abbreviated nine-month

surgical internship at Peter Bent Brigham Hospital (PBBH), he was assigned to active duty in the army at Valley Forge General Hospital in Pennsylvania. At that hospital, skin allografts from family members or cadavers were sometimes being used as temporary dressings on extensively burned soldiers, an approach that stimulated Dr. Murray's interest in the biology of tissue transplantation. He was particularly intrigued by the unusually slow rate of rejection of some allografts in these critically ill patients. His Chief, Dr. James Barrett Brown, had speculated that more rapid destruction of the skin graft was associated with increasing genetic differences between donor and recipient. He also advised Dr. Murray that he had observed skin grafts exchanged between identical twins to survive indefinitely. That observation proved to be a prophetic event that would lead to the first successful human renal transplant between identical twins less than a decade later.

When Dr. Murray joined the surgical faculty at PBBH in the early 1950s, he was encouraged by his Chief, Francis Moore, to work with the already active team that Dr. David Hume had assembled to perfect the operation of kidney transplantation in dogs with the goal of treating renal failure in humans.¹¹

In the fall of 1954, a history-making sequence of events began to evolve. A patient with severe renal disease who was referred to the PBBH for treatment was found to have a healthy twin brother. In preparation for a possible precedent-setting transplant operation, the ethical issues involved were extensively debated and ultimately resolved. On December 23, 1954, many years of work by investigators all over the world finally came to fruition when Joseph Murray, at the age of 35, performed the first successful human kidney transplant. Good function was maintained in this patient for a subsequent nearly eight years, at which point the original renal disease recurred, ultimately leading to the patient's death.¹² Dr. Murray would subsequently recall:

“This spectacular success was a clear demonstration that organ transplantation could be life saving. In a way, it was spying into the future because we had achieved our longterm goal by bypassing, but not solving, the issue of biological incompatibility.”¹³

Dr. Murray was recognized by the Nobel Foundation not only for this procedure, but also for performing in 1959 the first successful kidney transplantation between relatives that were not identical twins, using whole body irradiation as immunosuppression, and ultimately that between

unrelated individuals, performed in 1962 using some of the cytotoxic drugs synthesized by George Hitchings and Gertrude Elion for immunosuppression.

Joseph Murray continued his research and dual clinical practice in transplantation and plastic surgery for nearly 20 years after that first successful transplant in 1954. In 1971, he resigned as Chief of Transplant Surgery at the now Brigham and Women's Hospital (BWH) to focus on his major surgical interest, reconstructive surgery. He continued his practice until 1986 when a cerebral vascular accident, from which he recovered completely, prompted him to retire from active clinical work. He, nevertheless, remains active, with reference to his publications regarding various aspects of clinical medicine, including transplantation, reconstructive surgery, and medical ethics, appearing in Pub Med even today.

Dr. E. Donnell Thomas was jointly honored by the Nobel Assembly in 1990 for his many contributions to the successful clinical application of bone marrow transplantation. Dr. Thomas was born in Texas in 1920. He received his MD from Harvard in 1946 and while continuing his post graduate training, he and Dr. Joseph Murray became friends at the then PBBH in Boston. Dr. Thomas thus was present, as a medical resident, to help care for the first kidney transplant recipient described above.

Dr. Thomas began his lifelong investigation of bone marrow transplantation initially with Dr. Sydney Farber in Boston. He then worked for several years at Cooperstown, New York, but eventually settled in Seattle, Washington, in the early 1960s.¹⁴ His ongoing attempts to establish allogeneic marrow engraftment in dogs and man while avoiding the usually encountered and often fatal graft-versus-host disease (GVHD) were greatly aided by the clarifications of the histocompatibility system that were being provided at the same time by Snell and Dausset (see above).

Dr. Thomas' team eventually settled in the Fred Hutchinson Cancer Research Center, which became the leading bone marrow transplant center in the U.S. His contributions, particularly to the control of GVHD with judicious administration of cytotoxic agents, were credited by the Nobel Assembly as the foundation for the cure of thousands of patients with leukemia and other blood disorders.

Dr. Thomas retired from patient care about the same time that he was awarded the Nobel Prize, but he has continued to lecture and publish widely. He remains involved with the Fred Hutchinson Cancer Research Center activities, most recently as an ardent advocate for stem cell research.

Conclusion

The Nobel Prizes awarded to these eight individuals highlight some of the most remarkable achievements in the art, the science, and the practice of transplant medicine over the past century.

The important discoveries made by these pioneers were based upon a range of ingenious approaches and astute observations. As acknowledged by the Nobel Foundation, these contributions do not “cover the whole story,” but they should serve as a collective source of pride and inspiration for the entire transplant community. The vision, courage, and perseverance displayed by these giants emphasize that success is not an accident, and their enthusiasm for their work should serve as a source of inspiration and example for all investigators currently seeking to unravel the many remaining mysteries that limit the more widespread application of organ and tissue transplantation.

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Clinical Transplantation— Some of Today's Challenges

ARTHUR J. MATAS, MD, 2006–2007



It is a tremendous honor to be standing here today as the 33rd President of the American Society of Transplant Surgeons. Since its inception, the ASTS has been an important part of my life. In fact, a few years ago, Robb Corry reminded me that I had presented the first paper at the first meeting of the ASTS. I remember that presentation—it was one of the few times that I gave a slide presentation while reading from notes, and I got lost between the slides and the notes. I have rarely used notes since, but am doing so today, so I hope that the same thing does not happen.

In the last few months, I have thought a great deal about what I would say today. I read previous presidential addresses. Some reflected on the Society—what it had accomplished and its ongoing mission; others addressed topics

outside of transplantation. I struggled to come up with my own theme (of course, wanting to leave an indelible mark on the future). But reality soon hit. The best I could do was provide a personal perspective and highlight what I see as some critical challenges for the future.

As a junior surgery resident over three decades ago, three of the things that attracted me to transplantation, and which still remain relevant today, were:

- First, our long-term commitment to the recipient and the recipient's family;
- Second, the fact that, although transplantation was and is clearly a surgical subspecialty, it needs multidisciplinary knowledge and effort; and
- Third, our field's tremendous enthusiasm for asking new questions to benefit future recipients (obvious not only at my own institution but also at those early ASTS meetings).

Back in the mid 1970s, the principal focus of clinical research in our field was to minimize acute rejection, minimize graft loss to acute rejection, minimize early infection, and improve short-term recipient and graft survival. But today, I believe that the preeminent clinical challenges are different. To me, they are:

- a. To improve long-term recipient and graft survival;
- b. To minimize post transplant morbidity; and
- c. To eliminate the organ shortage.

I want to spend some time discussing each of these three challenges and then focus on the ASTS response. I will end with what I see as new challenges for the individual transplant surgeon.

Our first challenge is to improve long-term recipient and graft survival.

Although the first successful kidney transplant was in 1954, it was not until the late 1960s and early 1970s that a large number of recipients were alive and well with successful allografts. In 1963, Joseph Murray (who would win the Nobel Prize for his work in transplantation) and others established a kidney transplant registry to collect information on cases from around the world. Their initial report was from a conference put together to review all accumulated cases.^{1, 2} The proceedings were published in *Transplantation*; Dr. Murray gave the opening remarks, stating: "This conference was organized to collect and evaluate data on all kidney transplants done so that

we can share experiences.... We have on hand all pertinent facts on practically every known kidney transplant performed prior to July 1, 1963.” At that time, 244 kidney transplants had been done worldwide; 92 of the recipients were still alive. At the conference, the discussion was on a case-by-case basis.

The fifth report of the kidney transplant registry, published in 1967, was the first to present cumulative data on the percentages of patient and graft survival.³ That report included information on 1,187 transplants from 63 institutions in 19 countries. Interestingly, many of the problems that still plague our recipients—such as an increased rate of post-transplant malignancy, infection, and cardiovascular disease—were noted in those early reports from the mid and late 1960s.

The ninth report in 1972 represents my introduction to transplantation.⁴ For recipients with a sibling donor, the one-year patient survival rate was 84 percent; the one-year graft survival rate, 76 percent. For recipients with a deceased donor, the one-year patient survival rate was 67 percent; the one-year graft survival rate, 54 percent.

Contrast the data from this ninth registry report with today’s data from the SRTR. I want to thank Bob Merion and the SRTR group for providing me with the following data. For living donor kidney transplant recipients in the United States, the one-year patient survival rate is now 98 percent; the one-year graft survival rate, 95 percent. For deceased donor kidney transplant recipients, the one-year patient survival rate is 95 percent; the one-year graft survival rate, 90 percent. We have made considerable progress in preventing and treating both acute rejection and CMV infection. Similarly, the three-year outcome for today’s recipients far exceeds the expected two-year outcome for those transplanted before 1972.

In addition, the one-year outcome has continued to improve for recipients of other solid-organ transplants. Table 1 shows the one-year recipient and graft survival rates for liver, heart, lung, pancreas, and intestine transplants.

Table 1. 1-year survival – 1st Transplant (2003-2004) (SRTR)

	RECIPIENT	GRAFT
Liver-DD	87%	84%
Liver-LD	91%	84%
Heart	88%	88%

Lung	85%	84%
Pancreas SPK	95%	85%
Pancreas PAK	96%	80%
Intestine	88%	81%

But what about the long-term outcome? By five years post-transplant, there is a significant falloff in both patient and graft survival for all recipients (Table 2).

Table 2. 5-Year Survival – 1st Transplant (1999-2004) (SRTR)

	RECIPIENT	GRAFT
Kidney-DD	81%	68%
Kidney-LD	90%	81%
Liver-DD	73%	69%
Liver-LD	77%	69%
Heart	74%	73%
Lung	52%	50%
Pancreas-SPK	86%	71%
Pancreas-PAK	84%	59%
Intestine	50%	41%

By 10 years, the survival is abysmal, worse than that for patients with certain malignancies. Compare the data, as shown in Table 3, with what we hope the outcome is for our patients—i.e., 100 percent long-term survival. Even when we look at death-censored graft survival for kidney transplant recipients, the 10-year results are disappointing. We still have a lot of work to do.

Table 3. 10-Year Survival – 1st Transplant (1994–2004) (SRTR)

	RECIPIENT	GRAFT
Kidney-DD	61%	41%
Kidney-LD	76%	57%
Liver-DD	59%	55%
Liver-LD	76%	67%

Heart	53%	51%
Lung	26%	24%
Pancreas-SPK	70%	54%
Pancreas-PAK	61%	28%
Intestine	41%	29%

Our second challenge is to minimize post-transplant morbidity.

In addition to the dismal long-term patient and graft survival rates, as you are all aware, a myriad of other post-transplant problems also affect our recipients' general health and quality of life. These problems include infectious diseases, post-transplant diabetes, malignancy, cardiovascular disease, and drug-specific side effects. For solid-organ donors, we need to be concerned about the surgical and long-term consequences of nephrectomy or of liver or lung lobectomy. New drug development, refinement of recipient protocols, and clinical research must also focus on minimizing post-transplant morbidity.

Our third challenge is to eliminate the organ shortage.

As I stated earlier, much work is needed to improve transplant results. Nonetheless, the outcome for a transplant recipient is clearly far superior to the outcome with alternative therapies. As of April 26, 2007, a total of 96,260 candidates were on the waiting list for a deceased donor transplant in the United States—over 70,000 on the kidney waiting list alone. In the last four decades, despite ongoing attempts to increase organ donation, demand has increased more rapidly than supply. More recently, progress has been made with paired donation, desensitization, non-directed donation, and the Breakthrough Collaborative—and these efforts all need to be encouraged. Still, the kidney waiting list has continued to grow.

A consequence of this growing list, without a commensurate growth in the supply, is that candidates for a kidney transplant are waiting longer, and mortality on the waiting list is increasing. In 2001, 6.3 percent of candidates on the list died each year; by 2005, this death rate had increased to over 8 percent. It is critical to realize that those dying on the waiting list were acceptable transplant candidates when listed. At our institution, we studied waiting list deaths over a two-year period. We found that, of those dying

while waiting, the mean age was 55; 70 percent were waiting for a first transplant; and 70 percent had a 0 percent PRA level.⁵

Looking ahead, UNOS has set goals for organ recovery by 2013—after implementation of all the new initiatives. Yet, using their own data, even if the UNOS goals were able to be achieved for kidney donors, the number of available kidneys each year would still be far short of the number of new transplant candidates listed each year. Sheehy and others previously noted, “Even in an ideal world in which all brain-dead potential donors became actual donors and the demand for organs remained constant rather than increasing, the supply of organs...could not meet the needs of all the patients on waiting lists.”⁶

Unless we make dramatic changes in our policies and in our practice, the waiting list will only continue to grow, and our transplant candidates will wait longer. If waiting longer were the only issue, perhaps I would not be so concerned. But the long wait on dialysis has significant adverse consequences: patient survival and quality of life are far worse on dialysis than after a successful transplant, and the outcome of a transplant is increasingly worse for every year spent on pre-transplant dialysis.

It is time for innovation, not fine-tuning! My suggestion is that we advocate for a regulated system of living donor kidney compensation. Richard Fine, in his AST Presidential Address last year, presented many of the compelling ethical arguments for such a system. Today, I want to make four points:

First, because a transplant is cost-effective as compared with dialysis, a regulated system of compensation could be cost-neutral to the health care system. Schnitzler has shown that a living unrelated donor transplant saves the health care system about \$95,000 (and that figure does not account for the priceless value of improved quality of life). Thus a minimum of \$95,000 per transplant would be available for administrative costs and compensation for the donor—without any additional costs to our health care system.

Second, by a regulated system, I mean one that entails:

- a. A fixed payment by the government or insurance companies to the donor
- b. Allocation by the OPO using a predetermined algorithm (like the one currently used for deceased donor allocation) so that all candidates on the waiting list have a chance;
- c. Thorough evaluation of the donor;
- d. Informed consent and safeguards;

- e. Long-term health care and follow-up; and
- f. No sales permitted outside the system.

The compensation to the donor could include term life insurance, lifetime health insurance, reimbursement of expenses, college tuition, a tax break, a direct payment, or any other of a menu of options.

It is essential to differentiate the regulated system that I am proposing from unregulated systems currently in existence. In an unregulated or free market system, the donor and the recipient find each other (sometimes with brokers involved) and negotiate a price. Many problems mar such unregulated systems, including the lack of protection and the lack of follow-up for both the paid donor and the recipient; moreover, only recipients who can afford to will be able to participate. We have already seen unregulated systems fail elsewhere. In stark contrast, in a regulated system, the price would be fixed, the donor and the recipient would be protected, and everyone on the waiting list would have an opportunity to be transplanted.

Third, a regulated system would not be difficult to implement. We could use the infrastructure already in place for deceased donor evaluation and allocation—in the United States, the OPOs. In brief:

- a. National criteria would be developed for acceptance or rejection;
- b. Potential donors would call the OPO for a screening interview (if they are accepted, a medical and psychological evaluation would be done and then reviewed by an OPO panel consisting of a surgeon, physician, transplant coordinator, social worker, and donor advocate);
- c. If the donor is accepted, the computer algorithm for allocation would be run (similar to our current practice for deceased donors) and the kidney would be offered to the center with the top-ranked transplant candidate;
- d. All bills (for donor evaluation, the operation, and follow-up) would be sent to the OPO, which would handle all financial tasks, all donor payment, and all longterm donor follow-up;
- e. The OPO would charge a fee to the recipient's transplant center (to be paid by the recipient's insurance);
- f. The opportunity to be a paid donor would be available only to citizens and legal residents (so that long-term health care and follow-up could be provided).

The fourth point regarding a regulated system of compensation is this: as a transplant community, we need to remember that we already accept donation. Any argument against compensation must separate sales from donation. I do not have time to detail each specific argument or counterargument here. For those of you who are interested, a number of excellent articles are in the literature.⁷⁻¹⁰ I only want to note that I realize this is a complex ethical question. However, not implementing a policy of compensation has major negative consequences—condemning many transplant candidates to suffer and die on dialysis. We can make a difference in their lives by increasing the number of available organs.

Given today's three challenges—improving long-term recipient and graft survival, minimizing post-transplant morbidity, and eliminating the organ shortage—what is the American Society of Transplant Surgeons doing? In fact, the ASTS is addressing the very concerns that I have raised today. Our annual meeting, the American Transplant Congress (ATC), held in conjunction with the AST, has become the most prominent annual meeting in transplantation for disseminating and discussing new information on enhancing outcome. Special thanks go to the organizing committee and to Pam Ballinger and her staff for, again this year, helping us put on a superb meeting.

Our journal, the *American Journal of Transplantation*, again done in conjunction with the AST, has become the most highly cited transplant journal in the world.

In January of this year, the ASTS held its 7th annual winter meeting. The theme, “Solving the Organ Shortage Crisis,” specifically addressed one of the major challenges that I have put before you. We had record attendance. Next year's winter meeting addresses another important topic: “Transplanting the high-risk patient.” I encourage all of you to attend.

Of note, the ASTS has taken a substantive step, in the form of a video, toward enhancing the process of obtaining truly informed consent from donors. Aimed at potential kidney donors, the video will be available to all transplant programs in the country. It concisely details the risks to the donor. The video is being previewed at the ASTS booth – I encourage each of you to see it and to determine how you can use it for your own program. At my home institution, the University of Minnesota, we have used a similar video and have found it extremely useful. We send the video to prospective donors

before their first clinic visit; they can then come to the clinic armed with their questions.

What else is the ASTS doing? In association with the University of Michigan, we applied for and were awarded a grant from HRSA to provide travel expenses and subsistence costs for living donors, thus removing some of the financial disincentives from donation—again addressing one of our three major challenges. In addition, a National Living Donor Assistance Center will be established at the ASTS national office to study the impact of reimbursement on donation rates.

The ASTS has established a database of transplant centers interested in doing clinical trials—again, an effort to improve long-term outcome. At the end of last year, a request for information was sent to all kidney transplant centers regarding the structure of their program and their interest in clinical trials. This database information will be available to individuals or companies that are setting up multicenter trials; our hope is that this database will facilitate initiation of clinical research. A similar request for information will soon be sent to all liver transplant centers.

One of our most exciting new initiatives is the development of a formal curriculum for transplant fellows. With a formal curriculum, we can ensure that fellows in all ASTS training programs will be provided with a similar core of information. It may be possible that this curriculum could also be used by ASTS members to meet their American Board of Surgery Maintenance of Competency requirements.

We are all excited about passage of the Norwood Paired Donation legislation. The ASTS, along with many of our partners, advocated strongly for passage of this bill. Other patient care areas where we can hopefully make a difference include payment for long-term coverage for immunosuppressive drugs, a tax credit for living donor expenses, a gift of life Congressional medal, and funding for the Organ Donation Act. Perhaps one of the most notable aspects of the passage of the Norwood legislation was that the Congressional Budget Office—for the first time—clearly documented that a transplant was cost-saving, long-term, as compared with dialysis. This step has huge implications as we develop other initiatives.

Development of new initiatives is only useful if we can disseminate the information to our membership. To that end, we have a new user-friendly website and an updated look to our bulletin, *The Chimera*. The website contains up-to-date information on all of our activities. Importantly, for

ASTS members, information is available on physician reimbursement and educational meetings; a job board is also kept current. We have begun sending intermittent emails to all of you describing our efforts in support of our membership. I do not have time today to describe each initiative but encourage you to go the website and explore.

So far, I have discussed three prime challenges for the field of transplantation and how the ASTS is trying to meet them. I now want to separately discuss several challenges facing both current and future transplant surgeons. Progress in our field will not come from doing the same things over again; progress will come from basic, translational, and clinical research. But, it seems to me that three intersecting issues, in particular, are impeding our ability to meet the current challenges: limited NIH funding, changes in medical economics, and the 80-hour workweek. As a result, surgeons nowadays are driven toward spending more of their time on clinical care and less time on research.

Limited NIH funding minimizes the dollars available for research; changes in medical economics, and within departments of surgery, encourage surgeons to maximize their time in the operating room; and given the 80-hour workweek, we must focus on teaching house staff to be outstanding clinical surgeons—and there is little time left for encouragement of research.

My fear is that we are moving toward a future where surgeons spend the lion's share of their time in the operating room and leave the “challenges” to our colleagues in other areas. My challenge to you is to resist this trend. Transplantation as a specialty could not exist without surgery; the recipients and their donors are our patients. I am not minimizing the significance of our multidisciplinary interactions, but surgical research—basic, translational, and clinical—has led to some of the seminal advances in our field. Surgeons have the best perspective on the integration of pre-, peri-, and postoperative care.

As I stated at the beginning, one of the most fascinating attractions to me of transplantation is the long-term commitment to the recipient, which necessitates integrating all facets of patient care. The decisions that we make affect not only patient and graft survival but also the incidence of infection, of malignancy, and of other long-term morbidities.

For every one of our recipients, we should be asking “what can I do better?” To me, that means “what studies can we do to learn what we can do better?” My challenge to you is to continue the investigative enthusiasm that

launched our field in the first place. This may mean running a research lab. It may also mean being part of a multidisciplinary team focusing on improving transplant outcome. Whatever the opportunity, I encourage you to be involved, in some way, in studies that advance our knowledge and thus our patient care.

In closing, I would like to say thank you to a few people. I have been extremely fortunate this year to work with an exceptional executive council and committee chairs. The ASTS and I sincerely appreciate your hard work, commitment, and enthusiasm—my hope is that your ongoing enthusiasm will continue to keep our Society vibrant. Katrina Crist, our Executive Director, and her staff—Kim Gifford, Joyce Williams, and Chantay Parks—work tirelessly for our Society, and I thank them. I have already mentioned Pam Ballinger and her group from Association Headquarters. They have been responsible for our annual meeting for longer than I (and probably she) care to remember. Again, this year the organization has been fantastic and we thank them.

My enthusiasm for transplantation was generated by my mentors—John Najarian, Dick Simmons, Carl Kjellstrand, and this year's Pioneer Award winner, David Sutherland. Rough around the edges, I was shaped by Ian Tellis in New York. Although each of them has a different style, they each taught me the importance of the individual patient; I thank each of them for the knowledge they have imparted and for their friendship over the years. My enthusiasm for transplantation has been maintained by our transplant fellows at the University of Minnesota, whose dedication and questioning challenge each of us.

I would also like to thank our own transplant team at the University of Minnesota—all of the physicians, nurses, coordinators, researchers, and my assistant, Stephanie Daily. Through their efforts, we are able to care for our donors and recipients, and to carry out the studies that I think are indispensable for improving outcome for future patients. And, I would especially like to thank the transplant candidates who give us the privilege of taking care of them.

I want to reiterate how special the ASTS has been for me. It has been a privilege to serve you. Finally, as a proud Canadian, let me be the first to welcome you to the ATC in Toronto, in 2008—the first time that our annual meeting will be held in Canada. A year from now, I hope we will see new

strides toward improving long-term recipient and graft survival, minimizing post-transplant morbidity, and eliminating the organ shortage.

Thank you.

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Standing on the Shoulders

GORAN B. KLINTMALM, MD, PHD, FACS, 2007–2008



Members, colleagues, and guests, I stand before you as the President of the American Society of Transplant Surgeons, which is a humbling honor that I would never have dreamt of receiving in May 1980 when I attended my first ASTS Meeting at the Drake Hotel in Chicago. To be your President is to have an enormous trust placed in me by the membership, which carries with it a responsibility to you, the ASTS members, but also to our colleagues in the American Society of Transplantation, to all non-member physicians involved in transplantation, to the transplant programs, and most of all to our patients who place their trust in us to restore them to health.

This year would not have been possible without the assistance of my family for which I am immensely grateful. I am hugely indebted to my wife Tina and my three sons, Marcus, Erik, and Philip, for giving me their love

and support, as well as allowing me time away from them to dedicate myself to the Society.

Also, thanks to my colleagues at home, who closed ranks behind me so that I could do this job. I am sure you recognize the distinctive profiles of Robert Goldstein, Marlon Levy, Edmund Sanchez, Srinath Chinnakotla, Henry Randall, Greg McKenna, Richard Ruiz, and Nick Onaca.

My predecessor, Art Matas, here seen with Sandy, Tina, and I at the Winter Symposium last January, told me after I received the gavel last year to start working on my Presidential Address right away. That was very good advice. Over the next 30 minutes I will share a few of the multitude of issues that not only ASTS, but the entire society of transplantation, will face in the not so distant future.

The three issues I will address are:

1. How We Got Here
2. Regulatory Oversight
3. The Future of Transplantation

I will begin with how we got to where we are.

My first mentor was Carl Groth at the Karolinska Institute in Stockholm, who gave me a solid platform in transplant surgery. You see Carl here at the helm. When he attended the ASTS meeting at the Drake in 1979, he “sold me” to Tom Starzl. The slave trade did not cease with the end of the Civil War. This is how I found myself at my first ASTS meeting....

My first ASTS meeting was in Chicago at the esteemed Drake Hotel in May 1980. As a transplant fellow in Denver I was there with my second mentor, Thomas Starzl. It was an awe-inspiring event—one single session where every abstract was presented and discussed by all the attendees.

All the pioneers in transplantation were there: Medawar, Starzl, Calne, Pichlmayr, Hume, Belzer, Carrel, Najarian, Murray, Bismuth, and Cooper to mention a few. The discussion was lively and insightful. Topics on the floor included the effect of transfusion on renal allograft survival, HLA matching, ALG, and surgical innovations. The corridors were buzzing about Roy Calne’s mystery drug, Cyclosporine A, which at this time only a handful of individuals in the U.S. had used. In Denver, we had started using it six months earlier in December 1979. That evening we were entertained with dinner and a string quartet from the Chicago Symphony at Fred Merkel’s home located on Lakeshore Drive. It was a dazzling event for a young

surgeon. Just the thought of being part of this community, who had made it their quest to find solutions to diseases where there had been neither hope nor life, were awe-inspiring. Ever since that time, the art and science of transplantation has fascinated me and I have dedicated my professional life to it.

Organ transplantation was developed as a surgical specialty with the surgeons having to address not only the daunting surgical difficulties, but also the issues of patient selection, immunosuppression, organ preservation, postoperative care, and the multitude of essential details. The history of the surgeons' developing the field of transplantation cannot be changed; however, today, even if the surgeon remains the leader of the programs and transplant teams, transplantation is no longer the sole claim of surgery.

Indeed, today transplantation is a comprehensive department which is comprised of a tight-knit fabric of specialists including surgeons, anesthesiologists, nephrologists, hepatologists, cardiologists, radiologists, infectious disease physicians, pathologists, coordinators, nurses, and administrators—to mention only some. Transplantation exemplifies the term multidisciplinary team. In fact, it did so long before the term was coined and popularized—by whom I do not know, but perhaps someone in a health care think tank somewhere, someone who did not know that this was already an established practice in transplantation. To those of us in the field of transplantation, however, this politically correct term is empty. If you, as a professional, are part of a transplant team, it really doesn't matter what your training and certificates say—you are on the liver, kidney, heart, or lung transplant team. That is your source of pride!

Here is Doug Tindall today with his wife and triplets. I transplanted Doug on December 1, 1987, at Baylor. He was a 19-year-old suffering from Crigler-Nijjar Syndrome. Since his transplant he has completed his college degree, gotten married, and fathered these three beautiful triplets. He is working as the Director of the Houston Disaster Relief and Emergency Medical Service. Doug Tindall serves as a shining example of the power of transplantation.

We have gone from being a specialty where only a handful of surgeons and a few nephrologists or gastroenterologists struggled with the failure of regular medicine and where survival was only hoped for but rarely seen, to being victims of our own accomplishments. Patients and their families now expect success. In the past we could only provide hope; now we deliver

results. In fact, society at large is so used to hearing about our successes that it now expects us to provide the same safety, security, and outcomes as are experienced in general health care. This has created a problem because society at large does not have even a rudimentary understanding or insight into the biological, surgical, and logistical complexities involved in transplantation.

This leads us into the second part of today's talk: Regulatory Oversight. We should not expect that federal, state, or private organizations can understand the intricacies involved in transplantation. However, they have made it their business to organize and regulate how transplantation is performed. They use rules pertaining to general medicine and surgery, transfusion medicine, and to clinics open 9 to 5 and apply them to the field of transplantation.

It is hard for them to understand the social, psychological, and medical complexities involved in the workings of living donor organ identification. They lack insight into the logistical complexities involved in working up an organ donor who is hundreds of miles away at a small outlying hospital while at the same time arranging the actual transplant of an urgently admitted recipient.

These well-meaning individuals formulate demands that, as an example, may in effect threaten the availability of living donors by making the transplant center requirements so unrealistic that they only succeed in slowing down and possibly deterring the transplant process. Additionally, this results in an unquestionably dramatic increase in the cost of providing health care with only a marginal improvement in patient safety.

We constantly hear about the escalating cost of health care, yet no one has ever bothered to calculate how much of the cost increase has been caused by regulatory demands. Safety is paramount and so is quality. However, safety and quality are not the result of signed forms but of established carefully designed processes. I am not convinced that transplantation, as practiced today, is significantly safer or better than 20 years ago, but then I have never claimed to be politically correct.

In the last few years, organ transplantation has turned into the most regulated field of medicine. It is the responsibility of the professionals in ASTS, AST, NATCO, and AOPO to engage ourselves in these ongoing developments. We must not simply say yes or compromise because the political climate currently favors the development of regulations, but we

must fight unrealistic proposals from any institution populated by administrators and physicians not involved in transplantation. Not by categorically saying “No,” though.

The transplant community must shoulder the responsibility to help develop regulations when justified and to make sure that whatever new regulations are developed that they are best for our patients and the future of our specialty.

In the past, the tendency has been for physician organizations to categorically deny problems and legitimate complaints from patients and the community. ASTS has recognized that such an approach leaves the professionals bypassed. Instead, ASTS sees it as a responsibility to our patients and the community to admit when something is wrong or when it does not work and assist in developing ways to improve the system and to prevent abuse. The solutions must be compatible with the clinical reality and support a sound functional system. During the past year ASTS has worked diligently with Senators Grassley and Levin, CMS, UNOS/OPTN, JCAHO, and FDA on a number of diverse issues. Our input has been uniformly very well received and listened to. My own opinion is that functionaries at these institutions were suspicious at first when meeting with us and expecting a traditional categorical “No” from us regardless of what was being presented.

However, after hearing that we call a spade a spade and that ASTS was there to deliver constructive criticism, we experienced extraordinary responses to our critiques. Sometimes it took a little more prodding, but in the end it is always for a greater good. This effort is the result of an organized, systematic review and critique of every regulatory document submitted to the public. Each and every document was reviewed and discussed by the entire ASTS Council with the participation of the appropriate standing committees such as Legislative, Living Donor, Standards, Curriculum, and Ethics to mention a few. Comments and drafts were worked on by a host of ASTS members. Thus, these comments are a true reflection of our membership, not just a small group of individuals, and the result of these thoughtful comments have been uniformly well received. Assisting throughout these processes I want to mention the participation of Rebecca Burke, Diane Millman, and Peter Thomas from Powers, Pyles, Sutter, and Verville who have been critical in this process as well. It is important to note that ASTS does not accept as an answer that an agency does not make all the requested corrections. When this happens we convene again,

make further improvements, and continue to work with whoever is making the recommendation.

At this point, I wish to express my sincere gratitude to Senator Grassley, Senator Levin, and their staffs; to Thomas Hamilton and his staff at CMS; to Dr. Jim Burdick and his staff at HRSA-DoT; and to Dr. Timothy Pruett and the staff at UNOS for their willingness to work constructively with us. It should be noted that Dr. Burdick's participation at the DoT is remarkably important. Having an experienced transplant surgeon at the helm that understands the issues and can explain them to administrators is of tremendous value. I fervently hope that we can continue this positive relationship into the future.

A secondary result of this rush to regulate the practice of transplant surgery and medicine is that progress and development are taking a back seat. The practice of transplantation is being frozen in its present state through regulations that make yesterday's practice the only way to transplant. CMS, OPTN/UNOS, and JCAHO will apply the rules, regulations, and standards of their respective organizations with scant consideration of new and perhaps better ways to perform transplants. These rules hinder centers from trying new and innovative solutions aimed at providing superior and more effective health care.

"Transplantation and modern immunology" were concepts created by "ignorant surgeons," in spite of the warnings from all theoretical scientists in the 1950s, 60s, and 70s.

Having been in the field of transplantation for more than 30 years, it is my strong opinion that had organ transplantation first been developed in the 21st century instead of in the 1950s, 60s, 70s, and 80s, any and all attempts at organ transplantation would have been completely prevented or shut down by various review boards, who in their collective wisdom do not have the brilliance of individuals such as Francis Moore, Thomas Starzl, Roy Calne, or Norman Shumway. At best, these surgeons would have been forced to implement rigorously defined randomized trials, even when the appropriate patient indications, the surgical technique, as well as the perioperative treatment protocols including immunosuppression, were for all intents and purposes unknown. The results would have been disastrous and would have shut down all further attempts to transplant.

Galileo stated that the earth was not the center of the universe. As a result he was excommunicated for his theories by the Inquisition, the cardinals, and

the Pope as being a heretic. Similarly, to this day we still do not completely understand the mechanisms that lead to operational graft acceptance. I believe our transplant forefathers would have been treated similarly if they had begun their quests today. They would have been excommunicated by the scientific and legal communities, as well as the popular press.

My conclusion is that the freezing of how to practice by regulations, together with the escalating costs due to regulatory mandates, are the biggest threat to the future of transplantation in the United States.

Fortunately, not everything is gloom and doom. We have accomplished a great deal this past year in our Society. The hope and future of transplant surgery today, just as in yesteryear, depends on our new members. Our fellows of today will be the future leaders of transplant programs and of the American Society of Transplant Surgeons.

Most importantly, we are implementing a formal curriculum for transplant fellowships. The curriculum will consist of 28 modules addressing all facets of transplant surgery, including not only surgery and immunosuppression, but also pre-op evaluation and care, intensive care, post-op care, and follow-up. The curriculum is expected to be fully implemented by next year. There will also be a formal certification in the foreseeable future. The Curriculum and the Fellowship committees are to be commended for their work on this endeavor this past year. Parallel to the transplant fellows training program, ASTS has developed detailed recommendations for a curriculum for residents rotating through transplant services. This important work was undertaken after discussions with the American Board of Surgery and the Residency Review Committee. Every transplant program and transplant fellowship director in the United States and Canada received an outline for a resident curriculum last July. ASTS will closely follow the implementation of a residency curriculum along with the American Board of Surgery.

Medicine and especially surgery are still professions you can only truly learn through an apprenticeship. Formal study of science is fundamental to any practice of medicine. But to believe that a competent surgeon will spring forth after years in the library is an illusion. Surgery is a profession that can only be learned through an old-fashioned apprenticeship. It is only through the careful development of the apprentice's diagnostic, surgical, and management skills under the watchful eye of a mentor that a professional will emerge. The entire history of surgery consists of an unbroken line of mentors and trainees. Surgeons say that we stand upon the shoulders of our mentors.

In doing so each generation climbs a little higher. It is from this elevated perspective that we are able to see and understand what was once beyond the horizon for the previous generation.

There is more to training a surgeon than to simply teach professional skills. The training must also teach ethics and humanity, as well as learning to be humble. William Halstead was followed at Hopkins by Alfred Blalock, who trained Thomas Starzl in the principles of surgery. This only serves as an example to illustrate that transplant surgery has its roots in the fabric of general surgery. Thomas Starzl, the father of liver transplantation and modern immunosuppression, holds a monumental place in the history of transplantation.

Indeed, I would venture to say that even Marlon Brando, the Godfather, would be envious of Starzl's image. However, this may be the Brando image for which Tom was striving. One of Starzl's points of brilliance was his compassion for the patient. He refused to ever give up and amid a torrent of information, much with unknown significance, always kept his focus on the essentials. Finally, his mastery in surgery is the one reason we are here today. He and his peers of that generation persevered in spite of the obstacles. They succeeded, and we are here to continue their legacy.

I arrived in Denver in 1979 to be trained as a second generation transplant surgeon by Thomas Starzl. I will never claim that I see further or understand the biology of transplantation nearly as well as Starzl. However, he gave me the opportunity to stand on his shoulders to catch a glimpse of the wonder on the horizon. What I saw has fascinated me ever since.

My fellows have stood on my shoulders for a short time and thus, become third generation transplant surgeons. My hopes and expectations for them are that they will climb higher to see what I will never see in my career as a transplant surgeon.

Even in an environment where it sometimes seems as if a perfect storm exists with new regulations, certifications, attempts to legislate the practice of medicine, and declining reimbursements, organ transplantation is an honest and noble profession. To be a transplant professional is fascinating, engaging, and you know you make a difference. If I had a choice, I would do it all over again. However, if I had known what was in store for me, I do not know if I would have dared. Ignorance can be a wonderful thing.

The pride of my professional life is having been given the opportunity to play a small part in the development of solid organ transplantation, of patient

care, surgery, and immunosuppression; to be part of the creation of the Baylor Regional Transplant Institute in Dallas and Fort Worth; and for what is to me the ultimate honor, to be your president.

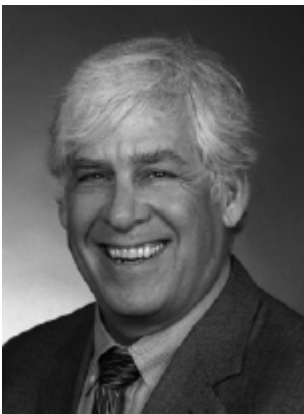
However, all this pales in comparison to those next to me, my family—Tina, my wife, my love, my friend, my confidant; my sons Marcus, Erik, and Philip, without whom life would lack purpose. I thank you for listening to me and for choosing to be part of the noble profession of organ transplantation.

The tragedy that struck the University of Michigan and the transplant community on June 4, 2007, was a harsh reminder of the sacrifices that are made by people engaged in transplantation. As health care professionals we have grown up learning to make every effort that is humanly possible for our patients, working night and day—as if it is not a really big deal—with little or no sleep, never giving up even when the odds seemed insurmountable. However, retrieving deceased donor organs means taking a step that requires a different level of engagement. There are different levels of risk one may be exposed to when making a donor trip. I remember flying in a Lear Jet at 1,000 feet from Chicago to Pittsburgh because the door had frozen and could not be closed. Our concern was not with the fuselage door but with the mounting ischemia time for the liver in its cooler. Or the time in upstate New York being driven in a country taxi on roads so slick that you could push the car sideways, or the excited sheriff who drove us at 100 mph through the main street in a little town in Missouri. But for the Michigan team it did not take a fool pushing the limits, only a mechanical failure of an otherwise flawlessly planned and executed organ retrieval run. Pilots, donor coordinators, residents, and surgeons were lost. We all lost something. Our Society is working with the University of Michigan to better understand the practices that exist for donor retrievals in the U.S. with the hope of learning something that can lessen the peril for all those involved.



2009 Presidential Address

JOHN P. ROBERTS, MD, 2008–2009



I would like to thank Goran for that nice introduction. One of the signs of aging is when you run into someone that you have not seen for 20 years and they do not recognize you. Another sign is when you look at old pictures and do not recognize yourself.

The most important part of my Presidential Address is to thank those who have helped the Society and those who have helped me along the way.

I would like to start with thanking those corporate sponsors who have helped the Society with our mission.

This is the greatest Transplant Congress in the world. The educational opportunities for all of us are seemingly endless, and next year when I do not have to fulfill all these presidential obligations, I will be able to say in good faith that I actually attended the meeting.

The Society provides awards that have benefited many members of the audience in the past and allow our younger members to test new ideas that the more established funding sources might not be willing to take a gamble upon. Further, these awards recognize achievement in transplantation, such as this year's recipient of the Pioneer Award, Sir Roy Calne.

When all is said and done, our main mission has always been to educate the next generation. We have been developing a curriculum for the education of the fellows, residents, and our allied health professional partners. When finished, the curriculum will offer online education to our future.

Each year, we have a Winter Symposium that focuses on topics that are of interest to our members. The Symposium has been a fantastic success with rapid attendee growth, development of the combined meeting with our NATCO partners and with our newest members, the nurse practitioners and physician assistants.

As part of our educational mission, ASTS provides consensus conferences in conjunction with other societies and UNOS. These consensus conferences provide guidance for important issues. Recent conferences include Liver Transplantation for Hepatocellular Carcinoma, Donor Derived Infections—NAT Testing, and Combined Kidney Liver Transplantation.

Finally, the Society is working on an initiative to allow surgeons to maintain their competencies. With increasing scrutiny of surgeons in regards to maintenance of quality care, these initiatives are important to providing the resources for the best in patient care.

I would like to thank all of our corporate sponsors for helping the Society meet its goals.

I would like to thank those on the ASTS Council during my term. The President has many opportunities to make mistakes, but having a bunch of very smart, dedicated people to bounce ideas off prevents this. We have reached our goals by a combination of cooperation, consensus building, and hard work.

While the President gets to take the credit, the work is actually done by the committees and their chairs. I would like to thank the chairs for their able leadership and enthusiasm for the ASTS mission. Over the last number of years, ASTS has become a more active and interesting Society with your help.

Being the President is a little like being the Wizard of Oz. Your countenance appears in public, but there is a group of people that are turning

the cranks and pulling the levers that are not well seen. The staff of the ASTS has been a fantastic help to me during my presidency and to the whole Society. I love you guys.

I have been at UCSF for 22 years now. I would like to be there for another 20 years, but burning the candle at both ends will probably prevent that. It is a wonderful place where I have great colleagues. There is a synergy in the care of the transplant patient that arises when mutual respect between physicians, surgeons, and nurses is viewed as paramount. With support of the academic and clinical powers, organ transplantation has blossomed.

To all my friends who have made my life so much fun, thanks for putting up with me.

Finally, I would like to thank my family for their love and support. Here is a picture from a Christmas card many years ago. My parents are the sane people on the right; my father who will be 91 in a few days is trying to get his NSF grant renewed at Caltech so that he can publish rather than perish. My mother still is the patron saint of fundraising in Pasadena, in addition to being a footnote as a funding source on my father's recent papers. I would like to give thanks to my sister Anne and my brothers Don and Allen, with whom I shared many adventures while growing up. I thank all of you for coming to Boston.

Growing up as the children of two transplant surgeons is an adventure. My wife says that God does not give you more than you can handle, and that is certainly true in my family. Becky, who is here today, is a freshman at the University of Washington. Johnny could not be here because he is taking his finals in high school today. I would like to thank Becky and Johnny for putting up with us, as they did not get to choose their parents.

Finally, I would like to thank Nancy for the many years of love, mentorship, and most of all living with me, which is difficult at best. It has been a great run and I could not have done it without you. I would like to thank Nancy for helping me with my talk.

Here is my Presidential Address. What follows are my personal thoughts and should not be taken as reflective of the American Society of Transplant Surgeons' positions.

Now that I have your attention, I would like to say that this address is a difficult task. Over the last year as I thought about the talk, I went through the five stages of grief outlined by Kubler-Ross:

Denial: The talk is not until June.

Anger: Why did I want to be President anyway?

Bargaining: Maybe if I am nice enough to the ASTS staff they could write the talk.

Depression: I will never get this done.

Acceptance: Where I got to last night.

My selection of topic was in response to friends and family who begged me not to give a data talk, and I realized that Bob Merion will do a better job of torturing you next year. I did consider sprinkling it with French, as I learned from Mike Abecassis that a few words of French from your mother will rescue even the worst argument.

What I would like to talk about is the effect that media has on transplantation. In the recent past, the idea of a telephone call from a reporter requesting information about some issue would be enough to draw a feeling of doom, like this penguin's view of his next moments. This is a result of a spate of negative publicity about transplantation primarily focused on problems at transplant centers.

Nevertheless, we need to take a broader view of the media and understand its value to transplantation. Media coverage of sentinel events can change the attitudes of the public. Pictured here is the killing at Kent State, which affected the public's perception of the Vietnam War. There have been many killings before and after this iconic photograph, but this particular event triggered something more significant. There is a lesson for us here regarding iconic events.

To the media, transplantation is an attractive topic. It is compelling with heroes, heroines, and fallen heroes. There are desperate patients and ethical challenges coupled with life and death endings that sell newspapers. The media is important in the public's perception of transplantation, and our existence is dependent on this public perception.

Foremost, transplantation is the story of saving people from death from end stage organ disease, but we never will have enough organs and we struggle with decisions about rationing. This article by Shauna Alexander chronicled the use of committees to decide which patients would have access to the scarce dialysis machines. The committee was formed by a group of lay people who made decisions about who would not be placed on dialysis and therefore die. This article and other outcries were pivotal in the eventual widespread provision of dialysis by Medicare.

A similar effect of the media on access to dialysis also occurred in Britain so that today the age distribution of patients undergoing dialysis and transplantation in Britain is indistinguishable from the United States.

The long-ranging effect of this media campaign is evident today as we debate the provision of kidney transplantation to the rapidly growing older dialysis patient population. It is interesting that we no longer use committees that make decisions about individual patients but instead have committees that create national policies, resulting in a computer that supplies the *deus ex machina*.

In the hero category, transplant surgeons have always been of interest to the media. Alex Carrel, pictured here with Charles Lindbergh, was one of the early pioneers in transplantation. The apparatus in the picture was a perfusion pump created by Lindbergh, a predecessor of pump oxygenator and organ perfusion. Carrel's work on creating vascular anastomoses was awarded the Nobel Prize.

Carrel was deified in the media, and his receipt of the prize greatly increased the media's interest in organ transplantation. As we look to the past, we should not focus completely on the medical literature for our information. As an example, Carrel is not generally credited with solid organ transplantation in humans, but there were several media reports of papers given to the Clinical Congress of Surgeons in 1911.

Here, Carrel discussed a xenotransplant from dog to human. Carrel apparently considered having a bank of these kidneys in cold storage ready to be used. It is also remarkable that at the same Congress, Dr. L.J. Hammond reported on what is probably the first deceased donor human kidney transplant. The kidney was recovered from a man killed in a motor vehicle accident. This report presaged by 25 years the first report in the medical literature of cadaver transplant by Voronoy. The donor was also the first multi-organ donor, as Hammond transplanted a testicle from the same donor into another patient. I found this report in a book by Susan Lederer, *Flesh and Blood*, about transplantation and blood transfusion.

Despite these earlier attempts at transplantation and the later more successful attempts in the 50s and 60s, solid organ transplantation plodded along with only the occasional media coverage.

A bright light exploded on transplantation in 1967 with Christiaan Barnard's performance of heart transplantation. This huge media event

sparked worldwide interest in heart transplantation, attracting surgeons and hospitals to the allure of the spotlight.

Unfortunately, the field was not advanced far enough as the vast majority of the recipients died.

By 1971, 146 of the first 170 heart transplant patients were dead, and what had looked like a surgical miracle had turned into a disaster. Cardiac surgeons admitted defeat and called for a complete moratorium on heart transplants. Barnard's credibility waned in his later years as he became associated with questionable causes.

Norman Shumway is credited for persevering through this maelstrom of bad publicity. Although Shumway expressed to me many years ago his dislike of Barnard's efforts, at a later stage of his life, he recognized the ill effects that the media attention can have on a surgeon's life.

It is interesting that the recent media interest in face transplantation has not led to the same issues. While this may in part be due to the lack of comparable need, the ethical infrastructure, for better or worse, creates an environment where racing to the spotlight is impossible. Our modern environment may inhibit the creation of new media idols, at least in American medicine. In some aspects, this is a good thing, although it can decrease the attention paid to transplantation.

Organ donation is an area where the media's attention has fostered transplantation, and we are dependent on the public perception. While general stories about the organ shortage are of interest, there are personal stories that have helped to change the public's view of donation.

Jamie Fiske, a child with biliary atresia, and her father Charlie were a major news story in 1982. Jamie needed a liver transplant that was not available to her in Boston. Charlie brought his daughter to Minneapolis for transplantation.

Told of the difficulty with finding a donor liver, Charlie sent hundreds of telegrams to pediatricians. After lobbying Dan Rather, Tip O'Neill, and Edward Kennedy, the American Academy of Pediatrics allowed Charlie to give a presentation to the General Session where he pleaded, "I ask you to keep your eyes and ears open for the possibility of a donor.... Jamie wants to survive." When Charlie sat down, there was total silence in the ballroom for about a minute. Then the whole room burst into applause.

Covered by all three television networks and hundreds of news stories, Jamie received a liver transplant from a donor in Utah whose family had

heard the plea. Here Jamie is pictured with my mentor John Najarian a few years after the transplant.

Jamie's story is interesting in that it chronicles a father's Herculean effort to get his daughter a transplant. A father's plea to an august group of physicians who held the method of getting his daughter an organ touched the heart strings and was recognized by the media as a great story.

While this occurred before institution of NOTA, the National Organ Transplant Act, there was still concern that this effort disadvantaged those who did not have these resources. The story did help in changing the status of liver transplantation from an experimental to an accepted procedure by the NIH in 1983. It was this story and other stories, some more mercenary, that led to the passage of the NOTA. NOTA resulted in a regulated system of organ allocation and distribution and allowed for better access to organs for those in need.

Todd was another recipient who needed a transplant and went public with his need. Despite having a need like Jamie, this story did not have the same play in the news. Was it that Todd was asking for himself or was it the use of a billboard that trivialized his need and made it less newsworthy? Todd's family has continued to be active in helping with organ donation since his death.

More recently, Natalie Cole appeared on the Larry King show to discuss her need for a kidney transplant. While on the show, she received a number of emails from strangers offering her a kidney. While it is unlikely that one of these offers of donations will come to pass, these offers are similar to the ones for patients on Matching Donors.com, where nearly 400 people compete with the most compelling story to try and draw the most kidney offers.

Another celebrity who brought attention to organ donation was Mickey Mantle. Mickey Mantle was a storied baseball hero who played hard and partied hard. Mickey's story was potentially a great story about rescuing a true American idol. Unfortunately, this impact of his story was dimmed by the unfounded concerns that Mickey received his liver transplant unfairly because of his celebrity status, though he did not. Further shadows were cast by the concern of the role of alcohol in his liver disease. Overall, this story did not capture the imagination of the American people as it might have.

Despite this, there was a surge in organ donation as the plight of an American hero sparked overall interest in transplantation.

One of the most amazing stories affecting organ donation was the story of Nicholas Green. Nicholas was a young American boy who was shot in Italy during a highway robbery attempt.

His parents, despite the horror of their son's death, donated his organs to seven Italians. This gracious act created a huge media event in Italy. In a few years, the number of organ donations in Italy had increased severalfold. The bell of this act reverberates to this day.

Nicholas' story demonstrates the power of the media to increase organ donation. In the United States, many organs are lost because of the families' refusal to consider organ donation. We need another Nicholas Green story to help us. The key components of the story were a widely publicized death and the selfless act of the parents that offered salvation rather than revenge. We all know of widely publicized deaths where the family donated the person's organs, but these final chapters of the victim's organ donation are infrequently told to the public. How many news stories do you remember where that act of organ donation was acknowledged? Why cannot we replicate the news coverage of Nicholas' organ donation?

While I am not advocating taking away the families' right to confidentiality, some families would celebrate the act of donation. Our hesitancy to celebrate may be because of our fear of the loss of confidentiality, but it is more likely that we have not wanted to lift a ponderous veil of secrecy about death and organ donation. We should be prepared to ask families to celebrate their selfless acts before the media attention has moved elsewhere.

While surgeons have labored to improve organ transplantation, media attention has also improved transplantation. Recently, this has been by pointing out flaws in how we take care of patients and in how our systems operate. For the most part, the media attention has been negative. The result of this attention has been reaction and frequently overreaction.

In 2002, there was a widely publicized death of a living donor. This death has led to changes in the process of care. This was not the first death from a donor hepatectomy, but it was more widely publicized than the other deaths and brought about changes that the other deaths did not. What led to the strong press reaction was a perfect storm: the donor was a reporter, and the death occurred in New York City, a major media market. In addition, the donor's wife became a vocal advocate for new standards for living donation. These circumstances catalyzed a number of changes, including standards created by

ACOT, the New York Health Commission, and UNOS. The NIH- and ASTS-sponsored Adult to Adult Living Donor Liver Transplant study also arose from concerns about the safety of living donation. Today we have independent donor advocates, a multi-step consent process, and a greater awareness that may allow us to mitigate donor risk. Overall, we are in a better place than we were in 2002.

Another recent event brought further scrutiny to transplantation. In 2007, there was transmission of HCV and HIV from a high-risk donor. What transpired after this event was the government demanding a policy from the OPTN requiring communication of the risk of disease transmission by organ donors. While this was a necessary step, the policy uses outdated guidelines from the Centers for Disease Control. Without clear guidelines, anxiety and confusion have been the result, with organ procurement organizations and transplant centers being in conflict regarding the definition of a high-risk donor. Here the media attention brought a response that uses a very blunt tool. While the response was timely and arguably needed, the result has been less than perfect. We must be careful that the media do not push us into doing something, anything, even if it is wrong.

Over the last 4-5 years, there was a series of stories in the *Los Angeles Times* by Charles Ornstein and his colleagues about transplantation. Most of the stories were about California centers. The result was closure of centers and a heightened awareness of structural difficulties in transplant center oversight. Later, after publication of substandard center specific results, Senator Grassley got involved.

These events led to the creation by CMS of a new set of regulations for transplant centers. In general, these regulations have moved transplantation in the right direction. ASTS has spent a lot of energy working with CMS about modification of these rules, and there is more work to do regarding the risk adjustment of center results. While we have to have quality standards for transplant centers, we need to make sure that they are generated from well-defined reliable data that allows for appropriate risk adjustment.

Finally, I would like to prognosticate regarding future media events. On the positive side, we will have our own Nicholas Green story that will boost organ donation. Heroes and other celebrities who have their own crises will dramatize the need of every person on the waiting list.

The transplant community will have its own crisis as the media focuses its attention on our failures to distribute organs fairly. In the future, our policies

must pass basic tests. We should act in a way that we would expect others to act toward us. We should do the greatest good for the greatest number. We should take the same actions as would a disinterested party, and finally we should only create policies that we would feel comfortable explaining on a national news program.



2010 Presidential Address

ROBERT M. MERION, MD, FACS, 2009–2010



It is truly an honor and the highlight of my professional career to stand before you as the 36th president of the American Society of Transplant Surgeons.

This morning, I'm going to discuss the role of statistical information in transplantation. Many of you will not be surprised at my choice of topic, given my longstanding interest in the intersection of statistics and medicine, and given my dual roles as a transplant surgeon and as a health services researcher. And I know that I'm not alone in trying to bring the best science to my interactions with patients and families. Although medicine is both an art and a science, we tend to practice more of its art and seem to ignore much of its science. In choosing to talk about statistically based information, my goal is to give you an increased awareness of how statistics can help each of us to help our patients.

When you're sitting in an exam room in the clinic with a patient, how do you react when she asks, "Doctor, what do you think? What are my chances if I choose treatment A vs. treatment B?" The results of a recent study may come to mind as you struggle to answer challenging questions like these. The patient may even turn things around by quoting numerical information that they've found online, placing you in the position of agreeing or not. A good modern day example involves a famous patient known to everyone in this room.

Steve Jobs had a very uncommon liver condition. His challenge: identify transplant centers that would offer him a place on their waiting list, where the likelihood of getting a transplant was high, and where the post-transplant results were excellent. An unachievable and mythical place like Lake Wobegon?

No, all of these data were available to Mr. Jobs, just as they are to anyone with an internet connection. But since he had a rare condition, it was necessary to cross-reference the programs' attributes against their experience with his particular rare malady. This could only be accomplished in private discussions between Mr. Jobs and his doctors. That his transplant eventually took place in Tennessee is a matter of public record, and since it was made public there has been much debate about whether he received special treatment.

Did Mr. Jobs have more ability than the average patient to evaluate the numbers and understand them? Perhaps. After all, he's a very smart guy and the CEO of Apple Computer. Was he more available to meet with multiple transplant surgeons? Sure! Unlike the average patient, he has lots of money and access to a Gulfstream jet.

In the end, both the statistics and the surgeon saved Steve Jobs' life, because they processed *all* of the available information, from the statistical to the interpersonal, and made rational choices that each of us would have likely made in the same situation. Like a beacon shining in the night, the information in transplantation can illuminate the dark path for us and for our patients.

Now imagine not having access to any statistical information as you sit with a patient who is at risk to die from a life-threatening disease and asks, "What should I do?"

In 1722 patients all over England were doing just that. Smallpox was sweeping through the country with devastating consequences. Physicians had

heard of a procedure that terrified their patients as much as it gave them hope. The so-called treatment involved making an incision into the patient's arm and inserting pus from the skin lesion of a victim with active smallpox. It was hoped that the inoculum would result in a mild case of self-limited disease and subsequent immunity. But, not always. Some died as a result of the inoculation. And the inoculated smallpox itself was contagious to others. No one knew how well this worked, as only isolated case reports had been reported in the *Philosophical Transactions*. Patients certainly had no access to statistics, and neither did their doctors.

That is, until Dr. Thomas Nettleton, a physician in the small Yorkshire town of Halifax, decided to do something novel. He counted. He thought like a businessman and applied what he called the Merchant's Logick: "Stating the Accounts of Profit and Loss to find on which side the Ballance Lyes with respect to the Publick, & forming a Judgement accordingly." Simply put, he wondered how many patients would live or die with the procedure and how many would without undergoing it. By the end of 1722, he counted only one death amongst 61 inoculum recipients in Halifax against one-fifth of those who contracted natural smallpox. It was a sublimely simple but compelling comparison, and although it may seem trivial to us, it was extraordinary in its time. Statistical information had had its first opportunity to play a role in the practice of medicine.

It would take nearly 100 years after Nettleton to move to the next major stage—determining whether an observed difference between two medical treatments was simply a chance finding based on a small number of patients. That was accomplished in 19th century France by Jean Civiale, a surgeon who advocated a new technique of bloodless surgery for the removal of bladder stones. Annual publication of surgical success rates had become a popular form of medical marketing by the early 19th century. In order to strengthen his case, Civiale convinced the French Ministry of Public Instruction to fund a comparative effectiveness research study on an enormous European-wide scale that would have been unimaginable to his 18th century predecessors. His report, with a sample size of over 5,700 cases, was truly a landmark achievement in the conduct of observational research, marking an important milestone in the internationalization of research and the public funding of data collection and analysis. It could have been called the European Registry of Bladder Stone Surgery.

To convince naysayers like François Double, a prominent but skeptical physician of the day, who rejected as evil the suggestion that statistics be used to “turn clinicians into scientists,” the Académie des Sciences de Paris created a panel specifically to examine Civiale’s study and, more importantly, to frame the debate between the relative merits of physician experience versus statistical quantification as a guide to medical therapy. Under the leadership of the eminent Siméon-Denis Poisson, later famous for describing the Poisson distribution, the report of the academy’s panel, issued October 5, 1835, hailed Civiale’s work as a major advance. If Thomas Nettleton had been alive in 1835, he would have been awed by the scale, scope, and rigor of Civiale’s work.

The trickle of statistical information that began in Nettleton’s time and expanded in the 19th century has now made us feel like we’re drinking from a fire hose of data. With around 20,000 medical journals being published, it’s no wonder that physicians are swamped. An alarming countertrend is that journal reading by physicians has dropped by more than a third in recent years, and almost three-quarters of doctors report perusing as few as two journals per month. Two-thirds only read the abstracts.

Partly in response, the American Board of Surgery and other specialty boards have developed requirements for Maintenance of Certification that are increasingly quantitative and data-driven. Board-certified surgeons must now report every three years on the success of our efforts to stay current with advances in our field and demonstrate that we are monitoring our practices and our outcomes. The American Society of Transplant Surgeons recognizes the challenge and the opportunity that this represents for us to play a leadership role in understanding the appropriate use of statistical information in the 21st century practice of transplantation and is working to help ASTS members fulfill these requirements in the areas of quality and outcomes monitoring and continuing education. Many other ASTS initiatives, from the Academic Universe Curriculum to our ASTS State of the Art Winter Symposia, from the projects of our Scientific Studies and Standards committees to our Business Practice Services, incorporate a profound sensitivity to the power of data in transplantation and the continuing challenge of using them wisely in all aspects of our profession.

Using statistical information to make individual medical decisions is not always clear or easily accomplished. One problem with statistics based on large cohorts of patients is that they tell you how things will turn out on

average for patients with certain characteristics, but they don't necessarily tell you how they will turn out for the particular patient sitting in front of you. As I often tell my patients, "This procedure has a 90 percent chance of success for patients like you, but as far as your particular outcome, my crystal ball is cloudy. I can't tell with certainty if you are one of the 90 or one of the 10, so at the end of the day you'll either be 100 percent alive or 100 percent dead." Although that's not 100 percent satisfying, for me or for my patient, our inability to precisely predict the future shouldn't dissuade us from using solid numerical information as a guide to treatment choices. I start with the best available data, and then factor in the unique attributes of each individual patient's case. That's my definition of good medical judgment.

By the 1990s, the desperate shortage of organs led to relaxation of the requirements for accepting deceased donor kidneys for transplant, and the so-called expanded criteria donor with defined characteristics was born in 2002. It is a matter of common sense and a logical tautology that higher risk organs are associated with worse outcomes. The more critical question is analogous to the adage about the bird in the hand being worth two in the bush. In other words, does receipt of an expanded criteria organ result in a longer lifetime than waiting longer, hoping for a better offer before death intervenes.

In 2005, our group at the SRTR studied over 100,000 kidney transplant candidates and determined which patients have a significant life-extending benefit from expanded criteria kidneys. Our results were published in the *Journal of the American Medical Association* and have been widely cited. There is a diagram in the paper that shows how to decide whether a patient benefits by including expanded criteria kidneys in their donor pool by answering just four questions. We were pretty excited about the opportunity to provide the transplant community with this clear and compelling information to guide their decision making. Yet it is humbling to stand before you today and tell you that our work has not had the impact on practice that we expected. Morgan Grams and colleagues from Johns Hopkins, in the most recent issue of the *American Journal of Transplantation*, and in a presentation during this meeting, strongly confirmed our findings about the value of these transplants. However, they noted that since the publication of our paper, listing practices have remained just as widely varied as they were prior to 2005. As you can see, there have been over 14,000 of these transplants performed in the past 10 years. And thousands of patients are still dying every year on the waiting list. But, among patients predicted to benefit

from an expanded criteria kidney, the proportion actually listed for one remains stuck at exactly 50 percent. In some parts of the United States, all the patients are listed for an expanded criteria donor kidney despite the fact that only 50 percent benefit from one. In other areas, none are listed. These wide disparities haven't changed. And finally, right down at the transplant center level, the median change in listing practice was 0 percent.

I am really baffled by this lack of change. In our own program, we plugged the algorithm right into our practice, and when we talk to patients about it and describe where they fall in the diagram, it makes sense to them. Our own program's practices changed a lot, and we feel that our patients are better served by using the data in a logical and consistent manner.

It's clear that there are lots of patients around the country who would benefit from an expanded criteria kidney, but who are not getting access to this lifesaving form of therapy. Perhaps there were unique circumstances that favored a recommendation against it. Maybe it was recommended and the patient decided against it. But some reasons have nothing to do with what may be best for an individual patient. The transplant team may think that their program's results or reputation will be placed at risk, even though their patients would get a transplant more quickly and have a longer lifetime. Although cherry picking donors usually fails to help a program's results relative to what would be expected, the costs of providing an expanded criteria kidney to a patient are certainly higher. So, I'm not naïve and recognize that external forces do play a role in decision making by transplant programs, but we need to direct our attention elsewhere to address these external problems, because patients who are denied more timely and appropriate transplants are surely victims in this scenario.

Because I'm a scientist, I must accept the theoretical possibility that our analyses were flawed and that our recommendations were misguided. But I don't think that's the case. There must be other reasons why practices have not changed, even at the extremes. Apparently, it's not sufficient to simply produce and publish statistical information and sound recommendations in high quality journals. We must do a better job translating those recommendations into best practices. And I don't just mean my studies. Failure to understand and apply new information in clinical practice is widespread in medicine, extending far beyond the field of transplantation. The Institute of Medicine, in its 2001 report entitled "Crossing the Quality Chasm," noted that less than 50 percent of patients in the United States

receive proven treatments for common diseases. Yes, less than 50 percent of patients in the United States receive proven treatments for common diseases. We must squarely face this challenge in transplantation.

We live in quantitative times, our daily lives suffused with numbers, data and metrics, statistics and calculations, predictions and observations. From the global scale to the individual human perspective, from birth until death, from health to disease and, hopefully, back to health, we look to numbers and statistics for support, for justification, for encouragement, and for hope. In transplantation, we also face the inescapable tension between individual patient loyalty and concern for the public good, in the face of an inadequate donor supply for all. We judge ourselves by a high standard. We're held to a high standard by our patients. And, in transplantation, we're evaluated by entities outside the patient-physician relationship, as the tableau of our everyday miracles continue to capture regulatory, payer, and media attention.

Statistics are certainly not a crystal ball, telling us the right course of action in every case, but we ignore them at our peril and at our patients' peril, and risk returning to the past. Our challenge for today and the future is to embrace statistical information, at its intersection with our solemn Hippocratic Oath to our patients, and to use statistics to help illuminate the path for ourselves and for our patients.

It has been a great pleasure and a profound honor to serve as the president of the American Society of Transplant Surgeons. The year has been filled with challenges great and small, and I have enjoyed every minute of it. I have many more to thank than I have time for, so I apologize to all who are not mentioned by name. I want to start by saying that I would not be here without the love, unqualified support, and guidance that I have received my entire life from my parents, Milt and Margy Merion. I am thrilled that you are both here today. I have been fortunate to have many surgical mentors, but two deserve particular mention. I met Jerry Turcotte when I was a third year medical student in 1977. During the ensuing years, he taught me on the surgical services, hired me as a surgical intern, and was responsible for my spending two years with Sir Roy Calne in Cambridge. I learned the craft of transplantation from Sir Roy and had the extraordinary benefit of his keen investigative and creative mind. I returned to Ann Arbor, where Dr. Turcotte hired me 25 years ago as a faculty member in the Department of Surgery. I will be forever indebted to both of them.

My accomplishments as ASTS President have been made possible by an extraordinary Executive Committee, Council, committee chairs, and all of our past presidents, who have given of their time and their insight to the important missions of the ASTS. Our Executive Director Katrina Crist, Associate Director Kim Gifford, and the rest of the ASTS National Office staff work tirelessly on behalf of our 1,600 members. I have the utmost respect for your passion and your professionalism and couldn't have done it without you.

I want to acknowledge our corporate partners, whose support powers many of our activities. I offer my thanks to Joren Madsen, president of our sister society, the American Society of Transplantation, for a remarkable year filled with collaboration and cooperation between our two great organizations.

My surgical division at the University of Michigan, led by Jeff Punch, is a transplant surgeon's dream team. Thank you all for supporting the Delta Airlines Professor of Surgery. Deb Richards, who took this picture, is always behind the scenes and watches my back as my ace administrative assistant at the University. My team at Arbor Research Collaborative for Health is filled with smart, energetic, and passionate people whose research is focused every single day on improving the lives of patients by tackling the toughest problems in analysis of organ failure and transplantation data. Bob Wolfe and Fritz Port have played a seminal role in developing my understanding of statistics in medicine.

And finally, I'd like to thank my wife and children, who have put up with me during all the years before and after becoming a transplant surgeon. Our younger daughter, Sarah, is in college in Buenos Aires and can't be here today, but I'm happy that our older daughter, Al, and David, her husband of seven weeks, are here from Los Angeles. Thank you for sharing this day with me.

And, if I were going to thank only one person in the world, it would be my wife, Debbie, who has made the biggest sacrifices for my success, and who, from the age of 14, has been my best friend, my confidant, my biggest fan, and the love of my life. I love you, Deb!

Thank you to every member of the American Society of Transplant Surgeons for bestowing upon me the privilege of this year and of this day.



The Luster Cycle of Transplantation Surgery

MICHAEL M. ABECASSIS, MD, MBA, 2010–2011



Dear Friends, Colleagues, and others. And by others, I mean of course my family, but also those present who will not publically or readily admit to being either my friends or my colleagues:

The ASTS is a great organization, and it has truly been my privilege to serve as its president this past year. Together, we have accomplished a great deal as we focused our work on our stated mission areas. We carefully crafted a new vision statement for the ASTS this past year. In executing this vision, and together with our partner stakeholders, we have advocated strongly for our members and for our patients. I would like to specifically highlight the fact that the ASTS and the AST worked together tirelessly this past year, like never before, so that our collective voices could be heard,

louder than ever, in these advocacy efforts. There is strength in unity.... I would like to applaud Dr. Maryl Johnson, and her executive committee, for their leadership in this productive partnership. I know that Dr. Johnson will review these efforts with you during her address, and therefore, I will not spend any more time on their details.

So rather than looking back on our many accomplishments, I would like to share with you some of my thoughts on the future of transplantation in general and transplantation surgery in particular. I hope to make a compelling case for the need to constantly re-invent ourselves and our field, in order that we remain strong, so that we continue to attract the best and brightest to our ranks. In order to argue this case, I will not torture you with data and trends on the number and details of applications to the ASTS fellowship match, or on the number of transplant surgeons currently engaged in funded research, or on the number of high impact factor articles authored by transplant surgeons in recent years. Why confuse the issues with facts? Instead, in true scientific form, I will base my comments on a single personal anecdote, as I believe that this “n of one” should cause us to reflect on the future of this magnificent discipline, to which we all, in one manner or another, have dedicated and continue to dedicate our professional lives.

Five years ago, at around this time of year, I received a call from a young man who had matched at Northwestern for one of our transplant surgery fellowship slots. He had come to us with outstanding recommendations from several of our colleagues. This was someone who had decided as a medical student that he wanted to be a transplant surgeon, mostly as a result of admiration for a couple of surgeons at his medical school, having adopted them as role models. He had then gone on to a surgical residency at another institution, where he immediately gravitated towards transplantation. In short, I am probably describing any one of us and the path that led us to a career in transplantation. So we fully expected this young man to start his fellowship in July, but here he was, calling me in May....

He spoke in a soft voice, yet I could easily hear his disappointment and chagrin as he apologetically informed me that he would not be doing his fellowship with us. In fact, he was not going to pursue a career in transplantation at all. Naturally, I immediately asked for an explanation. Were there personal reasons for this? What could possibly cause this young man to have such a sudden change of heart? He began to speak in response, but then he paused, for what seemed like a long time. And then, in a muffled voice, he

said, “Transplantation has lost its luster.” Imagine that! “Transplantation has lost its luster.” Incomprehensible! I have thought often about these words, and I have to admit, I have been perturbed by them since that day, mainly because I comprehend them. But as I prepared for this address, and as I reflected on my own career, I began to slowly understand the meaning and, more importantly, the implications of this young man’s words. So for the next few minutes, I would like to share some of these thoughts with you.

So what did he mean by “luster”? The *Encarta Dictionary* defines luster, the noun, as: [soft-sheen] a soft sheen of reflected light, especially from metal that has been polished gently; [shininess] a bright and shiny condition or tone; [splendor] the glory and magnificence of a great achievement; [polish] something used to give something a shiny finish; [chandelier] made of cut glass, designed to reflect the light; [glaze on pottery] an opalescent metallic glaze on pottery, especially porcelain; and finally, as [light reflected by a mineral] one of the ways in which a mineral is defined, the highest degree of luster being resplendent. And synonyms for resplendent, according to the Thesaurus, include: splendid, dazzling, magnificent, glorious, brilliant, stunning, glittering, and impressive.

In trying to understand this young man’s words, and keeping this literal definition of the term “luster” in mind, the **first question** that came to mind was: **Would I have used the word “luster” to describe transplantation when I entered the field?** And I think we would all agree that the answer would be a resounding “YES.” An obvious follow-up question then is why? And although the answer to this question is more complex, I believe that at the heart of it is the fact that from its very infancy, transplantation surgery has been, by any and by all metrics, one of the most challenging yet fulfilling surgical specialties imaginable. By presenting daunting clinical, technical, and immunologic challenges, the mere accomplishment of converting investigational procedures into standard of care therapies is nothing short of resplendent. And what about the men and women, surgeons all, larger than life, who pioneered these procedures? Again, nothing short of resplendent. And that, ladies and gentlemen, is “luster,” pure and simple. A discipline that allows one to dream, and then to fulfill that dream almost in its entirety, all within one’s own career and lifetime! Splendid, dazzling, magnificent, glorious, brilliant, stunning, glittering, and impressive.

As a result of fulfilling these aspirational goals, we have entered a “Golden Age” of transplantation. Now to be sure, we’re not entirely there

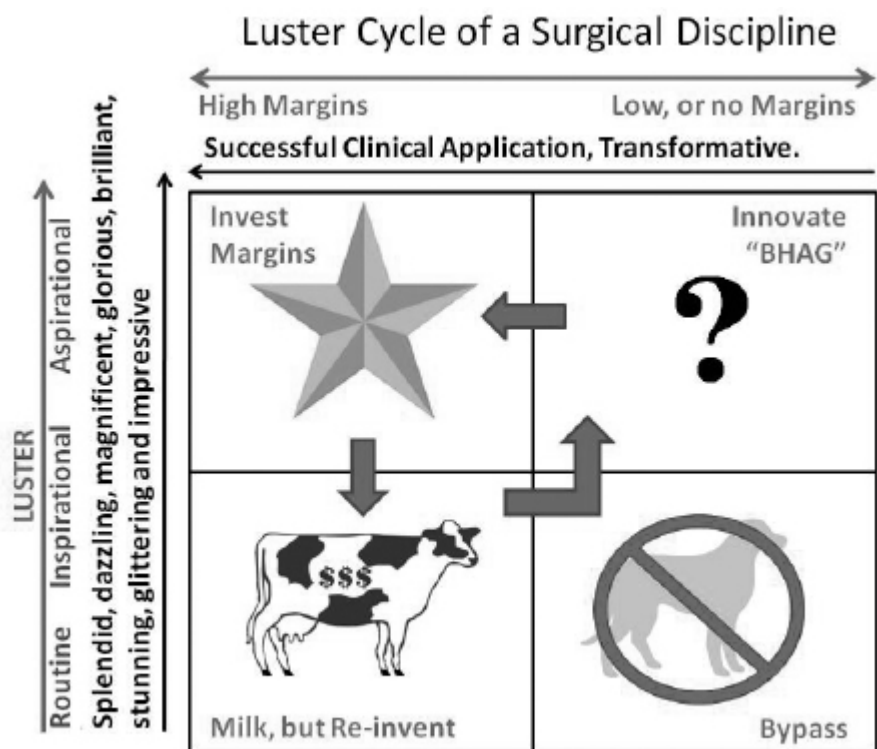
quite yet. But I would submit to you that we are living the dream. Transplants are now routine operations with excellent short- and long-term outcomes. Can we improve on these? You bet. But it's hard to argue with >90 percent success rates. And what about the "Holy Grail" of transplantation, immune tolerance? Are we there yet? Well maybe not quite, but we're pretty close! Several presentations at this very meeting will attest to these claims. As many before me have stated, we stand on the shoulders of giants. And as a result, we can see the horizon clearly. And it is a magnificent view indeed!

So the **next question** is: **Would I use "luster" to describe transplantation today?** I believe the answer to this question is more complex. I would submit to you that for those of us who have lived and continue to live the dream, the answer again is unequivocally "YES." But the real question is how might a surgical resident, contemplating a career and a future in transplantation today, answer this question? Obviously, the index resident that I alluded to at the beginning of the address answered this question with a resounding "NO." Also, let me gently point out to you that surgical residents nationwide are not exactly elbowing and tackling each other as they attempt to secure a rotation on the transplant service. Also, I can't remember the last time a transplant, of any type, attracted a sellout audience of surgical residents and medical students. Alas, can you all recall the good old days when these procedures would attract lots of enthusiastic and impressionable students and residents? Most of us were those students and residents. Do you remember when even the nephrologists and hepatologists and the cardiologists would come to the operating room, just to feel like they were part of the miracle?

So the **next question** is: **Has transplantation really lost its luster**, at least for those impressionable young men and women that used to be so awed by what transplant surgeons did? In order to address this, I think we need to answer **one final question**: Is there an operational definition for the term "luster"?

I will spend the next few minutes trying to convince you that the subject of my single case study, that surgical resident responsible for this monologue, was in fact, at least in part, correct. But I will also propose that we, the transplant community, are well on our way to re-establishing the status of transplantation as a resplendent discipline, even in the eyes of seemingly disenchanted future generations of transplant surgeons and scientists. In order to do this, I will use as a visual and conceptual aid an old matrix, well

known to the business community and first described by the Boston Consulting Group in 1977. This is a 2x2 matrix known as the “Growth-Share” matrix. So the idea is that all new products begin the cycle as “question marks,” defined as highly innovative, but with low market share due to the fact that they have not yet penetrated the market. As the product gains acceptability and as the consumer realizes its value, market share grows, as do revenues, and it becomes a “star.” Now for a product to remain a star, it is essential to continue to re-invest some of the revenues into research and development, so that continuous improvements lead to sustained market share and revenues. In contrast, once re-investment slows, the product becomes a “cash cow,” defined by a focus on sales and marketing as these replace R&D. Unfortunately, the natural history of cash cows is that they become “dogs.” So once the cow has been milked without re-investment, the product loses differentiation and becomes a mere commodity, price-sensitive and vulnerable to imitations. Margins erode, as does market share, ending the cycle. In this construct, “luster” exists in the question mark and star phases of the cycle and dulls as the product becomes a cash cow and ultimately a dog.



So now you're asking yourselves: How is this relevant to transplantation? So let me take you through this same cycle, which I have now renamed the "Luster Cycle of a Surgical Discipline." A surgical discipline can be defined by the clinical, surgical, and scientific needs of a specific patient population. So in relevance to transplantation, the pioneers who preceded us were able to transform a highly investigational set of procedures into a therapeutic reality, such that over the past 2-3 decades, question marks became stars, as successful clinical application of these procedures by a select few, in an even more select number of forward-looking institutions, made transplantation the accepted approach to end-stage organ failure. More recently, however, these stars became cash cows, and the focus shifted from innovation to margins and market share. And how many of you can tell me honestly that discussions with administrators at your institution about margins and market share don't trump concerns about research and innovation? And when was the last time you hired a transplant surgeon so that he or she could focus on innovative research without worrying about how many RVUs they need to generate to make their salary? And where is the luster in margins and RVUs?

Now before you start lining up for the Kool-Aid®, let me tell you that I FIRMLY believe that the future of transplantation has never been brighter. I told you at the beginning of the address that I hoped to make a compelling case for the need to constantly re-invent ourselves and our field, in order that we remain strong. And so I propose that in order to bypass the "dog" phase of the cycle, it is essential that we re-invent the BHAG so that we create a whole new set of "question marks" and, by doing so, we renew the cycle of luster and re-establish and regain our "star" status.

So what is a BHAG? By now, I'm sure that most of you are familiar with this term. Jim Collins coined this term in his book *Built to Last*, over a decade ago. Parenthetically, most of you probably know Jim Collins better for his sequel to *Built to Last*, the best seller *Good to Great*. BHAG stands for Big Hairy Audacious Goal. And this is what Jim Collins said about BHAGs: "a true BHAG is clear and compelling, serves as a unifying focal point of effort, and acts as a clear catalyst for team spirit. It has a clear finish line, so the organization can know when it has achieved the goal.... People like to shoot for finish lines." And I think that you will agree that for most of us, it was the BHAG that attracted us to transplantation: the idea, the dream, of transplanting organs into patients, and that somehow we would overcome

the technical and immunological barriers that this challenge presented and that someday, within the span of our own careers, we might be able to do this with minimal or even without immunosuppression. Well, we are almost at the finish line. We have almost achieved the BHAG. And so the luster, just like the natural history of any luster, has started to dull. So how do we re-establish the luster back to its highest level, to resplendence?

The answer, in my opinion, is quite simple: we must develop a new Transplant BHAG—one that addresses our current hurdles and challenges, and aims to overcome them. And to be sure, there are plenty of challenges that limit our ability to move the field forward that could benefit from a well-thought-out BHAG. But let me just focus on just a couple. First, I would argue that for the most part, we still approach our patients with the mindset that “one size fits all.” But we know that this is not the case, so it’s time to change that mindset. And several presentations at this meeting demonstrate that current scientific knowledge and technology are sufficient to customize and personalize our approach to our patients. So why not consider a new Transplant BHAG that aims to develop predictive biomarkers that leverage recent advances related to the Human Genome Project and that allows for personalized treatment decisions, coupled with state-of-the-art decision analytics.

And within that construct, why not address a second major challenge, the organ shortage? Let us together define a New Holy Grail of transplantation: “just-in-time” organs that consist of either a biologic or a biologically active degradable scaffold, populated by the recipient’s own cells and customized in a bio-reactor.

And if you have any doubts that these are achievable, then you haven’t been reading your journals and you certainly haven’t been paying attention to many of the presentations made during this meeting, including the one that immediately preceded this very address. So are these goals aspirational? You bet. Are they achievable in our lifetime? Maybe. Are they achievable in our trainees’ lifetime? You bet. So let’s redefine the BHAG, and let us all search for the New Holy Grail. And if anyone questions our sanity, then we know for sure that we are on the right track. And let’s let every surgical resident out there know that the answer to this question is a resounding NO! The luster is definitely there, not because it’s back, but because it was never lost.

As I conclude my term as President of this great organization, I would like to acknowledge a few special people who have helped me become who I am, for good or for bad, and who continue to inspire me every day:

Bernie Langer, who taught me how to operate, particularly on the right upper quadrant.

Rudy Falk, who encouraged me to become a surgeon-scientist, and who taught me that no idea was too big or too crazy.

Gary Levy, who taught me how to think, how to do research, and how to present and publish data, and who taught me that a mentor can also be a great friend.

Robb Corry, who taught me that there was more to transplant than just the liver.

David Steinmuller, who taught me to always question the obvious, and the art of writing a grant proposal.

And Frank Stuart, who taught me how to be a mentor to others.

My parents, Isaac and Liliane, for whom no sacrifice was ever too big and no achievement too small.

My wife, Debbie, who has continued to love me for who I am all these years, and who has allowed me to do what I do without having to worry about everything else.

My kids Josh, Zach, Victor, Max, and Sissa, who complete me. Thank you for interrupting your lives to join me today. And Josh, happy 24th birthday today.

My Northwestern family: what a ride! I am so proud of our program and of everything we have accomplished together.

My ASTS family: thank you for your support and your help in all our achievements this past year.

My AST friends: what a great year! Let's keep the collaborations going.

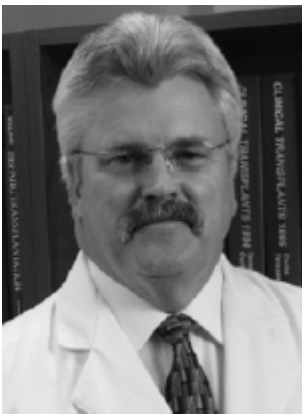
Our patients: who trust us with their lives. They are the reason we're all here today.

Thank you!



2012 Presidential Address

MITCHELL L. HENRY, MD, 2011–2012



We are rarely afforded the opportunity to speak with an open invitation to say what you want. Since I am allowed to choose, I wish to first take the opportunity to say a few thank-yous. I would like to thank Larry Carey for teaching me how to be a surgeon. I would like to thank Ron Ferguson, who taught me how to think like a transplant surgeon and ask the question why. Next, I would like to acknowledge the transplant team at Ohio State and thank them for the hard work they do on a daily basis to make the program go. In particular, I'd like to thank my partners for their commitment, especially this year when I asked for coverage on many occasions: Ron Pelletier, Amer Rajab, Ginny Bumgardner, Elizabeth Davies, Mahdi Elkhmmas, and Ken Andreoni. Special thanks to my family, who for a long, long time have put up with the craziness of transplant surgery: Luke

and Erin, Marge. And to my parents, who I am lucky to have in attendance today: Ruth and Herb Henry.

I wish to provide three examples in my life where keeping score has been particularly important, and the competitive challenge that comes with it. First is the space program, followed by athletics, and lastly transplantation.

I vividly remember climbing out of bed very early in the morning as a young boy, finding a comfortable position in front of the TV, a black and white one at that, and watching Walter Cronkite and his colleagues preparing for the launches of the Mercury spacecraft—always framed by the pre-dawn views of the Redstone and Atlas launch vehicles, with powerful spotlights allowing detailed pictures, and the eerie venting of various gases, all contributing to the mystery of the hour (and in some cases hours and hours). The worst word to come across the screen was HOLD, and the clock at the bottom of the screen showing T minus X and holding. Eventually, the count would resume and finally the words, “We have liftoff.” There was nothing more exhilarating than the thunderous sound, huge gaseous flame, and the rocket pushing skyward with the tiny capsule at the top. This all began as the Russians humiliated the United States with the launch of the first satellite, Sputnik, and soon following in 1961 with their first manned flight. The Americans, having lost the competition to be first, then launched a suborbital flight with Alan Shepherd on May 5, 1961. The race was on! The first U.S. orbital flight was a memorable one with John Glenn (an Ohio boy) in Friendship 7 on February 20, 1962, and after nearly 5 hours of orbiting the earth, parachuted the capsule to a safe landing in the Atlantic. In September 1962, President John F. Kennedy boldly announced that he had set a goal to land on the moon before the end of the decade:

“We choose to go to the moon. We choose to go to the moon in this decade and do the other things, not because they are easy, but because they are hard, because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win....”

The space race culminated in a moon landing on July 20, 1969, and the world watched as Neil Armstrong (another proud Ohioan) climbed down the steps of the lunar lander and spoke those unforgettable words. From Mercury to Gemini to Apollo to the Space Shuttle programs, the competitive U.S. spirit designed, developed, and implemented technologies that, while aimed at space flight, have touched every one of us. So long as we are keeping

score, let me outline a few of the outgrowths of these activities: satellite technologies, including weather satellites, communication satellites, and GPS satellites, are probably at the top of the accomplishments. However, many more come to mind; some are right in our own backyard, including medical imaging, personal computing and handheld electronic devices, robotics and laparoscopic devices, and the artificial heart. Other notables include astronomical discoveries, aircraft safety, cordless tools, space age lubricants and batteries, pressure-relieving mattresses, lightweight super-strength materials, microwave technology, smoke detectors, and on and on. A *USA Today* listing of the Top 25 scientific breakthroughs noted that nine are directly derived from space technology.

As an aside, there is a cute story about an American engineer at an international conference bragging about the invention of the roller ball ink pen so that American astronauts could write in zero gravity. The Russian in the room noted that he was aware of the invention but the Russians had approached it in a different manner—the pencil.

There was an in-depth study that was published about the 2004 economy that demonstrated that \$98 billion of economic activity, \$25 billion in earnings, and 550,000 jobs were generated as a result of commercial space transportation. None of these numbers takes into account the immeasurable national pride that has been engendered by the space program. The competitive spirit that started with the goal to put a man in space has generated so much. Don't be fooled into thinking that no one was keeping score, and I know each one of those individuals wanted to win!

Sports have always been very important to me. I used to spend countless hours throwing a baseball with brothers and cousins, pounding a basketball and taking that last second shot for the mythical win, and talking Nebraska football with anyone who would listen. Nebraska is a small state of about 1.6 million people. On football Saturdays, the Nebraska stadium became the third largest “city” in the state. The competitive spirit of this program was (and is) a great source of pride to its people. The expectations were exceedingly high, and a year with even two or three losses was felt to be a disappointment to many. I guarantee you they were keeping score. I watched Bob Devaney and subsequently Tom Osborne take many unheralded recruits, as well as those walk-ons (not deemed to be scholarship worthy), and mold them into championship teams. These coaches took the talent they had and molded and coached and taught these kids how to get everything out of them

by making a team—the sum was clearly greater than the individual parts. I am absolutely convinced that their leadership coaching and leadership produced remarkable results that others could not have accomplished. The pride and desire for winning in this small community is a great example of how high expectations and desire can lead to positive results.

When I was growing up playing sports, I always tried to play with the older kids. I do believe in the concept that one plays up or down to its competition. I had some talents, but clearly I wasn't the most gifted (and I am sure those who know me will readily agree!). I would go to the gym to be around those who were better than me, and I learned a lot from that. Frequently it meant that a faster one would run past me or a taller one might smack the ball back in my face, but in the long run, this was beneficial. Now that I'm older, and a lot slower, I play games with less contact but try to maintain similar intensity. I hate to lose to these guys that I see each weekend. Ben Hogan said it right—"I play with friends often, but there are never friendly games." Tiger Woods was quoted as saying, "If you come in second, you're just the first loser." As Ricky Bobby said in *Talladega Nights*, "If you're not first, you're last!" Maybe I'm not quite that bad, but I do know these guys keep score every time! I do like what Michael Jordan remembers. He said, "I've missed more than 9,000 shots in my career. I've lost almost 300 games. Twenty-six times I have been trusted to take the game-winning shot and missed. I've failed over and over again in my life, and that is why I succeed."

That brings me to transplantation. My introduction to the world of organized transplantation was the ASTS meeting at the Drake Hotel in Chicago in 1985. This was an intimate setting where the giants of transplantation walked. I will never forget being invited by Ron Ferguson to the gathering of these gods in the evening following the first day of the meeting in the foyer (bar really). Like a good fellow, I had read the papers in the few transplant journals available at the time and had written a couple of papers and chapters with the obligate multitude of appropriate references. It was amazing as the names on those papers came to life in front of me. I hesitate to mention names as I will leave some important people out, but there was Najarian, Salvatierra, MacDonald, Belzer, Starzl, Terasaki, Kahan, Diethelm, Groth, Sollinger, Sutherland, and on and on. Now I know that one might recognize that transplant surgeons have a competitive nature, but this was an entire gaggle of competitors sitting in one room. I guarantee

you that they were keeping score and did want to win. Whether it was center volume, patient or graft survival, incidence of rejection, a new technical innovation, or a unique immunosuppressant or combination, the conviction of data or opinion was quite evident. It instilled in me an envious drive to be like these people. It was indelibly marked in my brain.

I don't wish to depersonalize the outcomes of individual patients, but transplantation was one of a very few specialties that accounted for the outcomes of these specific variables, reported them in the literature, and compared them to other centers' outcomes. This drove each program to improve those outcomes and the outcomes of their patients. That was a long time ago, yet we still strive to perform at expected levels, even though many of the variables have changed. We have gone out of our way to have the collective transplant world in the U.S. collect thousands and thousands of pieces of data to analyze in the name of quality improvement—at least that was the intent originally. Think about it—we keep these scores every day. Not only do we know our own program-specific performance, thanks to mandates from the federal government and our partners at the SRTR and OPTN, we report these results in public vehicles. On top of that, we identify those that perform to the arbitrary expectations of these entities, and even those that don't. If your program has been identified as having anything less than this optimal arbitrary outcome, even by a percentage or two, you are defined as a second-class citizen.

The commercial payers are keeping score too. Some even apply their expectations, based on the imperfect SRTR pronouncements, in order to stay in their “preferred” networks. Our hospital administrators know exactly how long the patients are in the house, what the pharmacy bill is, what the percentage of patients that we readmit postoperatively are, and yes, even what the volume of transplants on a daily basis is compared to their expected budgets.

I don't have to tell you, all of these people are keeping score, and at some level, we need to meet their expectations. My concern is that this may, in fact, affect patient access to transplantation, as older and sicker patients may be left behind in the name of optimal outcomes. As a result of our past successes, our patient population continues to be more complex, and we need to apply all our efforts at continuing the successes in these patients.

We tend to be somewhat of a victim of our past success. I have always been taught that transplantation is all about cutting edge and pushing the

envelope. We do this *not* because we can, but because we know that with transplantation we can prolong their survival and improve their quality of life beyond that provided with alternative therapies, and in many instances with less financial resources. Yet when one must maintain specific arbitrary outcomes it not only can limit patient access to these life-saving procedures, but stifle innovation and clinical research. I think we are being told to be very careful about pushing the envelope or you may put your program towards regulatory scrutiny, or lose patient referral base from commercial payers. Clearly we have to balance the ability to optimize the utilization of the scarce resource without significantly affecting patient access to our life-saving therapies.

This is the challenge. We have to continue to strive for realistic goals, sophisticated risk stratification, and statistical methods to evaluate *both sides* of the transplant equation, donor organ quality and recipient outcomes. We need to be transparent with our processes and outcomes, as we continue to be the leaders in the medical environment in reporting and applying process improvement to optimize outcomes.

Transplant surgeons have been bred to win. At each step along the trail to independent practice, more demands are made of these individuals. As they meet the demands, they proceed to the next level. After four years of medical school, five to eight years of surgery residency, and two years of fellowship, they know what competition and winning is. Because transplant surgeons are used to winning, I would submit to you they hate losing more than they like winning. From the moment the skin incision is made, there is a unique pledge made to that patient. The surgical assault is a powerful commitment on the surgeons' part to make that patient better. In my mind, there is a significant difference between simply treating the natural course of a disease and assaulting the patient with our interventions, transiently making them sicker so they may become better. There is no greater exhilaration than that following a successful procedure, and no lower moment than that following a failed one.

Your Society remains strong. We are pledged to fostering and advancing the practice and science of transplantation for the benefit of patients and society, and representing our members' needs.

I think I've heard every Presidential Address since my first meeting in 1985, and each have talked about the privilege and honor to serve the Society. However, until this past year, it seemed to me that it was something

that I was expected to say. After working through this last year, I can tell you with great humility that I now understand those words, and it truly has been an honor and privilege.



Think Global, Act Local: The Glocalization of the ASTS

KIM M. OLTHOFF, MD, 2012–2013



Colleagues, thank you for the privilege to be up here this morning, and allowing me to share some reflections on the ASTS. Mitch, thank you for that wonderful introduction. It is appropriate that we are in Seattle, the birthplace of Starbucks....

“Think Global, Act Local” is a phrase used to describe a lifestyle of thinking beyond one’s own surroundings and recognizing the impact of the little things one does on the world. It is a movement that urges people to carefully consider what happens in their own communities, how it affects the planet as a whole, and what they can do as individuals or groups to enact change. It began as a grassroots effort, but now has grown to involve governments, corporations, and international organizations.

In my neighborhood and city, it seems to me that everyone is getting into the act. I see it all around and it touches my life in numerous ways—Farm to Table restaurants are a big thing using only locally sourced ingredients, and they are some of my favorite Philly restaurants; Starbucks highlights their community and international initiatives, claiming their efforts are “bigger than coffee” and making me feel that every \$4.00 cup of latte I buy is truly helping the global effort; and Community Supported Agriculture—networks of individuals that pledge (and pay) to support local farmers, growers, sharing the risk and benefit of food production, and every week the participants share in the bounty of what the local farm produced.

My family has certainly embraced the idea. We removed much of our lawn to create an organic garden. My younger son, Jacob, enrolled us in a local CSA when he was considering the life of a chef and cooked for us every night with locally sourced ingredients. While he no longer has a culinary career as a goal, he continues to exercise his epicurean skills using our garden’s bountiful harvest. My older son, Lucas, is the student director at the Roberts Environmental Center, an institution focused on benchmarking the corporate sustainability reports of the world’s largest companies. Lucas’ job is focusing on the developmental steps to get to that report—collaborating with local organizations on creating their first reports and consulting with others that could use assistance refining their reporting process and end product. And our course we recycle, we use re-useable grocery bags, we compost, we shop at Whole Foods....

It seems more and more people are trying to see things from a different, more global perspective with regard to the planet’s well-being. This morning, I would like for you to reflect on the concept of “Think Global, Act Local” from a slightly *different* perspective, the transplant perspective. Transplantation has always been more global than other surgical specialties. It has an eclectic and international flair to it, part of what attracted me to it in the first place. Transplant has people from varied backgrounds and viewpoints, willing to think outside the box, beyond the status quo, not afraid to try to go where others would not or could not.

There are many “firsts” in transplantation from around the globe, and one seminal event can have huge international impact. In London, Peter Medawar introduced transplant immunology as we know it today, initiating the long-term relationship between scientists, transplant physicians, and transplant

surgeons, resulting in the first successful human kidney transplant at the Brigham in Boston by Dr. Murray.

Two surgeons, one in the U.K. and one in the U.S., both dreamed of doing liver transplants. Dubbed a modern Damian and Cosmas, Thomas Starzl and Roy Calne both saw this daunting procedure as a reality. The first liver transplant by Starzl, performed 50 years ago this past March in Denver, was not successful, but Starzl and Calne both worked to address problems in surgical technique and immunosuppression, and the first successful one was performed by Starzl in 1967, soon followed by Calne. They both have been rewarded by recently receiving the coveted Lasker Award.

Christiaan Barnard, a South African, and Norman Shumway, an American, worked together at the University of Minnesota and were fierce competitors. Both were intent upon becoming the first to do a human heart transplant. Christiaan Barnard won that race, performing the first heart transplant in Cape Town, South Africa, gaining notoriety and touring the world as somewhat of a celebrity. Shumway followed soon after with the first in the U.S.

The first living donor liver transplant from parent to child was performed by Raia in Brazil, followed by other successful cases in Australia, and then in the U.S. by Christoph Broelsch, from Germany, at the University of Chicago, my alma mater. The first adult to adult living donor liver transplants were performed in Japan and the first in the United States in Denver, by Igal Kam, an Israeli. And the first combined liver-intestine transplant was performed by David Grant in Toronto, Canada. More recently, but just as groundbreaking, the first hand transplant was performed in Louisville, Kentucky, in a New Zealander and the first face transplant performed in France in 2005.

So I hope you see how these illustrate the international innovation of transplantation. Surgeons from around the world were excited and fired up by these successes, traveled globally to learn from these innovators, and brought the experience and energy back locally to their home towns and native countries in order to establish programs of their own. And while these “firsts” make headlines and were broadcast around the world, it is often the subsequent progress at the local level that can make the most impact. Just like the progressive environmental “Think Global, Act Local” movement.

The original concept of “think global, act local,” however, was not so modern, and had little to do with the environmental health of the planet. It has

been attributed to Patrick Geddes, a Scottish biologist, geographer, philanthropist, pioneering town planner, and social activist who wrote a book in 1915 called *Cities in Evolution*. He introduced the concept of “region” to architecture and planning. The character of the city had to fit into the essence of the region around it, and in his book the early idea of global thinking and local action was clearly evident: You can’t have local character without seeing it in the context of the bigger world.

Geddes was an advocate of the civic survey, which included, at a minimum, the geology, the geography, the climate, the economic life, and the social institutions of the city and region, and their inter-relationships. He did a great deal of work in India and the Middle East, and wrote a series of exhaustive town planning reports on 18 different Indian cities, making interventions considerate of local context and tradition. In 1925 he submitted a master plan for developing Tel Aviv, adopted by the city council, and the Tel Aviv city core is actually built around “The Geddes Plan.” Geddes had a strong interest in Eastern philosophy, which he believed looked more readily at “life as a whole.” He criticized the tendency of modern scientific thinking to specialization and instead saw cities as common interlocking patterns like the petals of a flower. If one gets too focused on one’s own specialty, it is like tearing off the petals of a flower, and the beauty of the flower is lost.

So what does Patrick Geddes and his philosophy of “think global, act local” have to do with an ASTS Presidential Address? I think the community of transplantation has an outlook similar to Geddes; at least it should. While we are appropriately focused on our own patients and our centers, we recognize that each part of transplantation is interconnected. Placing one organ into a recipient affects another on the waitlist; efforts to increase organ donation in one region of the country or area of the world can impact another; advances by one surgeon can teach many; a scientific discovery can change global practice. The ripple effect.

The world is rapidly shrinking due to the explosive expansion of information technology, the vast reach of the internet and social media, and the ease of international travel. Over 500 years since Columbus reported the world was round, the *New York Times* journalist, Thomas Friedman, discusses in his book, *The World is Flat*, how individuals, companies, and countries have to shift their perception of the world in order to remain competitive in a global market where historical and geographical divisions are becoming increasingly irrelevant. He talks about how he observed that

we have “leveled the playing field.” Technology has made it possible for more people from all corners of the world to collaborate and work in real time, compete on equal footing, more than ever before. This is important in the world of transplantation as well, and perhaps more so. Contributions from transplant surgeons and physicians of all nationalities, ethnicity, colors, race, origin, and gender have leveled our playing field, so all can compete.

There is a term that is a play on “think global, act local” and I think describes transplantation today. “*Glocalization*.” This term first appeared in the late 1980s from Japanese economists in the *Harvard Business Review*. According to the sociologist Roland Robertson, who is credited with popularizing the term, “glocalization” describes a new outcome of local conditions toward global pressures—“the simultaneity—the co-presence—of both universalizing and particularizing tendencies.” The big picture as well as the little details.

For example, the presence of McDonalds or Starbucks worldwide is “globalization,” but the attempts to appeal to local palates are an example of “glocalization.” A global product is transformed in shape (or taste) in order to meet the needs of local consumers. Transplantation is like this—it is a universal and global product—but it continues to transform and mold to fit the needs of the local environment. One example is organ donation. Most transplant activity still occurs in North America and Europe, at least when counted by per capita, and the highest rates of deceased donation occur in those areas too. But there are many major transplant centers that are no longer just Euro- or U.S.-centric, and some of these areas do living donors at a much higher rate than we do, and are starting to initiate deceased donor programs as well.

Similar to corporations, we too need to shift our perception of the world, as Thomas Friedman suggests, and as this map depiction of the world based upon population shows. Geographic boundaries are becoming less distinct. And perhaps that is where the greatest need is as well. In fact, while the numbers of transplants in the U.S. and Europe are quite stagnant, the greatest growth in the last 10 years has been in Asia, India, and South America. I have had the privilege to be able to travel in many areas of the world over the past few years and witness first hand “glocalization” as I search for my morning coffee and see a Starbucks, but much more relevant is seeing the growth of transplant programs in South Korea, India, Hong Kong, and Japan. In 2012, I visited India and South Korea and witnessed how they now do

many more LDLTs than the U.S. or Europe, and are beginning to develop the basis for deceased donation as well. And just a month ago I visited the director of the transplant program at the Portuguese Hospital in Sao Paulo, Brazil. South America, particularly Brazil, has developed a strong infrastructure for deceased donation, with huge increases in transplantation. We must be aware of the growth in these parts of the world and open to new opportunities.

Sometimes, the action of a national government, a world leader, corporations, or international celebrity can make global change happen on a grassroots level. In Spain, the government put into place the “opt-out” system of consent for donation and a training system for transplant coordinators—they have been the world leader in deceased organ donation for over 20 years, with many countries trying to emulate the “Spanish model.” In 2010 they drafted the European organ donation directive, which transfers the Spanish model to the rest of the European Union, creating a network of coordinators across Europe who can then instruct coordinators in their own countries. To combat declining donation consent rates in Israel, The Knesset passed a new law in 2011 giving priority on the waitlist to people signing donor cards by April 1, 2012. A total of over 72,000 people signed a donor card in 2012! On a special drive that coincided with election day, 32,000 more people signed a card. By the end of 2012, a total of 718,000 had signed organ donor cards, an increase of 13 percent over the previous year. In May of 2012, social media made the foray into organ donation when Facebook Founder Mark Zuckerberg announced that you could share your organ donor status on your Facebook page. As I heard it, this came about after Sheryl Sandberg, the COO of Facebook, read an article written for a Harvard class reunion booklet by one of our ASTS members, Andy Cameron. Today, you can register to be an organ donor in 19 countries from a link on Facebook, and over a half million people worldwide have used the Facebook organ donation option. A major event can also make a difference. There is published research that there is an increase in donation rates and an increase in transplant rates in countries that host the World Transplant Games.

We all know celebrities can have a global impact, but don’t forget the local impact too. In 1996, the Coalition on Donation, chaired by Howard Nathan, recruited Michael Jordan to do a Donate Life campaign with the help of the Chicago OPO, Gift of Hope. Michael Jordan was everywhere—posters in hospitals, life size cut-outs in DMVs, and live on TV. I recently

met Cynthia London, who spoke at Penn during our Kick-off for Donor Awareness Month. She went to renew her driver's license in 1997 and saw the life size cut out of Michael Jordan as she walked into the DMV. When asked about organ donation for her license, she thought, "If organ donation is good enough for Michael Jordan, it is good enough for me," and she proceeded to put it on her license. Later that year, she had to make that tough decision for her son Sipho to become an organ donor and she remembered that moment at the DMV and said yes. Since then she has been an avid speaker and volunteer for donation. When she shared her story with me, the message that Cynthia wanted me to share with all of you is this: Organ donation works for both the recipient and their family, but also for the donor family—as it gives them a legacy—a legacy of hope." There are now over 100 million people registered in the U.S. due to campaigns such as the Michael Jordan campaign.

While the efforts of famous people or organizations can reach many people, often the efforts of a few can lead great changes at home. "Thinking Global and Acting Local" might actually mean bringing global expertise home. This is familiar territory for many transplant surgeons and programs, and a very common event, causing the greatest ripple effect.

Let me give you a small recent personal example that really impacted me. Through the relationship we developed with some surgeons when we visited Delhi in 2011, a surgeon, Arun Kumar, from Kerala, India, spent three months with us this past year. He was part of an initiative of their center to build efforts of deceased donor transplantation in India. While he was with us, he went on over 40 procurements with our fellows and team. About six months later, we had the opportunity to visit southern India for a conference and saw Arun there. Just that week, they had gotten a DD offer at Trivandrum. He went on the donor procurement and was able to obtain kidneys that were successfully transplanted, and the recipients discharged soon after, with normal Cr! This is the patient with the local team and with his family. Arun now tells me that they have had six more in the last six months in Trivandrum City. In a country with few DD, this is a big accomplishment.

Many men and women have traveled long distances to follow a dream, and to learn from other people who had different culture, different language, different way of doing things. And each applied these experiences to their personal efforts at home. They were "thinking globally, acting locally."

At home in Philly, I also see the global influence in the history of our transplant program at Penn and CHOP every day. Our surgical and medical faculty have come from all over the world—Israel, Iran, Lebanon, India, Egypt, South Africa, Turkey, even Texas (which many think is a different country as well...). Two of my closest colleagues represent the epitome of thinking globally—both educated in other countries and both now working hard to help train those outside the U.S. Among many other global initiatives, Raj Reddy does teleconferences late into the evening in his office reviewing patients with trainees across the globe, and Avi Shaked is working with the Myanmar government to improve medical education and clinical care. And, similar to many U.S. transplant training programs, we have trained clinical and research fellows from all over the world: Columbia, India, Mexico, Israel, Australia, Greece, Spain, Argentina, Turkey, the Netherlands. These interactions have made our clinical and research programs all the more rich and productive, providing us with unique collaborative opportunities and prospects. I think most, if not all, ASTS training programs have many experiences like this. If you had an opportunity to meet the graduating class of ASTS fellows this year, like I did at the Fellows Symposium, you would see that this past year we have trainees from 18 different countries that have trained at many of our 60 plus different North American programs. We also follow our fellows after they “graduate,” and we know that nearly 20 percent leave the U.S. for a transplant job in another country. I personally cannot wait to see what future changes they will make in the world of transplantation all over the globe.

So my message to you is this: We need to increase the “glocalization” of the ASTS and the transplant community in general. We do not know who the next person we help train or touch in some unique way will be the next surgeon or physician to make a difference on the other side of the world or the opposite side of the equator. And we may not always know how they will alter their practice based upon local custom and values, just like Starbucks. We also don’t know how a visit to a new and growing country or program will affect our own practice here at home. The diverse backgrounds and cultures involved in our field can provide unique insights and fresh interpretations of the huge moral and ethical questions that transplantation faces. We must be open to not just hear them, but to listen.

This is where I would like to see the future direction of the ASTS go. Yes, it is the *American Society of Transplant Surgeons*, but I believe we need to

go beyond that title. We are focusing on doing what is right at home, but also broadening our vision and evolving to learn and share more with our global partners, changing our perceptions—we *are* “glocalizing.” The ASTS has already started down this path.

This past fall we had a strategic planning meeting for our ASTS fellowship programs and developed a five-year strategic plan to improve our transplant training here at home in the U.S.—raise the bar for programs, improve educational content, and ensure high quality consistency between programs. We will assess milestones for fellows, empower program directors, and create benchmarks. We are working on implementing programs to get medical students and residents interested in a career in transplant surgery early on, and continue to build and enhance the ASTS Academic Universe. I am excited by this plan, as I believe the training of the next generation of transplant surgeons, no matter where they are from or where they end up, is one of the most important things that we do.

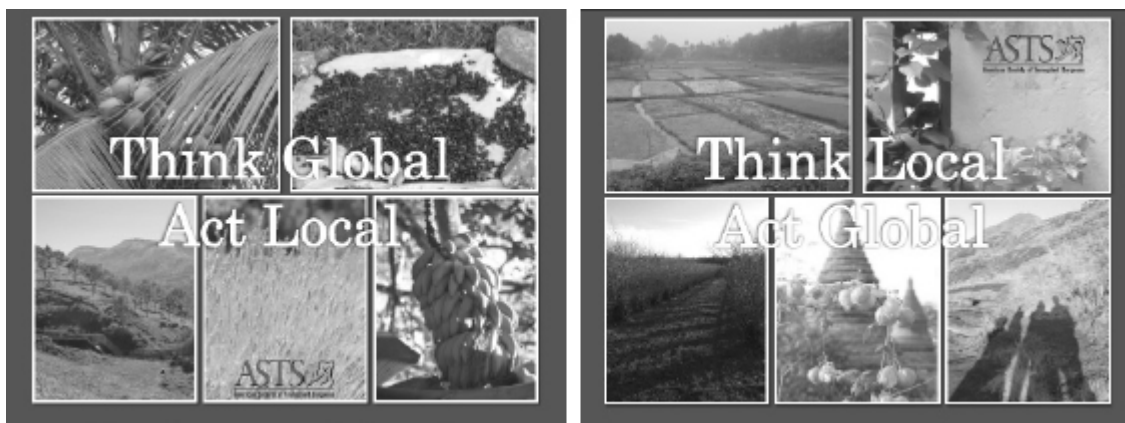
We were recently on the Hill lobbying for local efforts, in senators’ and congressmen’s offices, as have our AST colleagues. I was just in Brazil, where national health care providers recognize that they should provide life-long immunosuppression—and after years of fighting for it, we still don’t have that guarantee in the U.S. And in collaboration with the AST and the Transplant Roundtable, we are continuing to fight for increased funding for the DoT and transplant initiatives.

We have also learned from the efforts of surgeons like Elmi Mueller in South Africa that it is possible to increase the donor pool using HIV+ organs in HIV+ recipients, and via efforts spearheaded by ASTS members such as Dorry Segev and collaboration with our AST partners, there is now the HOPE Act sponsored by Barbara Boxer that hopefully will pass.

And we have started working on a Global Partnership initiative to increase our international collaborations. The ASTS wants to share our vision of surgical training of transplant fellows. We wish to expand our global reach, not just by increasing international members, but also with a new Global Training Partners Pilot Program—we hope to identify international programs with fellowships that meet the high ASTS standards of training and wish to partner with a North American program. These programs may have teleconferences, share research initiatives, participate in ASTS events, and facilitate clinical exchange programs to enhance experience in certain areas. Not just to learn surgical techniques, but to also

experience how things may be done differently—anywhere from organ donation initiatives, transplant center infrastructure, business practices, and how to do more with less. We should and must go beyond our comfort zone to continue to make advances in transplantation.

I certainly have been forced to go beyond mine this past year as President, but it has made me a better physician and surgeon, and opened my eyes to so many more opportunities and possibilities. My discomfort has been lessened by the partnership and friendship of the AST President, Roz Mannon—either together or in parallel, we’ve written letters to and visited the FDA, the CDC, HRSA, CMS, ACOT, congressmen and senators, pharmas and insurance companies, and even hung out on South Beach. Thank you, Roz, for a great year and keeping me laughing.



And my work has been significantly eased and organized by the guidance of the ASTS Executive Director, Kim Gifford, and her stalwart staff, as well as the amazing Council and committee chairs. Thank you for making the ASTS what it is. I am so grateful for the support of my friends and colleagues at Penn and CHOP—who truly supported and encouraged me, never saw me, and always managed to cover our busy transplant service. And I am of course deeply grateful for the encouragement and support of my family (who never saw me as well).

As Mitch passed the gavel to me last year, I didn’t know what was coming. Now, I know. As I pass the baton to Alan today, I will also pass on to him the over 2,000 ASTS members from all areas of transplant who are involved in our amazing global and local transplant experience. Some of these members will “Think Global, Act Local,” staying close to home, and will have the opportunity to touch the lives of those who live far away and wish to bring

transplantation to their community, and others will “Think Local, Act Global,” traveling beyond these borders to share the knowledge learned at home, and bringing new and fresh ideas from distant programs back to our own communities.

The ASTS will be 40 years old next year, and there is much to celebrate and much to look forward to. As the world of transplant changes, the ASTS will be challenged to evolve with it, but challenge is good—it makes you be at your best. Happy Birthday a little early ASTS; your best years are yet to come.

I am grateful for this incredible year. Thank you for the honor of serving as your President.



Color Photographs



Jonathan Bromberg, Avi Shaked, Clyde Barker, Mary Tilney, Nicholas Tilney, and Kim Olthoff circa 1999.



Amy Friedman, Tim Pruett, Tom Peters, Marge Henry, and Katrina Crist at the 2007 President's Dinner in San Francisco.



Jonathan Fryer, John Magee, Maggie Kebler, Ken Chavin, Kim Gifford, and Doug Farmer at the 2012 President's Dinner in Boston.



Ruby and Tom Peters with Randy and Monique Bollinger at the 2006 World Transplant Congress in Boston.



Alp Sener, Lew Teperman, Matt Levine, and Jason Wellen at the 2008 Fellows Symposium in Kiawah Island, South Carolina.



David Reich, Mark Ghobrial, and Dixon Kaufman at the 2010 Winter Symposium in Ft. Lauderdale.



Mary and Marwan Abouljoud at the 2007 Winter Symposium in Marco Island, Florida.



Frank Stuart and Bob Merion at the 2010 Winter Symposium in Ft. Lauderdale.



Bob Higgins, Peter Stock, Andrew Klein, and Jean Emond at the 2010 Winter Symposium in Ft. Lauderdale.



David Axelrod, Randall Sung, John Magee, Liz Pomfret, and Jim Pomposelli at the 2010 winter Council dinner in Ft. Lauderdale.



Joshua Miller, Clyde Barker, and Ron Busuttil at the President's Dinner in Seattle, May 2013.



Lloyd Ratner and Mel Williams after the third Hume Lecture in January 2012 in Miami Beach.



Markus Boehnert, Paul Greig, and Markus Selzner at the 2012 Winter Symposium in Miami Beach.



Hans Sollinger, Norman Shumway, Nancy Ascher, and Oscar Salvatierra circa 2000.



Will Chapman, David Mulligan, and Alan Reed at the Advanced Leadership Development Program in 2013.



Nancy Ascher, Peter Stock, Ryo Hirose, and Ginny Bumgardner at the 2007 Fellows Symposium in Maui.



Clockwise from bottom left, Marge Henry, Sandy Feng, Doug Hanto, Tim Pruett, Linda Cendales, Wendy Grant, and Ruby Peters at the 2013 Winter Symposium in Miami Beach.



Standing, Avi Shaked, Mike Abecassis, and Alan Langnas; seated, Goran Klintmalm, Kim Olthoff, Peter Stock, and Mitch Henry at the President's Reception in Seattle, May 2013.



Joyce Williams and Shelli Adams circa 2001.



Kim Olthoff, Nancy Ascher, Tiffany Anthony, Wendy Grant, Diane Alonso, Daniela Ladner, Ginny Bumgardner, Jordana Gaumond, and Liz Pomfret at the 2007 Fellows Symposium in Maui.



Rich Freeman, John Roberts, and Arthur Matas at the 2009 Winter Symposium in Marco Island, Florida.



Ken Brayman and Richard Thistlethwaite at the 2007 President's Dinner in San Francisco.



Chuck Shield and John Welch circa 2000.



Arthur Matas giving his Presidential Address in 2007 in San Francisco.



David Reich, David Axelrod, Christopher Sonnenday, Will Chapman, Ben Samstein, and John Magee at the 2013 Leadership Development Program.



Mike Abecassis and Phil Halloran at the 2007 President's Dinner in San Francisco.



From left, Peter Stock, Dick Howard, Richard Thistlethwaite, Mitch Henry, and Charlotte Berlin at the 2007 President's Dinner in San Francisco.



Mike Englesbe, Parsia Vagefi, Brian Boyarsky, and Mitch Henry at the Fun Run during the 2012 Winter Symposium in Miami Beach.



ASTS Council and Committee Chairs 2007: Back from left, Katrina Crist, Andrew Klein, Richard Freeman, Tim Pruett, Jim Markmann, Ken Brayman, Stuart Flechner, John Roberts, Charlie Miller, James Eason, Dick Thistlethwaite, Ginny Bumgardner, Liz Pomfret, and Sandy Feng. Front from left, Scott Gruber, Dick Howard, Robert Kormos, Mike Abecassis, Bob Merion, Goran Klintmalm, Arthur Matas, Mitch Henry, Kim Olthoff, Peter Stock, and David Mulligan.



Mike Ishitani, Charlie Miller, and Goran Klintmalm at the 2014 Winter Symposium in Miami Beach.



Senator Hillary Clinton at the 2006 World Transplant Congress in Boston.



Akinlolu Ojo, Dorry Segev, and Sommer Gentry at the 2007 Winter Symposium in Marco Island, Florida.



Hans Sollinger and Vanesa and David Sutherland, circa 2005.



Allan Kirk speaking at the 2007 Fellows Symposium in Maui.



Frank Delmonico, John Roberts, Marc Lorber, Dick Howard, Avi Shaked, Jim Schulak, Ben Cosimi, Mark Barr, Bob Merion, and Goran Klintmalm circa 2002.



The Chimera Chronicles honorees in January 2011 in Hollywood, Florida: back row from left, John Sadler, Eduardo Santiago-Delpin, Ron Ferguson, Hans Sollinger, Nick Tilney, and Gene Pierce. Front row from left, Bob Mendez, Barry Kahan, Ben Cosimi, and Bob Higgins.



Katrina Crist (in background), Mark Hardy, Marylou Monaco, and Jerry Turcotte circa 1998.



Milestones and Accomplishments

MITCHELL L. HENRY, MD,
DIANE L. MOSSHOLDER, MA

During the past 20 years, ASTS has celebrated numerous milestones and accomplishments. This chapter is an attempt to identify a number of these, along with some historical insights. The highlights include the establishment of the American Transplant Congress (ATC), the ASTS State of the Art Winter Symposium, the birth of the *American Journal of Transplantation* (AJT), the awarding of over \$9 million in grants to study our world of transplantation, the Leadership Development Program, and the establishment of the Academic Universe and CME MOC programs. While fellowship training was established early in the ASTS timeline, the last 20 years have seen significant refinements in its structure. New committees have been established to add new opportunities for members, including: the Vanguard Committee, composed of junior members, which allows them to share their thoughts with the Council; the Business Practice Services Committee, which has established the premier executive management course designed exclusively for the field of transplantation, the Leadership Development Program; and the Advanced Transplant Providers Committee, which provides resources, including a mentoring program, for ASTS associate members. In addition, the *Chimera* and Chimera Chronicles

continue communicating current activities and sharing memories with members.

Committee Evolution

Kimberly A. Gifford, MBA

As ASTS continued to grow, committees evolved, new ones were created, and others were dissolved.

In 1995, ASTS established the Standards on Organ Procurement Committee and appointed Mitch Henry the first chair. Subsequent chairs included Mike Abecassis, Charlie Miller, and Jean Emond. In 2003, the committee was renamed Standards on Organ Transplantation and Rich Freeman became the chair. Since then, David Mulligan, David Reich, Ryo Hirose, and Stuart Greenstein have chaired this important committee. The committee is currently working with the American College of Surgeons to create a National Surgical Quality Improvement Program (NSQIP) specific to transplantation. The proposed TransQIP program would help transplant surgeons fulfill Maintenance of Certification (MOC), Part 4, Evaluation of Performance in Practice, requirements.

The Education Committee was established in 1995, and Dixon Kaufman served as the inaugural chair. He laid the groundwork for the pillars that continue to guide fellowship training to this day. His work was carried on by Hugh Auchincloss, Dick Howard, Charlie Miller, and Mitch Henry. In 2006, the committee was renamed the Fellowship Training Committee and has since been chaired by Peter Stock, John Magee, Doug Farmer, and Wendy Grant. In 2012, ASTS developed a five-year strategic plan designed to ensure high quality and uniform standards across programs and provide mechanisms to evaluate the progress and competency of fellows.

In 2003, ASTS established the Informatics and Data Committee with Mark Adams as the first chair. The committee undertook a project to develop and launch a new website complete with online portals for membership application, research grants, and fellowship training. The new website was launched under the leadership of Sandy Feng in July 2006 just before the first World Transplant Congress. This was the culmination of work for the Informatics and Data Management Committee, which was subsequently merged with the Newsletter Committee in 2007 to form the Communications Committee. The newly formed committee assumed responsibility for both the website and members' magazine, the *Chimera*. Jim Whiting, Ken Chavin, and

Sandy Florman have continued the work of these two committees, including the launch of an even more sophisticated website in 2013.

In 2005 the Program, Publications, and Postgraduate Course Committee was redefined as the Continuing Medical Education (CME) Committee and its scope was expanded. With the growing demands from regulatory bodies, CME continues to play a significant role in ASTS activities. Most recently the committee, under the leadership of Mike Ishitani, created a transplant-specific maintenance of certification activity called Trans-SAP that helps ASTS members satisfy requirements for accreditation and licensing.

Finally, the Membership Committee was renamed in 2012 as the Membership and Workforce Committee. Beyond the review of new member applications, the committee plans to take on a greater role in evaluating workforce issues and informing the Council of trends in the field.

Continued growth, combined with changes in the field, created opportunities for new committees to address pressing issues. Many new committees started on an ad hoc basis before being formally codified in the bylaws. These new committees provided greater opportunities for member involvement and engagement; currently 9 percent of the membership serves on a committee.

1997: The Awards Committee was established under the leadership of Tom Peters. (See the ASTS Research Grants section for more information.)

2000: The Vanguard Committee was established by Ron Busuttill with Ken Drazan as the first chair. (See the section on the Vanguard Committee.)

2002: The Cellular Transplantation Committee (formerly the Cell Transplant Committee) was established to tackle issues in the emerging field of cellular therapies. Camillo Ricordi, Jim Markmann, Steve Paraskevas, and Andy Posselt have served as chairs and spearheaded many important initiatives related to islet cell transplantation and more. The Living Donation Committee was also established in 2002 to explore issues related to the growth in living organ donation. Francis Delmonico and Andy Klein served as early chairs. More recently, Chris Freise has chaired the committee and worked closely with OPTN as it developed new requirements for living donors.

2003: The Professional Reimbursement Committee was established and chaired by Mike Abecassis. In 2012 the committee's name and scope were expanded to include regulatory compliance. Mike continues to represent ASTS before the Relative Value Scale Update Committee (RUC) and works

closely with the current chair, Jim Pomposelli, to survey and defend the valuation of transplant CPT codes.

2004: The Legislative Committee was established with John Roberts as the inaugural chair. Since then, Rich Freeman, Amy Friedman, and David Reich have chaired the committee and continued its important work of advocating on Capitol Hill for issues that impact ASTS members and the patients they serve.

2006: The Curriculum Committee was formed to create an online learning system for fellows. The initial ad hoc committee consisted of members of the CME, Fellowship Training, and Vanguard committees. Liz Pomfret was the first chair, and her tireless efforts, combined with the contributions of many ASTS members, led to the launch of the ASTS Academic Universe in 2008.

2007: During Goran Klintmalm's presidency, he established the Business Practice Services Committee to assist members in understanding the business aspects of transplantation. Marwan Abouljoud, David Axelrod, and Will Chapman have served as chairs of this important committee and developed resources such as the Transplant Surgeon Compensation Survey, Leadership Development Program (LDP), Mock Medicare Surveys, and the Transplant Center Policy Library, as well as topic-driven seminars in conjunction with the annual ASTS State of the Art Winter Symposium.

2009: In 2005, David Mulligan, Chair of the Membership Committee, proposed a new category of membership for advanced transplant providers (ATPs) such as nurse practitioners and physician assistants directly involved in the surgical care of transplant patients. Given their growing role in transplant centers, ASTS thought it was important to create membership and educational opportunities for these important team members. In 2009, an ad hoc committee was established to address issues important to advanced transplant providers. In 2011, a standing committee was established with Ms. Deborah Hoch as the first chair. Today the committee is chaired by Mr. Mark Burns. The committee oversees the Advanced Transplant Provider Award (one of the ASTS Recognition Awards), has its own ATP Newsletter distributed via email, and runs a mentorship program for ATPs.

Additionally, in 2009 the Vascularized Composite Allograft (VCA) Ad Hoc Committee was formed to promote scientifically sound investigations and career development in VCA as well as foster a place for professionals interested in VCA. The committee, elevated to a standing committee in 2012, has been chaired by Linda Cendales since its inception and was recently able

to provide valuable information to the newly established OPTN/UNOS VCA Committee as it began the task of establishing national policies for VCA.

2011: In 2011 Mike Abecassis created the ad hoc Minority Affairs Committee to address disparities in transplantation, including access to transplantation and outcomes among under-represented and underserved minorities. Chaired by Juan Carlos Caicedo, it was made a standing committee called the Diversity Issues Committee in 2012 and continues its work to ensure balanced representation among under-represented and underserved minorities specific to organ donation and transplantation.

Over the last 20 years there were several committees whose work was completed and/or absorbed by other activities. In response, the bylaws were amended to dissolve the Advisory Committee on Issues, Local Arrangements Committee, Medical Data Review Committee, and Philanthropy Committee.

ASTS and Fellowship Training

Sandy Feng, MD, PhD

Without a doubt, fellowship training has represented a central pillar of the education agenda for the American Society of Transplant Surgeons. A founding charge of the six-member Education Committee, as articulated in 1980 by James Cerilli, sixth President of ASTS, was to develop criteria to approve quality training programs in transplant surgery. Under the leadership of John Najarian, the Education Committee elucidated guiding principles for fellowship training that have endured to this day. Focused at that time on renal transplantation, the concepts include a requirement for a rich educational environment that would instruct trainees in “basic sciences as they relate to the diagnosis and treatment of end stage renal disease” and provide trainees with “an adequate volume of operative experience in renal transplantation” and an adequate volume of new transplant patients. The training must take place over a minimum of 12 months but should be extended to 24 months, scaled by the center’s clinical volume. Training programs initiated the approval process by submitting an application. Final approval by the Education Committee followed by the Society would require a site visit paid for by the program.

Over the subsequent decades, the Education Committee operated within this general framework to assess and approve Fellowship Training Programs. There was, of course, evolution over time, exemplified by the development of criteria for liver and pancreas transplant training programs

and a gradual shift in focus from ensuring overall institutional volume to ensuring sufficient volume for individual trainees. With the codification of practices, it was decided that a certificate could be granted to each fellow who completed an approved fellowship program for purposes of recognition.

The next seminal development for fellowship training was initially presented at an ASTS Strategic Planning Retreat in September 2003. The Education and the Vanguard committees jointly proposed participation in the National Resident Matching Program (NRMP) for the Abdominal Transplant Surgery Fellowship. The stated goals were to “standardize the process by which fellow candidates select a program and fill fellowship positions; standardize the time frame of selection by both candidates and programs and thereby decrease the frequency of mid-course cancellations made by candidates because of changes in career choices; and finally to standardize communication between candidates and programs which will clarify expectations.” A survey of Program Directors indicated overwhelming support to institute a match: 39 in favor, 5 opposed, and 4 indifferent. At the Council Meeting in January 2004, the match was approved with a starting date of June 2006 for matriculation in July 2007. Formalizing fellowship application and acceptance processes through the establishment of a match has motivated increased engagement between the ASTS Fellowship Training Committee and Program Directors.

Parallel to the establishment of the NRMP Match for abdominal transplant fellowship training was a clear transition from paper to electronic processes. In conjunction with a complete redesign of the ASTS website, an internet-based fellowship log was designed and implemented to capture uniform information related to operative experience. Program accreditation applications and evaluations would be conducted electronically, with the exception of site visits as required.

The movement toward a solid electronic platform with new functionalities also set the stage for the next major development in fellowship training, the delineation of a body of knowledge that would become the ASTS National Transplant Surgery Curriculum (see the ASTS Academic Universe section). The emergence of a formal curriculum clearly signaled the recognition that training in transplantation cannot be solely embodied in the operative experience. Rather, there were key areas of knowledge—some general to transplantation, others specific to an organ—that should be mastered as part of a comprehensive and rigorous training program. The newly formed ASTS

Curriculum Committee defined 11 key topic areas called “units” spanning basic, clinical, and surgical sciences and articulated both unit and learner objectives. Each unit, in turn, was composed of multiple modules that presented the major concepts and content for the topic. Completion of the appropriate modules has recently become a prerequisite to qualify for an ASTS fellowship certificate of completion.

Although the past decade has certainly witnessed fundamental changes in fellowship training, it is clear that the evolution will not only continue but perhaps accelerate in the upcoming decade. The recent ASTS leadership has deliberately focused renewed attention on the process of educating young surgeons in our specialty. The vision now encompasses ensuring the quality and uniformity of training across all programs as well as the competency and professionalism of fellowship graduates.

Training program classifications have been redesigned such that each program will be identified according to whether it provides basic training in kidney, liver, or kidney-liver, with or without specialty training in pancreas, intestine, hepatobiliary, or hepato-pancreato-biliary surgery. Programs will be required to meet specific obligations for regular trainee assessment to document progress and competency. Moreover, trainees will be objectively assessed by both in-service and certifying examinations to safeguard minimum standards of clinical competency. Finally, concern for fellow quality of life is being addressed by the development of guidelines regarding work-hours and a strategy for monitoring.

The comprehensive reconsideration to standardize the structure, process, and content of fellowship training strongly expresses the ASTS commitment to ensure the quality and competency of future generations of transplant surgeons.

ASTS Academic Universe

Diane L. Mossholder, MA

In 2006, ASTS perceived the need for a resource that outlined the knowledge transplant surgeons needed to be successful in practice. The goal of creating an online learning system was formed, and an ad hoc committee was formed with members of the CME, Fellowship Training, and Vanguard committees. Elizabeth Pomfret, the committee chair, was a driving force behind the creation of the Academic Universe, winning Council approval to spend

\$250,000 for the construction of the new online system and managing the initial module creation phase.

In November 2006, the ad hoc committee and staff met with Deb DeRosa, PhD, a respected educator at Northwestern University. The committee's first steps were to determine the purposes of the curriculum, compare the proposed curriculum with other disciplines, and determine the format for the end product.

In March 2007, a needs assessment survey was launched, and in February 2008 the formal objective document was completed. The committee segmented the curriculum's objectives into subjects for the online modules. Authors for each module were recruited; Mark Stegall was the very first person to complete and submit his module. The curriculum went live in May 2008.

The National Transplant Surgery Fellowship Curriculum, housed within the Academic Universe, now provides approximately 170 modules covering general transplantation topics like basic pharmacology and organ procurement, as well as organ-specific topics including immunosuppressive strategies, rejection, outcomes, and long-term follow-up. Each module provides a narrated slide presentation, written summary with suggested additional readings, recommended references, and self-assessment questions to gauge learning.

In addition to the curriculum, the Academic Universe hosts surgical logs for ASTS fellows. In response to a debate about general surgery rotations, modules of specific interest to residents were segmented into a separate portal for them to login and view. In 2012 ASTS collaborated with the Surgical Council on Resident Education (SCORE) to create a second resource for general surgery residents through the SCORE website.

In 2007, the Curriculum Committee was approved as a full committee with Elizabeth Pomfret as the first chair, followed by Jonathan Fryer in 2010 and Kenneth Washburn in 2013. In December 2009, Jim Burdick was appointed senior editor for the curriculum.

As of February 2014, the Medical University of South Carolina has the most views from a program on the ASTS resident site at 270, and the most viewed module is Allan Kirk's "Basic Transplant Immunology: Basic Concepts" at 2,366 views.

ASTS as a CME Provider

Mina Behari Plante, BS

ASTS first applied to become an ACCME accredited provider in 1998 and received its two-year provisional accreditation in November 1999. Prior to that, ASTS worked under the auspices of the University of Pennsylvania ACCME providership to obtain sponsorship for its Annual Meeting. ASTS was reaccredited in 2005 and received a four-year accreditation.

In 2009, ASTS received the highest level of accreditation, “Accreditation with Commendation,” as a provider of continuing medical education for physicians from the Accreditation Council for Continuing Medical Education (ACCME). ASTS provides the CME accreditation for the American Transplant Congress, the Winter Symposium, the Fellows Symposium, the Leadership Development Program, and the Advanced Leadership Development Program.

In 2010, Kim Olthoff asked that a CME program be developed for the membership that would fulfill future requirements for accreditation and licensing. Under the leadership of Michael Ishitani, the Trans-SAP Maintenance of Certification program for ASTS members was launched in 2013. Trans-SAP is an online program developed to enable transplant surgeons and physicians to meet the American Board of Surgery (ABS) MOC Part 2: Lifelong Learning and Self-Assessment requirements. These CME activities are selected peer-reviewed journal-based articles with self-assessment multiple-choice pre- and post-test questions and answers. Each article has clear educational objectives and covers relevant clinical topics in transplant surgery and transplantation. Each activity provides Category I CME and self-assessment credits toward Part 2 of the ABS MOC Program. Under the direction of Richard Knight, a new program is being developed to allow credits to be earned by participation in self-assessment activities at the major transplant meetings accredited by ASTS.

ASTS Research Grants

Ginny Bumgardner, MD, PhD, Kim M. Olthoff, MD, and Thomas G. Peters, MD

The Awards Committee, as it was known when founded in 1997, has been chaired by Tom Peters, Kim Olthoff, Abhinav Humar, and Ginny Bumgardner and is currently chaired by Jonathan Bromberg. In its 17-year history, the

committee has disbursed over \$9 million to propel scientific excellence by ASTS members and their colleagues.

At the Annual Meeting of ASTS in 1997, Tom Peters was appointed chair of the newly designated ad hoc Awards Committee, which he subsequently led until 2004. Several problems had compelled the ASTS Council to establish an Awards Committee: previously, the review and selection of the awardees was done solely by the Council, which was a lengthy and sometimes contentious undertaking. The Council believed that it should not be in the business of peer-reviewed awards selection, as it recognized that some element of conflict of interest could exist.

The awards extant in 1997 were largely for young investigators, and each award was named for the sponsoring pharmaceutical company. For example, the Roche Young Investigator Award was intended for a junior surgeon interested in some basic or translational (a word not yet in common use at that time) project that needed support. Other company names were affixed as warranted. The awards were in the \$25,000 per annum ballpark at the time, and renewal for a second year was possible for several of them.

For the first year or two, Dr. Peters reviewed all submissions in the ASTS offices. Stacks of submissions, many in the NIH format, were reviewed with ASTS staff. Eventually, however, it became apparent that additional reviewers were required, and soon a real peer review was established, with the chairman reviewing all submissions and committee members or others reviewing those appropriate to their expertise. The ad hoc Awards Committee was established as a standing committee in 1999.

Within Dr. Peters' seven years as chair of the committee, the most notable advance came with expansion of the number and types of awards. A mid-level faculty award, the Presidential Travel Award, an award for a non-surgeon investigator, and one for an investigative team of a surgeon and non-surgeon all took shape; sponsorship was sought, and the awards were granted. In fact, the number of awards grew to the point that, in some years, there were just one or two applications for a competitive award such as the Presidential Travel Award. By 2004, ASTS was granting award support of approximately \$500,000 annually.

From 2004 to 2007, under the leadership of Kim Olthoff, the ASTS Awards Committee focused on developing clearer guidelines about the eligibility for various funding opportunities. A major advance during this time was the transition to an online research grants application system and an

online grants review process reflecting the NIH review criteria (Significance, Approach, Innovation, Investigator, Environment, and Overall Impact). This online system significantly improved the ease and efficiency of the grant review process and provided electronically captured program data for analysis.

New awards opportunities recognized important published work by junior faculty: the Vanguard Prize for best manuscript published in the award year and the Francis Moore Excellence in Mentorship in the Field of Transplantation Surgery Award to recognize an accomplished ASTS mentor.

Throughout this period, ASTS enjoyed a trend of increased funding available for transplant research grants which permitted an increase in the number and type of research grant categories. This trend was accompanied by a substantial growth in the number of applications submitted to the ASTS for research funding.

From 2007 to 2010, Abhinav Humar served as chair of the Awards Committee, followed by Ginny Bumgardner from 2010 to 2013. The name of the committee was changed in 2012 to the Grants Review Committee.

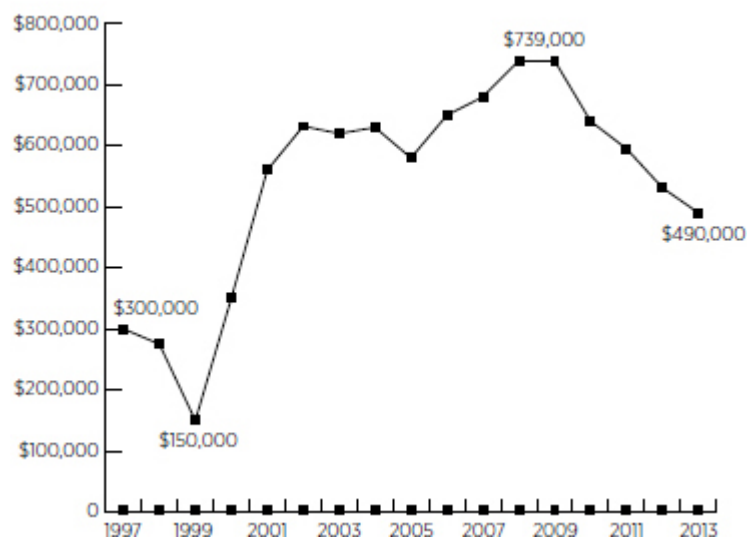
In addition to the established process, the committee developed educational sessions for members to enhance their grant writing skills and to learn about funding opportunities for transplant research sponsored by the NIH, national foundations, and industry sponsored mechanisms. For the most part, these committee-initiated research educational efforts took the form of Lunch & Learn sessions at the ASTS Winter Symposium.

The committee also formalized the process for recruiting and assigning reviewers and developed formal conflict of interest guidelines that apply to applicants and reviewers of ASTS Research Grants. These policies, approved by the Council, enhanced the fairness and transparency of the review process. To enhance the quality of program data available to assess return on investment for research grant dollars, the committee developed grant recipient progress report forms that captured research productivity data submitted by ASTS research grant recipients at the conclusion of the funding period, as well as 1, 3, and 5 years from initial funding. Analysis of program data revealed that the quality of proposals is outstanding, and often application rankings and funding decisions are based on computer-generated scores that differ by hundredths of a point.

The committee has been led by Jonathan Bromberg since 2013, and its greatest challenge in the current era is soliciting funding to build increased

support for transplant research funding at a time when \$490,000 funding at the NIH is severely compromised. Unfortunately, while the number of grant applications has steadily increased over the past several years, a reduced amount of funds are available to support ASTS research grants (see Figure 1). Decreased research grant funding resulted in fewer grants per research category and/or elimination of some categories. The committee remains focused on increasing funds to support novel basic, translational, and clinical transplant science.

FIGURE 1 ASTS Research Grant Expenditures, 1997–2013



ASTS Foundation

Diane L. Mossholder, MA

The ASTS Foundation was voted into existence by the ASTS membership at the Annual Business Meeting on April 30, 2002, during the American Transplant Congress in Washington, DC. An article in the Spring 2002 *Chimera* stated that “The purpose of the Foundation would be to expand the Society’s ability to provide awards and fellowships, conduct more studies and projects, and other endeavors to enhance the education and efforts of transplant surgery for the benefit of patients, surgeons, physicians, scientists, and the transplantation community.”

The following month, the Foundation was incorporated in Virginia for charitable and educational purposes, specifically:

- To conduct educational programs and research activities relating to organ transplantation
- To disseminate information relating to organ transplantation
- To promote the exchange of information among organ transplant professionals.

The first meeting of the Foundation Board of Directors was September 12, 2002, with Marc Lorber as the first Foundation President, James Schulak the Vice President, and Richard Howard the Secretary/Treasurer. On September 24, 2003, the Board of Directors approved a mission statement for the Foundation: “The ASTS Foundation will advance the field of transplantation by supporting the mission and activities of the American Society of Transplant Surgeons. The mission of the ASTS Foundation is to serve as the endowment vehicle of the ASTS. Funds generated will be used to provide support for ASTS sponsored initiatives such as education, fellowships and other training, and research.”

In 2007 the Foundation Board of Directors established a financial goal of \$20 million in net assets by the year 2020. The objective was to build sufficient reserves so that the Society could continue its core activities even in the absence of outside funding. To date, ASTS has achieved 85 percent of that goal. As Foundation President for 2013–2014, Kim Olthoff launched the Fund the Future Campaign, with a goal of raising \$100,000 by June 30, 2014, to support the ASTS Research Grants.

The ASTS Leadership Development Program

David A. Axelrod, MD, MBA

The ASTS Leadership Development Program (LDP) was established in 2010 as a collaborative effort between ASTS and Northwestern University’s Kellogg School of Management. The course was conceived in response to demand following several shorter education sessions on the business aspects of transplantation, which were developed by Michael Abecassis and presented at the ATC and the Winter Symposium. Building on this foundation, David Axelrod, Chair of the Business Practice Services Committee, and Dr. Abecassis proposed an in-depth educational program for transplant surgeons, administrators, and industry partners who sought a more extensive exploration of the economic, financial, and administrative aspects of program management. The faculty consists of a unique combination of Kellogg

professors and practicing transplant professionals. Enrollment in the program is purposely restricted to 60 participants to allow ample opportunity for interaction and questions.

The initial ASTS Leadership Development Program was conducted over 3.5 days at the James L. Allen Center of the Kellogg School of Management in Evanston, Illinois, in November 2010. The program was quickly filled to capacity and included a long waiting list. Since its debut, the LDP has been held annually at Kellogg and maintains its popularity. More than 250 transplant professionals have attended the course. Topics include accounting, transplant finance, team development, health care strategy, and regulatory/compliance issues. In addition, the program includes unique guest speakers who provide a national context for the program such as Thomas Hamilton, Director of the Survey and Certification Group at the Centers for Medicare and Medicaid Services (CMS); Frank Opelka, MD, a leader in health care reform and quality improvement with the American College of Surgeons; and Richard Migliori, MD, Chief Medical Officer of UnitedHealth Group. The secluded nature of the Allen Center contributes to the learning environment by facilitating a collegial environment and allowing participants to develop a peer network across transplant centers.

The success of the program reflected an explicit attempt to link theoretical knowledge developed through case studies taught by business school faculty and “real world” application presented by ASTS senior leaders. Thus, participants learned the basics of managerial accounting and then applied these principles through an in-depth study of cost reporting. This unique curricular design has been expanded to include sessions on transplant center strategic development and Quality Assessment and Process Improvement (QAPI) processes. Among the curricular highlights each year is a session on negotiation taught by Kellogg professor Keith Murnighan, PhD, and Dr. Abecassis’ session on transplant finance.

The success of the LDP led to the 2013 launch of the Advanced Leadership Development Program (ALDP). The ALDP consisted of a 2.5 day residential program focused on advanced topics in strategic analysis, team building, and crisis management for senior transplant leaders. ALDP participants were then offered the opportunity to participate in quarterly webinars over the course of a year, as well as a final session at the 2014 World Transplant Congress.

The Vanguard Committee

Kenneth L. Brayman, MD, PhD

The Vanguard Committee, formed in 1999, was the brainchild of Ron Busuttil during his ASTS presidency. Its initial chair was Kenneth Drazan (1999–2001), followed by Sandy Feng (2001–2004), Elizabeth Pomfret (2004–2007), Randy Sung (2007–2010), Dorry Segev (2010–2013), and currently Michael Englesbe.

The philosophical purpose of the Vanguard Committee has been to support and inspire the junior membership of ASTS to be involved and to obtain experience with scientific presentations in a relaxed and nurturing environment. As noted in the mission statement of the committee, “The primary mission of the Vanguard Committee is to encourage involvement in the activities and initiatives of the ASTS by its junior members. The Vanguard Committee will provide opportunities for interactions between the Society’s leadership and its newer members, thus increasing the cohesive nature of the Society. The Vanguard Committee will also develop new initiatives that are of particular interest to the junior members and to the Society as a whole.”

Along these lines, the committee has studied grant funding and publications by junior transplant surgeons, identifying the challenges faced in today’s rapidly changing clinical, regulatory, and financial environment. The committee also expanded access to the Winter Symposium by providing complimentary registration to candidate members and travel grants to junior members, and by allowing co-submission of abstracts to the Winter Symposium and the American Transplant Congress for junior members seeking opportunities to present and discuss their scientific work in the larger forum.

One major function of the Vanguard Committee is the organization of the ASTS Winter Symposium. The first symposium was held in 2001, with 142 people attending. The Winter Symposium has consistently grown over the ensuing 13 years to 250 attendees in 2004, 307 in 2007, 341 in 2010, 436 in 2013, and 478 registered participants in 2014. The quality and quantity of science has increased significantly as well, from 52 abstracts submitted in 2002 to 180 abstract submissions in 2014. Abstracts are submitted to this meeting in the areas of kidney, liver, pancreas, heart, and lung transplantation, in addition to donor management and other topics. The

predominant abstract submissions remain in the area of kidney and liver transplantation.

At the Winter Symposium, each accepted oral abstract is presented in a plenary session for the entire membership, rather than in smaller concurrent sessions. Additional innovations resulting from this meeting have included oral poster and slide presentations, awards, and a highly successful soap box format, both of which have been adopted by other surgical and transplant conferences. As a meeting by surgeons, for surgeons, many attendees have commented on how the winter meeting is reminiscent of the original ASTS meetings held in Chicago, which were noteworthy for their manageable size and the opportunity for focused, meaningful clinical and scientific exchange and discussion.

The Vanguard Committee also is charged with two ASTS Recognition Awards: the Francis Moore Excellence in Mentorship in the Field of Transplantation Surgery Award and the Vanguard Prize.

The Vanguard Prize is designed to identify the best clinical and basic research manuscripts from young investigators in the previous year and honor them with a travel prize to the State of the Art Winter Symposium. It was first awarded in 2003 to Jeffrey Rogers, and the 2014 recipients were Raymond Lynch and Shunji Nagai.

The mentorship award allows junior members of ASTS (candidate members or junior faculty within 7 years of fellowship) to nominate one mentor annually. The award was first given in 2008 to John Fung and Robert Merion. The 2014 recipient was Paul Greig of the University of Toronto.

Complete lists of all recipients are available on ASTS.org.

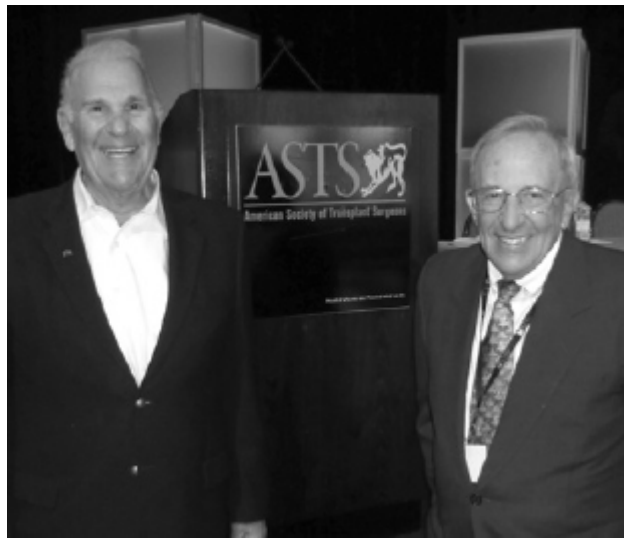
The David Hume Lecture

Thomas G. Peters, MD

The American Foundation for Donation and Transplantation (AFDT) sponsors the David Hume Lecture, which is given annually at the ASTS State of the Art Winter Symposium. A distinguished lecturer is chosen by the AFDT Board of Directors with advice and consent from the ASTS Winter Symposium Planning Committee. The lecture is meant to honor Dr. Hume, and to reflect—at least in part—on the roots of our surgical specialty, to which he was such an important early contributor.

David M. Hume (1917–1973) received his MD degree from the University of Chicago in 1943 and did his surgical training in Boston at the Peter Bent

Brigham Hospital. As a young surgeon, he served in the Navy for two years and, after returning to Boston, spent an additional two years in basic research on the canine hypothalamic-pituitary-adrenocortical axis while initiating experimental work in renal transplantation. He completed the chief surgical residency year at Peter Brent Brigham in 1951 and thereafter directed the Harvard Laboratory for Surgical Research. In 1951 and 1952, Dr. Hume performed nine cadaver donor renal “homotransplants” in patients with terminal kidney disease cared for by John Merrill, an early expert on end-stage renal failure. Four of the nine patients were the first ever to show sufficient transplant renal function to maintain life, and one kidney functioned for six months in the absence of immunosuppressive therapy. In 1956, Dr. Hume moved to Richmond, Virginia, as the Stuart McGuire Professor and Chairman of the Department of Surgery at the Medical College of Virginia, now called Virginia Commonwealth University. In Richmond, Dr. Hume continued manifold efforts in organ transplantation and successfully applied surgical and medical innovations so that a clinically effective transplant program had evolved at MCV by 1962.



John Najarian and Mel Williams, the fourth and third Hume Lecturers, respectively.



Wes Alexander and Gil Diethelm, the second and fifth Hume Lecturers, respectively.



Nick Tilney (center), the first Hume Lecturer, with Tom Peters (left) and Francis Wright of the American Foundation for Donation and Transplantation (right).

Among accomplishments directly attributable to David Hume stands the founding of the South Eastern Organ Procurement Foundation (SEOPF) in 1969. At that time, there was a relative surplus of kidneys recovered after donor death as transplant hospitals had but a few patients awaiting transplantation, and suitable kidneys often were thrown away if a local match could not be found. There was no way to share these kidneys that were too often discarded. Dr. Hume—along with surgeons, nephrologists, and

immunologists from six centers in the Southeast—agreed to share organs and eliminate the waste of kidneys deemed excellent for transplantation. SEOPF ultimately founded and nurtured the United Network for Organ Sharing (UNOS), which has grown to the large, nationwide entity managing so many aspects of organ donation, sharing, and transplantation.

Shortly after UNOS was contracted by the U.S. government to oversee organ transplantation in the United States, SEOPF was renamed the American Foundation for Donation and Transplantation to reflect its nationwide mission and to make clear that the AFDT was no longer a regional organization. The AFDT mission evolved to encompass matters related to living donation, histocompatibility, professional education, and business practices. The national reach of the AFDT and its continued commitment to scientific and educational activities relating to organ donation and transplantation has come to include the annual David Hume Lecture at the ASTS Winter Symposium.

The first David Hume Lecturer was the late Nicholas Tilney of the Brigham and Women's Hospital, a poignant choice considering Dr. Hume's early accomplishments in Boston. For his 2010 lecture, Dr. Tilney discussed the role of immune-active cells in allotransplant rejection and the history of discovery regarding cellular components of the rejection response. This first Hume Lecture capped Dr. Tilney's life-long interest in cellular mechanisms and affirmed the accomplishments credited to his laboratory as well as strides made by other scientists sharing his interests.

In 2011, J. Wesley Alexander of the University of Cincinnati Department of Surgery was the Hume Lecturer. He focused on the clinical challenges faced by surgeons who cared for organ failure patients as transplantation evolved in its early years. Dr. Alexander initiated organ transplantation at Cincinnati as a young surgeon in 1967, and he was quite familiar with the early strides by David Hume. An internationally recognized authority in diverse surgical fields including pediatric burn care, infectious disease, bariatric surgery, and metabolic components of surgical disease, Dr. Alexander's lecture brought a welcome perspective to innovative management of complex disease.

G. Melville Williams of Johns Hopkins University was the third Hume Lecturer, taking the podium in 2012. Dr. Williams was on the transplant team with Dr. Hume in Richmond during the early days of kidney transplantation there. He recounted many of the milestones that he personally participated in

while working under the leadership of David Hume. Dr. Williams brought to light the unexpected and puzzling—as well as rewarding—instances of social, ethical, biologic, and medical issues that emerged in the decade 1960 to 1970 because organ transplantation essentially forced examination of new concepts about life, death, and medical care.

The fourth Hume Lecturer was John S. Najarian from the University of Minnesota in 2013. With a life-long interest in pediatric kidney as well as extra-renal transplantation in children, Dr. Najarian reviewed several of the milestones and contributions from Minnesota that make up so much of transplant lore in America. With his sound direction and oversight, Dr. Najarian led a transplant team which excelled in defining successful management of patients and the organs needed to save their lives through transplantation.

In 2014, Arnold G. “Gil” Diethelm emphasized in his Hume Lecture lessons learned in the early years of clinical renal transplantation. The healthy recipient of both a liver and kidney transplant, Dr. Diethelm discussed the growth of transplantation surgery from a time when professionals had little knowledge of organ preservation and transplant rejection; no one understood how to modify the host response to an allograft. Dr. Diethelm worked as a young surgeon in the Harvard Laboratory for Surgical Research, as had Dr. Hume. Dr. Diethelm then joined the University of Alabama, where he established and led a highly successful transplant program over nearly four decades.

Each of the honorees had also served as President of ASTS, and each had a distinguished career directing clinical and research efforts while training scores of transplant surgeons. These professional progeny also have gone on to lead organ transplantation in America, just as the Hume Lecturers did. The five of them have set the bar for excellence as the ASTS David Hume Lecture continues in years to come.

The author acknowledges assistance with information from the American Foundation for Donation and Transplantation, the United Network for Organ Sharing, and Virginia Commonwealth University.

American Transplant Congress (ATC)

Pamela Ballinger, CMP

Through 1999, there were always two meetings, the AST and the ASTS, both in Chicago. It was agreed by the two societies that it would be beneficial to

both of them, as well as their supporting industry, to combine the meetings and present one joint meeting. The first joint ASTS/AST meeting was held in 2000 at the Sheraton Chicago and was branded TRANSPLANT 2000. The Joint 2000 Executive Planning Committee consisted of Hugh Auchincloss, Jr., Abraham Shaked, Mohamed Sayegh, and Laurence Turka. It proved to be a major success. There were 1,848 abstracts submitted and 3,817 attendees. In 2003, the meeting took on a new name, the American Transplant Congress (ATC), and moved to a larger venue, the Marriott Wardman Hotel in Washington, DC. By 2004, the meeting had grown out of hotel venues and moved to the Boston Hynes Convention Center. This move coincided with the 50th anniversary of the first successful kidney transplant in Boston.



Nancy Ascher speaks at the second joint ASTS/AST meeting, TRANSPLANT 2001.

In 2003, Benedict Cosimi and Mohamed Sayegh approached the two societies with the idea of joining with The Transplantation Society (TTS) for a World Transplant Congress (WTC). Boston was the proposed site of the TTS 2006 meeting, and everyone agreed it would be more successful to hold one major transplant meeting in North America instead of two competing meetings. The result was a resounding success with 6,500 attendees, 1,500 exhibit personnel, and 4,000 submitted abstracts. The WTC will be repeated in 2014 in San Francisco.

YEAR	ABSTRACTS	ATTENDEES	LOCATION
2000	1848	3304	Chicago
2001	2058	4087	Chicago
2002	2016	4026	DC
2003	2315	3890	DC
2004	2474	4065	Boston
2005	2424	4322	Seattle
2006 (WTC)	4000	6500	Boston
2007	2347	4522	San Francisco
2008	2209	4109	Toronto
2009	2519	4265	Boston
2010	2234	4060	San Diego
2011	2229	4764	Philadelphia
2012	2141	4544	Boston
2013	2208	4242	Seattle

The American Journal of Transplantation (AJT)

Mitchell L. Henry, MD, and Allan D. Kirk, MD, PhD

The *American Journal of Transplantation* (AJT) was an outgrowth of a collegial activity of the ASTS and AST to provide a forum for transplant professionals and others to publish their observations in an effort to advance the field of transplantation. The journal is co-owned by and serves as the official publication of the two societies. The AJT was formally initiated in early 2000, with a first call for papers that fall. The initial issue was published in May 2001. Within a year, the AJT was at the top of the ISI Journal Citation Report with the impact factors in the transplantation category.

Much of the credit for the success of the journal can be attributed to its first editor, Phil Halloran. His vision translated into three tiers of an editorial board: Editor-in-Chief, deputy editors, and associate editors. His keys to success included a renowned group of international transplant professionals on the editorial board, as well as rapid review and turnover of submitted abstracts.

As a financial success, the journal revenue helps to support many of the activities of ASTS and AST. The AJT manages more than 2,000 manuscript submissions per year with a goal to select novel and high-quality clinical and basic research that will be of interest to the readership. Although there has not been a set acceptance rate, year-to-year between 17 and 20 percent of papers are accepted for publication, making it highly selective. It has

remained the highest-ranked journal in impact factor in the transplantation category and ranks number 2 among all surgery journals. International subscriptions and readership continue to increase.

Allan Kirk became the Editor-in-Chief in fall 2010. The electronic world is becoming integrated into medical journals, challenging our current perception of how a journal functions. Consistent with this, AJT began an iPad edition in 2012, and digital downloads of the articles in AJT are continuing to increase annually. Issues including enhanced electronic publishing, open access, industry support, and the business model of journal publishing are several of the questions that will need to be continuously addressed to keep AJT current. While these issues will change the way we publish and disseminate information, there are opportunities to make an even greater impact through the journal.

Chimera

Mitchell L. Henry, MD

The birth of the *Chimera* was in 1989, with a goal to provide the ASTS membership with news important to the Society and the field of transplantation. The chosen name comes from Greek mythology and depicts a creature with the body of a lion, a goat's head, and a serpent's tail that ends in a viper's head. In the *Chimera's* first year of publication, it had a circulation of about 500, serving the membership, another 75 members of Congress, and other individuals who interacted with ASTS.

With time, it became clear that the *Chimera* needed to morph with advancing technology. An electronic version was crafted in 2001 and was initially available with the print version. As electronic transmission of information became widely accepted, the print version was discontinued in 2010. Management of the *Chimera* is currently assigned to the Communications Committee.

Chimera Chronicles

Thomas G. Peters, MD

The ASTS Chimera Chronicles is composed of more than 30 video interviews of prominent transplant professionals, many of whom were present and active as organ transplantation began in the 1960s. Available through the ASTS website, each interview is 5 to 10 minutes long and is accompanied by a written transcript of the entire 30 to 45 minute exchange

between the subject and the interviewer. Grant support for Chimera Chronicles came initially from Roche and Genentech. As the project grew, support also came from the American Foundation for Donation and Transplantation (formerly SEOPF) and Dialysis Clinic, Inc.

Honorees included many of the surgeons who founded ASTS, including the first President, Thomas E. Starzl. Other honorees who are not surgeons include Paul Terasaki, who developed many of the foundations of transplant immunobiology, and H. Keith Johnson, who founded Dialysis Clinic, Inc., and was the inaugural transplant nephrologist at Vanderbilt University. Many honorees were past presidents of ASTS, United Network for Organ Sharing, South Eastern Organ Procurement Foundation (SEOPF), American Society of Histocompatibility and Immunogenetics, and other prestigious organizations.



Randy Sung and Bob McCabe prepare for Dr. McCabe's Chimera Chronicles interview in Toronto in May 2008.



Tom Starzl and Tom Peters prepare for Dr. Starzl's Chimera Chronicles interview in Toronto in May 2008.

Chimera Chronicles began in 2007 under the leadership of Goran Klintmalm, ASTS President at the time; it was developed and managed by the ASTS Historian, Thomas Peters. Several thoughts spurred the Society to document the founding, history, and early days of the ASTS. First, most early leaders in clinical organ transplantation were alive in 2007 when the idea was conceived, so firsthand accounts could still be obtained. Second, Drs. Klintmalm and Peters, both storytellers themselves, believed that the honorees would have interesting stories that would fit nicely into a video format. Finally, logistics to gather the honorees were manageable, as 10 or 12 taping sessions at a time were planned in conjunction with several ASTS meetings over a period of about two years.

The first video session was at the ATC in Toronto in May 2008. Among the honorees at that session were Thomas Starzl, C. Thomas Fitts, Oscar Salvatierra, and Charles Zukoski. Sadly, Drs. Fitts and Zukoski died within months of capturing their memories on camera. And, the prediction by some in ASTS that we must document these milestones by great persons promptly, or the opportunity would be lost, proved to be true. Since the beginning of the Chimera Chronicles, five honorees have passed away.

Chimera Chronicles remains a work in progress, with plans to capture video recollections of those we could not interview, and with ongoing editing and posting of recent interviews.

The National Living Donor Assistance Center

Diane L. Mossholder, MA

In 2006, the Department of Health and Human Services announced the availability of funding for a program to help reduce financial disincentives to living donors. A competitive bidding process was implemented, and on September 14, 2006, the grant was awarded to the University of Michigan in partnership with ASTS. The grant was reauthorized in 2010 for an additional four years and was put out for bid again in 2014.

Day to day operations of the National Living Donor Assistance Center (NLDAC) are based in the ASTS National Office and managed by the program team. In 2014 this team consisted of Project Director Akinlolu O. Ojo, MD, PhD; Deputy Director Robert M. Merion, MD; Research Scientist Barry A. Hong, PhD, FAACP; a HRSA Project Officer; Project Manager Kimberly A. Gifford, MBA; Project Coordinator Holly Warren, RN, BA, CPTC; Project Assistant Coordinator Iby A. Diaz, JD, BsEd; and Project Assistant Maureen Ndoto.

The program also has an advisory group consisting of 11 multidisciplinary expert volunteers who meet annually to review program operations and make recommendations as needed and an application review committee responsible for reviewing applications each week and approving those that meet the program eligibility guidelines. Members of the application review committee include a transplant social worker recommended by the Society for Transplant Social Workers; a transplant nurse coordinator recommended by NATCO, the Organization for Transplant Professionals; a transplant recipient recommended by the National Kidney Foundation; and the NLDAC coordinator and assistant coordinator.

NLDAC approved its first application on November 8, 2007, and by August 31, 2013, had received 3,918 applications, 1,941 of which had completed their donor surgery. The program has disbursed more than \$5 million in funds for travel and subsistence expenses for living donors.

The program was designed to help low-income donors and recipients. The median household income for the recipient is \$25,842 with a household of 2.7, while the median household income for the donor was \$31,173 with a household of 2.9. Donors who travel to the transplant center and are later ruled out spend on average \$1,077, and donors who complete their donations spend an average of \$2,767.

“The program not only provides essential support for living organ donors, but helps to increase access to transplantation for patients with end-stage organ failure. Many patients on the transplant waiting list are too sick to work and do not have the financial resources to pay for their donor’s travel to the transplant center. The NLDAC eases this burden,” said NLDAC Project Deputy Director Robert Merion, MD, Professor of Surgery at the University of Michigan and President of Arbor Research Collaborative for Health.

At the time of publication, ASTS had submitted its bid for renewal of the grant and aims to continue the NLDAC program, helping fulfill its goal of increasing organ donation.

Engagement, Collaboration, and Strategic Partnerships

Kimberly A. Gifford, MBA

Since its founding, ASTS has pursued opportunities for engagement and collaboration with other stakeholders in the field and developed strategic partnerships with key organizations. One avenue by which ASTS pursues this engagement is through representative appointments to other organizations. These appointments create a visible connection between ASTS and the other organizations, create a mechanism for accountability, and often provide access to additional resources to ASTS and its members. A key example is the medical/scientific organizational representative to the OPTN/UNOS Board of Directors. This individual ensures that ASTS’ voice is heard in important policymaking discussions and that clear dialogue exists between the organizations. Many ASTS past presidents have served in this representative role, including Ronald Busuttil, Mark Hardy, Ronald Ferguson, Frank Stuart, Avi Shaked, Arthur Matas, John Roberts, and Robert Merion. Mitch Henry has been elected for the 2014–2016 term and will continue to represent ASTS in this important role.

ASTS also has a representative appointment to the American Board of Surgery (ABS). This was first established in 2002, with James Schulak elected in 2003 as the first ASTS representative. Today, Doug Hanto serves as an at-large member of the ABS board. In this role, he has advocated for training and maintenance of certification issues relevant to transplantation.

Today, Lewis Teperman serves as the ASTS representative to the American College of Surgeons (ACS); Tom Peters serves as the ASTS representative to the Specialty Service Society, part of the American

Medical Association (AMA); and John Magee serves as the representative to the Organ Donation and Transplantation Alliance (ODTA).

Beyond representative appointments, ASTS engages with a wide variety of groups to advance issues of importance to its members. Examples include:

Surgical Quality Alliance (SQA): Under the auspices of the ACS, the SQA brings together surgical specialties to define the principles of surgical patient quality measurement and development awareness among interested parties. Stuart Greenstein currently represents ASTS to the SQA.

Physician Consortium for Performance Improvement (PCPI): Under the auspices of the AMA, this national physician-led program is dedicated to enhancing quality and patient safety. ASTS is a limited voting organization member represented by David Reich.

For many years, the presidents and executive directors of AOPO, AST, ASTS, ASHI, NATCO, and UNOS have met annually to discuss areas of common interest and engage HRSA. In recent years the group has expanded to include ODTA, and in addition to the annual presidents' roundtable meeting, the executive directors meet monthly via conference call.

ASTS is also engaged in several advisory committees within HHS. The Advisory Committee on Organ Transplantation was established by HHS in 2000 to enhance organ donation, ensure the system is grounded in the best available medical science, assure the public that the system is as effective and equitable as possible, and increase public confidence in the system. The Advisory Committee on Blood and Tissue Safety and Availability was established in 1997 and advises the HHS Secretary on a range of issues, including the ethical and legal issues related to transplantation safety. While ASTS does not hold an official seat on either committee, ASTS members are actively engaged in both committees.

NATCO – The Organization for Transplant Professionals: In 2004, ASTS and NATCO partnered to co-locate their winter meetings. The ASTS State of the Art Winter Symposium and NATCO Symposium for Advanced Transplant Professionals were held simultaneously for 10 years, allowing unique interactions during the scientific and social aspects of the meetings. During this time, ASTS established a dual membership category for NATCO members, which continues to this day. The ASTS/NATCO dual membership provides access to the online AJT and other ASTS educational resources such as the Academic Universe.

American Society of Transplantation (AST): Perhaps ASTS' most successful strategic partnership has been with AST. Despite the tensions of the past, well described in many presidential addresses and reflections in this book, ASTS and AST continue to partner on key initiatives. A joint council consisting of equal members from both societies oversees joint activities. The hugely successful ATC and AJT are jointly owned ventures by ASTS and AST. There is also a dual membership category for those who desire membership in both organizations. Each society plays an important role in the transplant community yet values the partnership that allows them to collaborate and speak with a common voice on issues of shared concern.



ASTS Legislative and Regulatory History 1994–2014

PETER W. THOMAS, JD, PEGGY TIGHE, JD,
DIANE MILLMAN, JD, SARA ROSTA, MA

In the second 20-year span of the Society's history, ASTS has matured into a highly credible, proactive force at the congressional and federal agency levels, as well as in selected states. ASTS has worked independently and in coalition with other likeminded organizations to become a respected voice in public policy debates involving organ transplantation. ASTS made the decision early on to focus and advocate on public policies that not only benefit transplant surgeons, but also positively impact the patients we serve. This principle has guided our priorities in the area of transplant, Medicare, and health care policy, and the soundness of this approach has been validated time and time again.

During the organ allocation discussions of the late 1990s, most of the advocacy was directed toward federal regulations proposed by the Clinton Administration. Regardless of the positions taken on the allocation regulations, the simple fact was that much greater attention was necessary to address the persistent shortage of donor organs entering the system. The overarching goal of shifting attention to increasing the supply of donor organs, through both deceased donors and living donation, resulted in numerous federal initiatives and pieces of legislation over the past decade. ASTS played a key role in advancing each of these efforts.

The seminal event involved enactment of the Organ Donation and Improvement Act of 2004, which amended the National Organ Transplantation Act (NOTA) passed in 1984 and added new legislative authority designed to increase organ donation rates. Included in these new authorities were public awareness initiatives and living donor financial assistance programs. ASTS spearheaded annual efforts to increase appropriations to fund these new authorities during a time of fiscal restraint. ASTS pressed for clarification in federal law of paired donation, culminating in passage of the Charlie W. Norwood Living Organ Donation Act in 2007. In addition, ASTS worked with a coalition of others in 2013 to enact the HOPE Act, which lifts the prohibition on donation of HIV organ donors to HIV recipients and calls for additional research in this area.

But organ donation initiatives are not the only legislative efforts on which ASTS has taken a leadership role. ASTS has been a long-standing supporter of immunosuppressive drug legislation to remove the three-year cliff of drug coverage for Medicare recipients of donor organs. Legislation to address this problem has been advanced in different forms for years but has never been enacted, despite widespread bipartisan support in Congress.

Enactment of the Patient Protection and Affordable Care Act (ACA) did not solve this problem, but it is expected to improve coverage of immunosuppressive drugs for those with new insurance or Medicaid coverage. In addition, the ACA accomplishes an important legislative goal of ASTS: Prohibiting discrimination in private health insurance based on an individual's status as an organ donor or recipient. Under the ACA, private health plans can no longer deny health plan coverage, impose pre-existing conditions, or impose high premium rates on organ donors and recipients. Finally, ASTS has supported for years the effort to stabilize reimbursement under the Medicare physician fee schedule, partnering primarily with the American College of Surgeons and focusing its resources on the registry provisions.

After legislation is passed, the focus shifts to the U.S. Department of Health and Human Services (HHS) to implement laws that impact transplantation. ASTS has been actively engaged to ensure that transplant surgery has a strong regulatory and reimbursement voice. Among the most important regulatory milestones ASTS achieved in the past 20 years include strong advocacy to streamline conflicting or duplicative regulations between agencies, developing reasonable transplant center and Organ Procurement

Organization (OPO) regulations, and appropriate coverage, coding, and payment under the Medicare program for ventricular assist devices (VADs) as destination therapy, islet cell transplantation, and many other transplant procedures.

Becoming a Washington Policy Leader

Through the past 20 years, ASTS has matured in its Washington policy engagement. ASTS Officers and Council leaders have taken a hands-on approach to transplant policy, elevating considerably the resources and attention devoted to these matters. The ASTS Legislative Committee and Reimbursement Committee were formalized and have been blessed by strong and active leaders committed to representing the interests of ASTS members before Congress and the federal agencies. Leaders in the legislative and regulatory area include Marc Lorber, John Roberts, Mike Abecassis, Richard Freeman, John Fung, Amy Friedman, James Pomposelli, and David Reich. In addition, every ASTS President—at least since the year 2000—has played a role in public policy, as education and advocacy is central to ASTS' mission.

ASTS has carved out a role as a transplant policy analyst and advocate while distinguishing the transplant surgery perspective in many debates during the past two decades. An organization knows it is gaining traction in Washington, DC, when policymakers contact it for expertise. ASTS has attained this position and is routinely contacted as a resource and participates in discussions from across the policymaking spectrum.

In the 1990s, Milton Benjamin served as a government relations consultant to ASTS until the Society—under the leadership of ASTS President Nancy Ascher—hired a Washington-based firm specializing in health care law, policy, and advocacy known as Powers, Pyles, Sutter & Verville, P.C. Led by Peter W. Thomas, JD, Powers' team of attorneys and legislative staff included through the years Diane Millman, JD, Rebecca Burke, JD, Adam Chrisney, Legislative Director Dustin May, and most recently, Peggy Tighe, JD, Counsel to the firm. Members of the Powers law firm have worked closely with ASTS leadership and the Legislative and Reimbursement and Regulatory committees and chairs through the years.

ASTS has always been interested in working in coalition with other organizations to achieve consensus goals, especially the American Society of Transplantation (AST), the National Kidney Foundation (NKF), the

Association of Organ Procurement Organizations (AOPO), and the United Network for Organ Sharing (UNOS). In fact, ASTS and these organizations are the lead participants in a transplant coalition known as the “Transplant Roundtable.” This coalition meets periodically to share priorities, develop consensus on transplant issues, and pool and organize government relations resources to maximize favorable outcomes on transplant policy.

Through the past two decades, ASTS has participated in virtually every major transplant committee, advisory board, and meeting, including participation on the Advisory Committee on Organ Transplantation (ACOT), of which Nancy Ascher served as the first chairperson. ASTS has conducted numerous Washington “fly-ins” over the years, bringing hundreds of transplant surgeons to the halls of Congress to inform, educate, and advocate on transplant priorities.

We have spearheaded high-level meetings with decision-makers at HHS, the Centers for Medicare and Medicaid Services (CMS), the Division of Transplantation (DoT), the Centers for Disease Control and Prevention (CDC), and the Food and Drug Administration (FDA). ASTS has issued numerous member alerts and “calls to action” to promote transplant legislation favorable to surgeons and patients. Through it all, we have sought to keep communication flowing to the ASTS membership on public policy developments, because a more informed Society is a more effective Society.

Focus on Organ Transplantation in the New Century

With a change in Presidential administrations in 2001 came a new Secretary of HHS, Tommy Thompson, who was no stranger to the organ allocation debate of the late 1990s due to his position as governor of Wisconsin. Former ASTS President Hans Sollinger often counseled the governor on transplantation issues, and the new Secretary designated organ transplantation as a top priority of HHS. With William “Bill” Frist (R-TN), a former transplant surgeon and ASTS member, ascending to the Majority Leader’s post in the U.S. Senate, the field was poised for genuine progress on transplant policy.

Secretary Thompson first announced on February 9, 2001, his intent to launch a new national effort to encourage organ donation during the first 100 days of his tenure at HHS. Soon after this announcement, ASTS spearheaded an effort to bring together a group of transplant-related organizations to develop consensus organ donation recommendations to assist Secretary

Thompson in his effort to significantly increase the rate of organ donation in the United States. This effort culminated in a set of proposals that was forwarded to Secretary Thompson and, according to subsequent conversations with HHS officials, was well-received by the new Administration.

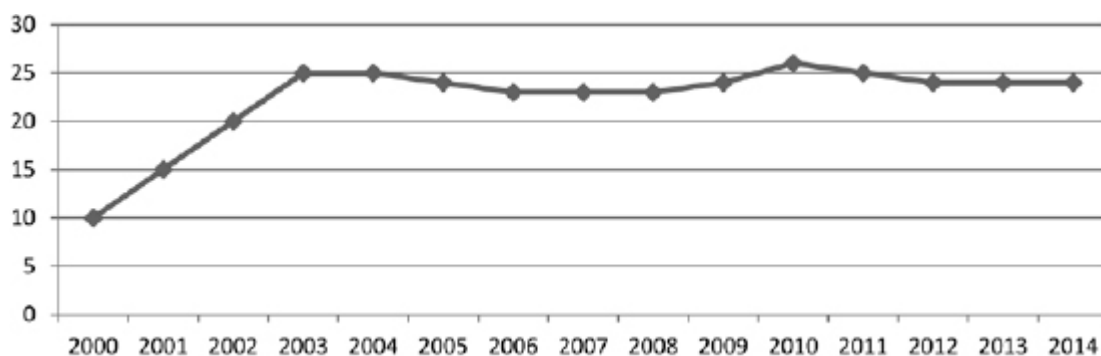
The importance of these efforts was underscored by a UNOS report at the time citing an increased need for organ donation. According to the 2000 Annual Report of the U.S. Scientific Registry of Transplant Recipients and the Organ Procurement and Transplantation Network, between 1990 and 1999 the number of Americans awaiting organ transplants more than tripled from 21,914 in 1990 to 72,110 at the end of 1999. Annual deceased and living donor transplants over the same period increased at a far slower rate, moving from 15,009 in 1990 to 21,715 in 1999.

In April 2001, Secretary Thompson announced a five-point initiative to encourage organ, tissue, marrow, and blood donations. This initiative included the Workplace Partnership for Life, a national initiative that called on employers, unions, and other employee organizations to join in a nationwide network to make workplaces more “donor friendly” and promote donation; a newly designed organ donor card; a national forum on the potential of registries; a national Gift of Life medal to recognize all families who consent to donation; and model curriculum for drivers’ education classes to build awareness of the importance of organ donation. In May 2002, one year after the HHS initiative began, Secretary Thompson announced a 7 percent increase in deceased donor rates and a 12.5 percent increase in living donor rates.

Secretary Thompson also led the Bush Administration in the early 2000s to propose steep increases in the budget for the Division of Transplantation, the federal agency that oversees UNOS, the OPTN, and a variety of organ transplant activities within HHS’ Health Resources and Services Administration (HRSA). From a modest budget of \$10 million in FY 2000, he proposed—and the Congress passed—increases that brought the DoT budget to \$25 million within four years. According to HHS budget documents at the time, the increased spending was used “to support the Secretary’s Gift of Life Donation Initiative, a variety of donation awareness efforts, the network that manages the distribution of organs throughout the United States, and vital data collection that guides community leaders and policy makers.”

In subsequent years, at the behest of ASTS and the Transplant Roundtable organizations, several Members of Congress were responsible for maintaining or increasing funds for the Division of Transplantation including Senators Byron Dorgan (D-ND), Arlen Specter (R-PA), Carl Levin (D-MI), Bill Frist (R-TN), Tom Harkin (D-IA), Dick Durbin (D-IL), and Chris Dodd (D-CT), as well as Congressmen Jay Inslee (D-WA), Peter King (R-NY), and the late Congressman Charlie Norwood (R-GA). Congress also enacted across-the-board spending cuts during this time that led to modest decreases in transplant spending in some years. But to this day, the DoT budget retains a solid baseline of spending.

Appropriations for the Division of Transplantation under HRSA (y-axis is \$ in millions)



Source: <http://www.gpo.gov/fdsys/pkg/BUDGET-2010-APP/pdf/BUDGET-2010-APP-1-11.pdf>

The Division of Transplantation was not the only federal agency for which ASTS advocated for increased funding. Around the year 2000, the National Institutes of Health (NIH) was the focus of concerted bipartisan House and Senate efforts to double funding for the agency over a five-year period. Recently, the NIH budget has hovered around \$30 billion, with limited increases, but in the early 2000s, the NIH budget was receiving increases of between 10 percent and 20 percent in some instances. Propelled by ASTS' strong interest in both DoT and NIH funding levels, the Society contributed to efforts to increase these budgets through its education and advocacy efforts.

In 2002, ASTS President James Schulak testified on behalf of the Society before the House Appropriations Subcommittee on Labor, Health and Human Services, and Education. The hearing gave ASTS an opportunity to present its views on future funding for these programs. On the NIH, Dr. Schulak testified that ASTS supported the five-year effort to double the NIH budget. "These additional funds," he stated, "should be used by the appropriate

institutes to aggressively pursue research on organ transplantation to maximize success rates and explore new and emerging science in the transplant field, particularly in the area of transplant surgery.”

Organ Donation and Recovery Improvement Act

The Organ Donation and Recovery Improvement Act (ODRIA) was signed into law by President George W. Bush on April 5, 2004. Its enactment marked the culmination of three years of efforts by ASTS and its members to secure meaningful organ donation improvement legislation. To commemorate the achievement, ASTS organized a major “Legislative Day” in Washington, DC, to directly engage federal lawmakers on the importance of transplantation, funding the new organ donation law, and educating Congressional members and staff on immunosuppressive drug coverage. ASTS also honored HHS Secretary Thompson for his efforts to increase organ donation and bestowed upon him honorary membership in ASTS, only the 16th honorary member in ASTS history.



HHS Secretary Tommy Thompson (left) is presented with honorary membership in ASTS by President Richard J. Howard.

ODRIA was designed to assist the federal government, states, and other entities to promote organ donation, reduce the waiting list, provide for travel and subsistence reimbursement for living donors, fund hospital-based organ coordinators, and improve the practice of organ recovery, preservation, and transportation. The legislation was originally introduced by Senate Majority

Leader Bill Frist and subsequently introduced in the House by the Chairman of the Energy and Commerce Health Subcommittee, Michael Bilirakis (R-FL). The law was developed in close consultation with ASTS and other transplant organizations.

Efforts to provide additional funds for ODRIA during the five-year period of authorized funding proved difficult. Nonetheless, ASTS was able to convince Congress to include favorable “report language” in appropriations bills during this period. For instance, in FY 2005, the Senate appropriations bill encouraged HRSA to create a scientific network to improve the recovery, preservation, and transportation of organs, as authorized under ODRIA. As a result of this report language, ASTS leaders met with the Director of the Agency for Healthcare Research and Quality Dr. Carolyn M. Clancy and Director of the HRSA Division of Transplantation Dr. Jim Burdick to discuss implementation of this report language and other programs authorized under the organ donation law.

Financial Assistance to Living Donors

An outgrowth of the new donor initiatives authorized by ODRIA—as well as increased funding for the DoT—was the open grant competition for the development of a program to provide federal financial assistance to low income living donors. The grant was designed to decrease financial disincentives to donate organs. ASTS partnered with the University of Michigan and was awarded this competitive grant beginning in 2006 for up to \$2 million annually for four years. In 2010, the grant was renewed on the same terms for four additional years. At the time of publication, the grant was once again up for a competitive renewal with funding anticipated at \$3 million annually for five years. The program is known as the National Living Donor Assistance Center (see page 240).

Kidney Paired Donation Act

Ambiguity about the legality of paired organ donation prompted ASTS’ effort in the mid-2000s that culminated in 2007 with the Charlie W. Norwood Living Organ Donation Act. Despite the fact that virtually no one in the transplant community believed that paired donation constituted the exchange of “valuable consideration” prohibited under Section 301 of the National Organ Transplant Act, a series of vague concerns raised by Executive Branch officials had made the legality of paired donation unclear. The elimination of

any lingering legal concerns through federal legislation—it was thought—would encourage transplant centers to adopt paired donation programs as a standard practice and might lead to the development of a national paired donation program.

Despite significant efforts in 2006 by ASTS and other transplant organizations to advocate for Congressional action to clarify the legality of living paired donation, no bill was passed in either the House or Senate. With the death on February 13, 2007, of Congressman Charlie Norwood (R-GA), a lung transplant recipient and sponsor of the original House bill, Congressional leaders fast-tracked the paired donation bill. As a result, on February 15, 2007, the Senate passed its version of the bill, S. 487, by unanimous consent. In the House, the bill was amended to include a definition of “paired donation” along with a change to name the bill in honor of Congressman Norwood. On March 7, 2007, the U.S. House of Representatives unanimously passed the Charlie W. Norwood Living Organ Donation Act. Because of these changes, the bill would have to be passed again in the Senate.

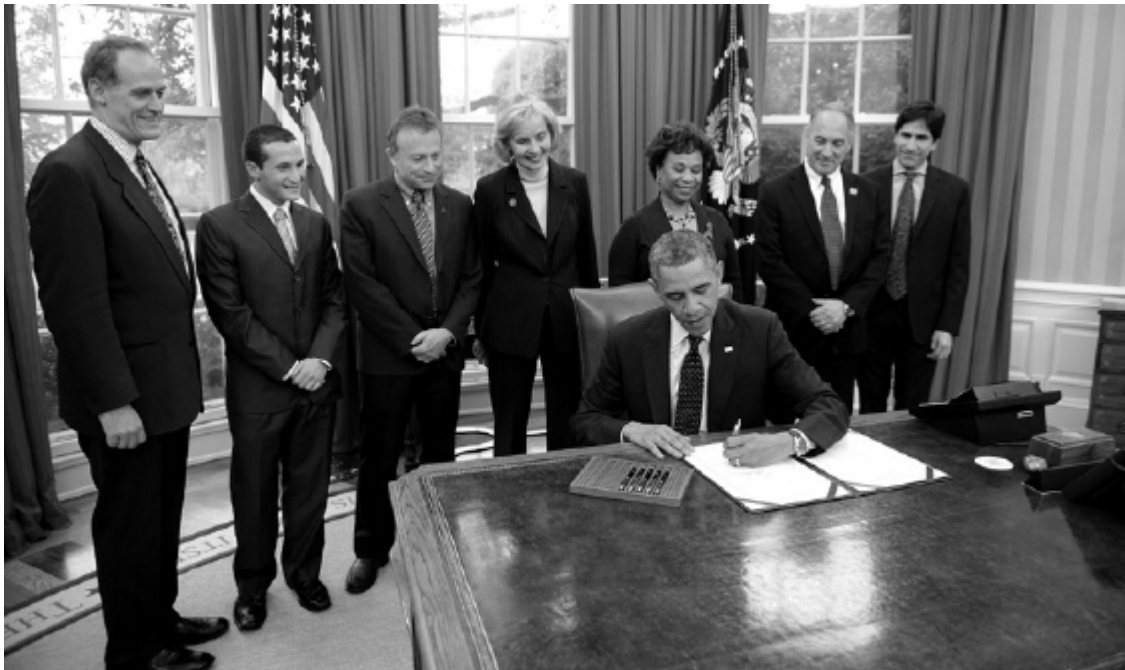
Soon thereafter, on March 28, 2007, the Office of Legal Counsel in the Department of Justice concluded that certain arrangements for donation of kidneys by living donors did not involve “valuable consideration” under Section 301 of NOTA. This written position statement was very significant as it clearly signaled that President George W. Bush would sign the bill once it arrived on his desk. Enactment of this legislation on December 21, 2007, represented an important and timely victory for ASTS and the transplant community. Paired donation is now a widespread and effective method of coupling suitable donors with suitable recipients. The practice continues to have a meaningful impact on organ donation across the country.

Immunosuppressive Drug Legislation

Whether covered by the Medicare program or through private insurance, access to immunosuppressive drugs for the life of a transplant graft is both absolutely critical to the long-term health of the organ recipient and good public policy. Those without adequate access to immunosuppression are far more likely to lose their graft, resulting in significant health risks, increased mortality, decreased quality of life, and unnecessary health care costs for dialysis (in the case of kidney transplantation), and perhaps the use of another donor organ.

Limited access to immunosuppressive drugs dates back to the first organ transplants and was noted as an unresolved issue during passage of the original NOTA in 1984. In 1994, after years of effort by ASTS and other organizations, Congress extended Medicare coverage of immunosuppressive drugs for kidney recipients to 36 months post-transplant, a major improvement in Medicare law at the time. While this extension was a meaningful advance in coverage of immunosuppression, the 36-month limit created a coverage “cliff,” after which lack of access to immunosuppressive drugs continues to be a major unsolved public policy problem. ASTS has been a steadfast supporter for at least the past decade of federal legislation to indefinitely extend Medicare Part B coverage of immunosuppressive drugs for all organ recipients.

There have been many iterations of this legislation over the past decade, and support for passage of such a bill has grown year after year. The provision was included in the House version of the ACA in 2009 but did not make it into the final bill. The most recent bill, H.R. 1428, the Comprehensive Immunosuppressive Drug Coverage for Kidney Transplant Patients Act of 2013, was introduced by Congressmen Michael Burgess (R-TX) and Ron Kind (D-WI) in the House and an identical Senate bill, S. 323, was introduced by Senators Dick Durbin (D-IL) and Thad Cochran (R-MS). Both bills are bipartisan, with more than 100 cosponsors in the House and 15 in the Senate. The bill would remove the immunosuppressive drug coverage cliff under the Medicare program for kidney recipients who lose their ESRD-based Medicare coverage. ASTS continues to work toward passage of this important legislation.



President Obama signs the HOPE Act into law in November 2013. Back row from left, patient advocate Shamey Cramer, Brian Boyarsky, ASTS President-Elect Peter G. Stock, MD, Rep. Lois Capps (D-CA), Rep. Barbara Lee (D-CA), Dan Salomon, MD, president of the American Society of Transplantation, and Chris Collins, director of public policy for amfAR: The Foundation for AIDS Research.

HOPE Act Becomes Law

ASTS leaders were instrumental in enacting legislation to address the legal ban on the use of HIV-positive organs for HIV-positive individuals in need of a donor organ. The legislation, H.R. 698 and S. 330, entitled the HIV Organ Policy Equity Act (HOPE) Act, lifts the research ban on organ transplants from one person with HIV to another with HIV and directs the HHS Secretary to create new guidelines and begin new scientific research concerning the donation of HIV-infected organs. The bill was passed through Congress with uncharacteristic speed and was signed into law on November 21, 2013, by President Barack Obama. ASTS President-Elect Dr. Peter G. Stock and six other key advocates attended the Presidential signing ceremony in the oval office at the White House.

Dr. Dorry Segev of Johns Hopkins University and Brian Boyarsky, a St. George's Medical School student, developed data on which the bill is based, setting the stage for the legislative efforts to follow. Their research results, published in the *American Journal of Transplantation* in June 2011, helped

convince lawmakers that the legal ban had been eclipsed by medical science, including significant advances in HIV treatment.

The legislation was first passed in the Senate on June 17, 2013, with the leadership of Senators Barbara Boxer (D-CA) and Tom Coburn, MD (R-OK). In the House of Representatives, Lois Capps, RN (D-CA) and Andy Harris, MD (R-MD) introduced the bill and were assisted by Congressman Michael Burgess, MD (R-TX) who played a pivotal role in its passage, advancing the bill through the committee process and to the House floor for final passage on November 12, 2013.

ASTS worked with the American Society of Nephrology, HIV Medicine Association, American Society of Transplantation, and patient advocate Shamey Cramer to educate Congress about the medical science and research behind this bill.

State Based Advocacy

As the ACA has driven many health care decisions to the state level, ASTS has taken on a greater role in education and advocacy in select states. For instance, when the Governor of Arizona, Jan Brewer, and the Arizona legislature agreed to restrict coverage of certain organ transplants under their Medicaid program in 2010, ASTS partnered with AST and Arizona advocates to seek repeal of that law. After months of intensive and coordinated efforts, Arizona reinstated funding for the restricted transplants and rescinded the policy.

Similarly, when Oregon proposed in 2013 to impose a two-year waiting period on all organ transplants in small group and individual health insurance plans offered on the state exchange, ASTS responded. Working again with other organizations and state-based advocates, ASTS was pleased when the state reversed its decision and rescinded the two-year waiting period. As health care policy decisions continue to devolve to the state level under the ACA, ASTS expects to continue targeted education and advocacy efforts within states and local advocates on the front lines of these health care policy battles.

Federal Regulatory and Reimbursement Activities

ASTS has actively represented the interests of transplant surgeons and patients before Congress, but addressing policy challenges involving regulations and reimbursement that impact transplant surgeons at the federal

agencies is just as important. ASTS' regulatory initiatives over the past 15 years include the following.

Medicare Certification: Transplant Centers

In 2005, CMS proposed "conditions of participation" in the Medicare program for transplant centers, including the development of numerous outcomes and process measures. After an in-depth review of the proposed standards, ASTS submitted comprehensive comments focusing on a number of deficiencies in the CMS proposal. These comments addressed CMS' proposed outcomes standards and various overly prescriptive process requirements related to care coordination, transplant center staffing, and quality assurance. At the request of ASTS, a number of members of the Transplant Roundtable endorsed the ASTS comments, and ASTS met with CMS representatives to advocate for appropriate changes to the standards. As a result of this initiative, CMS made a number of important changes to the standards when they were published in final form, becoming effective on June 28, 2007.

Following adoption of the proposed regulations, CMS began to focus on drafting proposed Interpretive Guidelines for state surveyors to use in determining whether a transplant center met the regulatory standards. After obtaining an advance copy, ASTS concluded that the Interpretive Guidelines exceeded the scope of the regulatory standards and imposed substantial additional burdens on transplant centers. ASTS again submitted comprehensive comments on the proposed Interpretive Guidelines and suggested specific revisions, many of which were accepted when the final Interpretive Guidelines were adopted.

Most importantly, CMS addressed ASTS' concern that, under the proposed rule, centers would be automatically denied approval for failure to meet threshold requirements related to data submission and outcomes, with no opportunity to show extenuating circumstances or to remediate. Under the final rule, a currently certified center that seeks initial approval under the new rules will NOT be denied approval automatically for failure to meet the threshold requirements. Instead, CMS adopted a process for considering "mitigating factors." These factors include the extent to which outcome measures are met; the availability of Medicare-approved transplant centers in the area; and extenuating circumstances that may have had a temporary effect on meeting requirements (e.g., a natural disaster).

Recognizing that both the regulations and the Interpretive Guidelines imposed new burdens on transplant centers, ASTS turned its attention to helping transplant centers prepare for their initial surveys. ASTS designed a “mock survey” program covering all the conditions of participation and focusing especially on those areas most likely to pose the greatest challenges for transplant centers. The mock survey program involves not only review of a transplant center’s written policies and procedures but also onsite evaluations by specially trained transplant administrators. The program has been highly praised by transplant centers that participated.

Finally, largely as the result of ASTS efforts, the transplant center certification regulations authorize continuing certification of transplant centers that fail to meet the applicable outcomes requirements if there are “mitigating circumstances” that justify the deficiency. ASTS worked closely with CMS to establish the “mitigating circumstances” process and standards to minimize the risk of precipitous or unjustified de-certification of transplant centers that are in technical violation of applicable outcomes standards.

Throughout the course of these initiatives, ASTS developed a positive working relationship with the CMS office in charge of Medicare certification and compliance, resulting in ongoing communications between ASTS and CMS with respect to a broad range of sub-regulatory issues.

Medicare Certification: Organ Procurement Organizations (OPOs)

At the same time CMS proposed Medicare certification requirements for transplant centers, it also proposed new Medicare certification standards for OPOs. The proposed standards provided an incentive for OPOs to procure organs regardless of whether those organs were suitable for transplantation, while the proposed transplant center certification standards’ emphasis on organ and patient survival statistics implicitly dissuaded transplant centers from accepting marginal organs. Accordingly, ASTS submitted comments urging CMS to address this inconsistency prior to finalizing the OPO or transplant center conditions of participation. Despite ASTS’ comments, CMS failed to adequately reconcile the final OPO and transplant center conditions of participation before finalizing both sets of standards.

In 2013, at the urging of ASTS and others, the HHS Secretary’s Advisory Committee on Transplantation (ACOT) formally requested the Secretary of HHS to reconcile the conflicting incentives in the transplant center and OPO

conditions of participation. ASTS spearheaded a joint committee including representatives of ASTS, AOPO, and others to review the transplant center and OPO outcomes standards and to reconcile these standards to the extent practicable.

In addition, because over half of all OPOs failed to meet the OPO outcomes standards initially included in CMS' regulations, effective in 2014, CMS loosened those standards, thereby avoiding the need to undertake a massive decertification of a substantial number of OPOs.

In adopting this change, CMS rejected ASTS' recommendation that the agency establish a "mitigating circumstances" process for OPOs similar to the process in place for transplant centers that fail to meet outcomes requirements, arguing that the statutory provisions relating to OPOs preclude such a change. ASTS continues to advocate for better alignment between outcomes requirements for OPOs and transplant centers.

Medicare Coverage

Over the years, ASTS has pursued various initiatives related to Medicare coverage for various transplant and related procedures. For example, on March 12, 2003, ASTS, represented by Dr. Robert Kormos, presented testimony before the CMS Medicare Coverage Advisory Committee supporting the extension of Medicare coverage for ventricular assist devices (VADs) as destination therapy for patients with end-stage heart failure who are not eligible for a transplant. ASTS also supported the proposal to authorize coverage for this procedure when it was subsequently published for public comment. When CMS proposed criteria for facilities qualified to perform this procedure, ASTS filed comprehensive comments recommending that the facilities qualified to perform these procedures be limited to transplant centers.

Medicare Coding and Payment

Since 2001, ASTS has taken an active role in representing the interests of the transplant community with respect to Medicare payment policies and payment rates. ASTS advocacy has focused primarily on Medicare payment policies and rates for surgeons' services and the amounts paid to hospitals for transplant-related services.

Medicare Physician Fee Schedule

While ASTS does not have a seat on the Relative Value Update Committee (RUC), which makes recommendations to CMS regarding the coding and valuation of physicians' services under the Medicare Physician Fee Schedule, ASTS has established an ongoing working relationship with the American College of Surgeons (which has a permanent RUC seat). Through these reimbursement activities, ASTS has been principally responsible for ensuring the availability of appropriate CPT codes and preserving and increasing payment amounts for transplantation services.

For example, ASTS was principally responsible for rescission of certain payment reductions that had been proposed in 2004; the revaluation of the living donor hepatectomy codes for the CY 2004 Physician Fee Schedule; the establishment of "backbench" CPT codes that became effective in 2005; an increase in the valuation of lung and heart/ lung transplantation procedures (effective in 2012); and the revaluation of the payment amount for kidney transplants (effective in 2014).

Inpatient Prospective Payment System

In 2008, CMS began the transition to a new Medicare Severity Diagnosis-Related Group (MS-DRG) classification system for hospital inpatient services. At that time, CMS proposed to establish severity adjusted DRGs for heart and liver transplants. ASTS opposes this bifurcation of these DRGs on the grounds that there is no such thing as an "uncomplicated" transplantation; however, CMS has consistently retained severity-adjusted DRGs for these procedures based on charge data indicating that transplant centers incur substantially higher costs for patients who have specified complicating conditions. In addition, ASTS sought in 2003 (unsuccessfully) the establishment of a new DRG for cases involving organ rejection.

ASTS has also remained vigilant in opposing proposed changes in Medicare payment policy that could undermine payment for organ acquisition costs on a "pass-through" basis. For example, when CMS proposed to deviate from this methodology in determining payment for certain islet acquisition costs, ASTS submitted comprehensive comments successfully opposing the proposal.

Hospital Outpatient Prospective Payment System

ASTS has also remained vigilant to ensure that Medicare provides appropriate payment for hospital outpatient services provided to transplant

donors and recipients. For example, ASTS has consistently urged CMS to establish observation stay allowances for transplant patients and has sought to ensure that Medicare payment for immunosuppressive drugs administered in hospital outpatient departments remains adequate to cover the costs of these drugs and their administration.

Islet Cell Transplantation

ASTS has dedicated substantial time and resources to the issue of Medicare payment for islet cell transplantation and related costs. The Medicare Prescription Drug Improvement and Modernization Act of 2003 (Section 733 of Public Law 108-173) provides for Medicare coverage of islet transplantation performed in the context of certain clinical trials. CMS initially proposed to deny payment for islet isolation costs as organ acquisition costs, a proposal that ASTS successfully opposed. ASTS also succeeded in pressing for establishment of appropriate CPT coding revisions to enable accurate reporting of these procedures by surgeons.

Unfortunately, while OPOs were initially afforded considerable flexibility in determining charges to transplant centers for pancreata intended to be used for islet cell transplantation, CMS subsequently modified its instructions to OPOs, requiring them to charge the same standard acquisition charge (SAC) for pancreata used for whole organ and for islet cell transplantation. ASTS spearheaded an unsuccessful campaign to reverse the policy, which culminated in a legal determination by CMS that the governing legislation mandates that transplant centers be charged the full SAC for all pancreata acquired for transplantation.

CDC Guidelines to Prevent the Transmission of HIV, HBV, and HCV through Transplantation

ASTS initially applauded, and nominated Advisory Committee members to assist, a CDC initiative to review and revise outdated 1994 CDC guidelines on the transmission of HIV through organ transplantation. However, by 2011 it had become clear that, as a result of changes made during interagency review, the CDC's proposed revised guidelines did not accurately reflect clinical consensus and substantially overstated the risk of disease transmission associated with transplantation. As a result, virtually the entire Advisory Committee assisting the agency requested the removal of their names from the document.

ASTS spearheaded—along with AST—a successful coalition effort to delay the publication of the final document and to revise a number of its salient deficiencies. As a result of further review conducted by CDC, a number of changes were made to the tone and content of the final document, including changes to the definition of “high risk” donors and to the recommendations for nucleic acid testing (NAT) prior to transplantation.

Regulation of Transplant Centers through HRSA and the OPTN

Since 2001, ASTS has interacted with HRSA and the OPTN to minimize unnecessary administrative burdens on transplant centers while protecting their due process rights, to expand the scope of OPTN authority where appropriate, and to advocate for policies that expand the availability of organs. For example, ASTS spearheaded an initiative to reduce data collection burdens on transplant centers and to establish principles to minimize future data collection burdens imposed by the OPTN on transplant centers.

ASTS also successfully led an initiative to delay adoption of OPTN bylaws changes that would have substantially curtailed the due process rights of transplant centers alleged to be in non-compliance with OPTN rules and regulations. At the same time, ASTS supported the OPTN authority when appropriate to ensure patient safety and further the field of transplantation. For instance, ASTS submitted comments to HRSA supporting the extension of OPTN authority to living donor transplants and supporting a HRSA proposal to define the term “organ” in a manner that provides the OPTN with authority to establish standards for Vascularized Composite Allografts (VCAs), defined as transplantation of multiple tissues such as muscle, bone, nerve, and skin, as a functional unit (e.g., a hand or face).

ASTS and Health Care Reform

Like many health care organizations, ASTS has been drinking from a fire hose with respect to reviewing and responding to the raft of regulations implementing the ACA. ASTS has worked extensively at both the federal and state levels to ensure that organ transplantation is considered an “essential health benefit” for purposes of private and Medicaid health insurance coverage. ASTS has also advocated on behalf of transplant centers with regard to health delivery reform through Accountable Care Organizations

(ACOs), bundled payment systems, and registry reporting. In particular, ASTS urged CMS to ensure that ACOs do not curtail Medicare patients' access to transplantation and urged both the agency and Congress to consider the Scientific Registry of Transplant Recipients (SRTR) as a model registry for the purposes of achieving the ACA's quality improvement objectives.

Conclusion

ASTS members look to their Society to represent their interests before federal and, to some extent, state policymakers. The past two decades have witnessed a concerted ASTS effort to meet these needs with engaged ASTS leadership, specialized Washington counsel, and membership support and engagement in advocacy activities. As health care continues to consume a larger share of national expenditures and the ACA dramatically expands health insurance access to millions of previously uninsured Americans, ASTS' legislative, regulatory, and reimbursement capacity and its initiatives in this area are expected to continue to be a central focus of the Society's work on behalf of transplant surgeons and patients.



American Society of Transplant Surgeons Executive Director Roundtable



Katrina Crist



Gail Durant



Kim Gifford

At the 40-year milestone, ASTS has had only three Executive Directors, all serving since 1997. Prior to employing professional leadership, ASTS was managed in an *ad hoc* manner, with officers and committee chairs performing tasks for the Society from their own offices, which were usually devoted to surgical practice, academia, or both. As ASTS grew in membership and scope of work, it became obvious that an office and staff devoted to ASTS were needed. The following is an “inside

account” of ASTS as told by the capable executives who have managed the Society for nearly two decades.

The three ASTS Executive Directors—Katrina Crist, Gail Durant, and Kim Gifford— served as follows: Ms. Crist, 1997–1998 and 2004–2011; Ms. Durant, 1998–2004; and Ms. Gifford, 2011–present. They were interviewed by Dr. Tom Peters on November 13, 2013.

Dr. Peters: Katrina, I think you were the first Executive Director we had. Is that correct? Ms. Crist: That’s correct. I believe that Hans Sollinger was President that year. The ASTS was seeking an executive director through an association management company. And, when I saw the organ transplantation aspect to it, I was very interested, and I applied for the position. I recall the top two candidates were interviewed by Avi Shaked in Philadelphia. So that was 1997.

Dr. Peters: Then you left and Gail came on board. Tell us a little bit about how that happened.

Ms. Crist: I took another position still within organ transplantation, working with Type I diabetes and islet transplantation.

Ms. Durant: This was near the end of 1998. The association management firm was looking for an executive director for ASTS. I was interviewed by Josh Miller. Josh was interviewing because he was the incoming president at the time. And so that’s how I came on board. And that was the very end of 1998.

Ms. Crist: When I was hired into the position, I was only 50 percent effort on ASTS. I also managed two other associations. So in the transition, the Society saw the value of having a professional manager and transitioned Gail to 100 percent, or full-time.

Ms. Durant: I was 100 percent ASTS. The support that the Society was getting in other areas from the management firm, I guess the Council believed, could be better, and so they began evaluating whether or not the Society should just have its own independent offices. And that’s what we ended up doing. And that took place a year later in 1999.

Dr. Peters: And then Kim, I think you came on board while Katrina was there.

Ms. Gifford: Correct. I was recruited in 2005.

Ms. Durant: I was sandwiched between Katrina and Katrina.

Ms. Crist: Yes, I did two tours.

Dr. Peters: Did you not get an MBA and then come back?

Ms. Crist: Yes, I did get an MBA. And actually it was Gail who called me.

Ms. Durant: Katrina was completing a five- or six-year project at Harvard. It was coincidental at that time in 2004 that my husband and I decided to leave the DC area. I called Katrina after I talked with the leadership, Avi Shaked and Dick Howard, and said, “Are you interested?” And the timing was good, I thought.

Ms. Crist: Yes, it was. What happened, though, was I said no at first. And then you went through a full search, is that right?

Ms. Durant: We interviewed a couple of people. We got about 300 applications, and I did the first review and then gave them to Dick and Avi. Dick was the incoming president, I believe. We interviewed a couple of applicants, and they were fine, but I think when I was talking to Dick I said that you may want to ask Katrina if she would like to reconsider. And they did and she accepted.

Dr. Peters: Katrina, your second tour was how many years?

Ms. Crist: I came back in May of 2004 and I left—was it June 2011, Kim?

Ms. Gifford: Correct. So about seven years.

Ms. Crist: Seven plus the prior two.

Dr. Peters: And Kim, you came on board in 2005?

Ms. Gifford: I came on board when we were down in Old Town Alexandria still at the Fairfax Street offices, and at that time it was Katrina and Joyce Williams and me. That seems amazing that it’s really been that short time ago that we were only three people. In 2007 our offices moved to Crystal City and we brought on board a communications director at that point. And then soon thereafter the National Living Donor Assistance Center (NLDAC) started. So that was kind of the impetus of the growth in the national office.

Ms. Crist: We went from three to ten, I believe.

Dr. Peters: And Kim, you became ASTS Executive Director when Katrina left.

Ms. Gifford: In 2011, correct.

Dr. Peters: We have prepared some topics and questions for your comments. Biggest challenge: Katrina, let’s start with you again.

Ms. Crist: Well, the first and the biggest challenge—I think this is so critical and key to ASTS history—was the potential amalgamation of ASTS and American Society of Transplant Physicians (ASTP), which is now the American Society of Transplantation (AST). That was a very interesting time

and there were very serious negotiations and talks about consolidating the two societies into one. Negotiations really started seriously around the beginning of 1998 and then carried through into Gail's term.

Ms. Durant: When I was interviewed in 1998, Josh was very upfront that ASTS was talking with another organization about a possible merger, which obviously would have an impact upon the Society staff. That was in late 1998. I also listed the possible merger as the biggest challenge for me, when probably a year later, reality set in that a merger wasn't going to take place. There was a long withdrawal period, which is when we became much stronger and more independent as a Society and started blooming.

Dr. Peters: Because we went through that fairly difficult time, ASTS emerged as a more confident and stronger professional society?

Ms. Durant: We came through much more focused. We hired good legislative help from a DC law firm that managed our policy initiatives. We were just more focused on what ASTS could do. The leadership had spent so much time on the possible ASTS/AST merger that we really weren't totally focusing on the Society itself. So I just felt we were blossoming at this point. We were more aggressive when dealing with AST, still wanting to be in joint projects like the journal and joint conferences, but we wanted and pursued our identity and our strengths in those projects.

Ms. Crist: And I would think that the creation—which really happened under your term, Gail—of a joint annual meeting, the American Transplant Congress (ATC), and then a jointly managed journal, the *American Journal of Transplantation* (AJT), really did position both societies to pursue the best interests of the field of transplantation together. The opportunity was to see how the two societies could work together, become successful, and take on equal risk as well as appropriate sharing of revenue before stepping into a major consolidation or merger. It seems like it was very successfully orchestrated.

Ms. Durant: I can't speak for AST, but I think that both societies recognized that we still had our independent needs for our own members, and yet there was so much we could also do together. So I think instead of just throwing everything in the same pot, we realized there are some things that go into that pot that we can stir together and do well, but there are other things we need to keep separate. And that's why we ended up maintaining the two separate societies.

Dr. Peters: So Kim, how about the first big challenge for you?

Ms. Gifford: When I first joined ASTS, we took fellowship training to a level ASTS hadn't before. I recall Katrina had made the decision earlier in 2004 to house all fellowship information in the ASTS office. And, that year the first fellowship match occurred. And so really looking at fellowship training in depth and evaluating the program—the effort and energy that the committees and the Council put into improving fellowship training—was an early challenge. That first year we had a large number of training programs that underwent a rigorous review. Those early steps really did set the course for something that I think is pivotal to the Society, which is to make fellowship training one of the hallmarks of what ASTS does.

Dr. Peters: What surprised the three of you most about being the Executive Director?

Ms. Crist: For me it really was how truly fascinating the field of transplantation is. I wasn't expecting it to be so unbelievably interesting and fascinating. I learned so much from both a clinical and scientific standpoint—which I never would have thought being the case going in—as well as the ethical and business matters in organ transplantation. I mean it really was interesting working with transplant surgeons who also were interested in how to run a department and how to manage the business side of transplantation. I learned a great deal.

Ms. Durant: I agree with Katrina. I found myself sitting in at the meetings on clinical sessions just in awe. I think another thing that surprised me was the energy level of everybody. The dedication and the involvement were just phenomenal. I found it inspirational. I felt like I learned so much that I didn't expect to learn. I just became fascinated by transplantation. Surgeons were beginning to do living liver donors and things like that when I came on board.

Ms. Gifford: I would say that my thoughts on that question were exactly the same. We have this amazing group of members who are dedicated to their professional home, the Society.

And this dedication exists in the face of very busy clinical practices, going that extra mile to teach, and being willing to learn new things to advance their profession. It has been very humbling in many ways—and energizing.

Dr. Peters: What were other big challenges you each faced?

Ms. Crist: For me, it was preserving financial interests and equity of ASTS in both the ATC and AJT—the two joint ventures with the AST. There were very delicate negotiations that occurred toward the end of my second term as

we had already developed two very highly successful and profitable joint ventures. We were successful in maintaining equity in decision-making as well as finances. As you know, from a volume standpoint, the member base is much greater on the AST side than the ASTS side. But when you build something and take on the same level of risk, as in the initial venture, then it really is important to preserve that equity for the members.



Shelli Adams, Joyce Williams, and Gail Durant, the first staff of the independent ASTS national office.

Ms. Durant: Establishing the totally independent national office was a big challenge. When I came on board I was employed by a management firm, and within a year we went out on our own. Due to an office space subleasing arrangement, we found ourselves in need of getting new office space immediately. That is how we ended up on North Fairfax Street in Old Town Alexandria. While I was looking for office space, ASTS staff were packing up. I just had two employees at the time and they did a tremendous job. We moved the office in a weekend. Not many people realized we were going through the move, but the bottom line was the Society kept going—the magazine came out on time, the website was kept updated, we did our legislative work. Nothing skipped a beat while we were going through this move and becoming a totally independent Society.

Ms. Gifford: In many ways, I think this is a question more suited to reflection than when you are in the heat of the battle. The biggest challenge might be before me. But I think what Katrina and Gail talked about earlier,

such unique challenges with the negotiations about the merger—those re-emerged in 2006 on some levels. The fact that they've been able to put that discussion to rest and the way that we strategically partner with AST on things like the AJT and the ATC, those huge hurdles have been resolved. And so looking ahead, I look at the financial goal that the Society has set to achieve: the \$20 million in net assets and how we're inching toward that goal. How do we move forward and set our programs in place that capitalize on serving the needs of the members and still make sure we don't lose sight of this goal that the Society has set and is very close to achieving.

Dr. Peters: What are your proudest moments?

Ms. Crist: I'm most proud of creating value for the members beyond the ATC and the AJT. To have the respect of and to be able to work with ASTS leadership moving toward a strategic direction to really, truly create value for the members has meant a lot. And we've all had a hand in the fellowship match, accrediting fellowship training programs, and making training of transplant surgeons much more robust. The curriculum, with the Academic Universe, the overall professional development, and then of course the leadership and business development aspects are part of a list that goes on. The teamwork overall to create that value and then stand back and see it makes me very proud. And of course the National Living Donor Assistance Center, which I consider my legacy item.

Ms. Durant: Looking back, my proudest moment would be when the Society established an independent office and the ability to focus on our own issues. We got much more involved in the advocacy arena as surgeons, as a group doing a lot more legislative work. And we started the January State of the Art Winter Symposium and got the Vanguard Committee rolling, which I thought was just wonderful. I believed that the Vanguard Committee became a way, without patronizing younger surgeons, to get them involved in the Society by really giving them something to do. And we had fresh blood always coming along for future leadership.

Ms. Gifford: Gail, you'll be happy to know that the winter meeting continues to be very successful. The groundwork that both of you put into that meeting has been well rewarded. Several years ago, the Council really struggled with how the winter meeting has grown and whether it needed to be managed at a higher level. They had some good discussions and, rightly so I think, they left

the winter meeting with the Vanguard Committee while adding senior advisers to help. The junior members retained ownership.

Ms. Durant: I just thought that was wonderful. People that as young as they were, new to the organization, really felt they had a vested interest and they could do something. I'm just so happy that occurred under my watch.

Dr. Peters: So Kim, is there another thing you take pride in that you want to mention?

Ms. Gifford: I'm very proud of the strides that the Society has taken in regard to fellowship training and all that entails. It's more than accrediting programs; it's the creation of the Academic Universe. We were able to engage our membership to create all these learning modules to help educate the next generation of transplant surgeons. And now we have a fellowship strategic plan regarding assessment of fellows and programs, with new tools to raise the bar a little more in the future. Finally, we now have a strategic plan that the Council developed in August. I am pleased that they took that time for self-reflection, looking at the environment today and thoughtfully deciding where they want the ASTS to be in the future. Now, we can chart a course to get there.

Dr. Peters: Each of you had a predecessor, even though Katrina was there twice, so her predecessor the second time was Gail. But Katrina, I'm sure you must have received instruction in your first tour from someone.

Ms. Crist: Certainly from Gail in 2004. But, the first time, 1997, it was so unformed, if you will. Just a true, 100 percent volunteer organization transitioning to professional management. Some of the best advice I got somewhere along the line was: "Look, they hired you for a reason. They're not expecting you to be a transplant surgeon; they have plenty of those. What they're asking you to do is to bring a different set of skills, look through a different lens, and help them work together."

Ms. Durant: Katrina, the most valuable thing you gave me was that, from the very beginning, everything was on the table and up-front. When it was just one on one, Katrina and me, it was warts and all: what was great, what needed work. She didn't embellish anything. That honesty was very helpful. Plus the fact she stayed in the industry. If I did call upon her, I didn't have to give her any background information; she was still involved in a way. But Katrina, it's not just your style, but your whole honest approach helped me tremendously.

Ms. Gifford: I'm very thankful for the mentorship Katrina provided me. And one of the lessons I always reflect on is her insistence to always raise the bar. And that's really become part of who I am and what we do. Probably the worst thing you can say is "That's what we did last year." She taught me to never accept the status quo and to look for ways to improve the products and services we provide to the membership. Doing it the same way and accepting the status quo is just unacceptable. And so that mentality has allowed us to discover what the true needs of the membership are and then identify products and services that meet those needs.

Dr. Peters: What was the funniest thing that happened during your term?

Ms. Crist: I think people don't realize how funny surgeons can be. But there's just nothing that compares to this one experience I had, the buffoonery of it all and the fun of it all. It was arriving in Philadelphia with Josh Miller, after all-day negotiations with ASTP. I can't even begin to tell you how tense those talks were at the time. After a significantly delayed flight, we were arriving around 11:30 p.m. to find the hotel was oversold due to the American Society of Nephrology meeting. And the hotel was having a hard time finding any place to relocate us. We were just so unbelievably tired; we had to get up really early the next day. After a 45-minute taxi ride commissioned by the hotel, we arrived in Cherry Hill, New Jersey, at the Inn of the Dove. I don't think even your wildest imagination could do justice to the decor and the accessories of these accommodations. So it was laugh or cry, and this story has afforded many laughs over the years.

Ms. Durant: Well, I remember very distinctly when we had an Executive Committee meeting in New York City and I made dinner reservations at a very nice restaurant that one of the Committee had recommended. As the Executive Committee and I walked in, the maître d' looked at one of the Executive Committee members and asked, "Excuse me, sir, do you have a jacket?" The response was no and the maître d' turned to me and said, "I am sorry, but all gentlemen must be wearing jackets." He then turned and walked away. The Executive Committee member looked me straight in the eyes and said, "Gail, give me your jacket." I literally had my hand clutching my lapels saying, "No! You're not taking my jacket!" Now this was taking place at the entrance of this lovely restaurant. Fortunately the maître d' returned with a jacket that they kept in the coat check room and handed it to us. And so my

coatless Executive Committee member now had a jacket on and we progressed with dignity into the dining room.

Ms. Gifford: I think there's a fine line between embarrassing and funny. I once sent an email and addressed leadership as "Dead Council" instead of "Dear Council." It's almost funny now but it was horrifying at the time. But when I think of a funny engagement with the Council, I think of our Council meeting at the ATC in 2012. I was nervous because I had been preparing to ask for a substantial amount of money for the IT upgrade. For the executive session and my presentation, the committee chairs were dismissed. As we looked out in the hallway, there was a bride and her bouquet, and a groom, and the arch, and a whole wedding set up to come into the room as soon as we vacated. And I had to present this request for this money! I had taken Katrina's advice to start with what you want, and I had put the total dollar amount up there pretty early, and as I started to go to the next slide, someone said, "Can I ask a question?" And I thought, oh no, this is it. It's going to get kicked to January. And he continued, "Can we just move approval and let this wedding get underway?" All of that planning and rehearsing were over in about two minutes. We got the approval for the IT upgrade and the wedding went on as planned.

Dr. Peters: Is there anything you'd have done differently?

Ms. Crist: I'm sure there must be plenty of things, no doubt. But I don't remember what they are.

Ms. Durant: The one thing that came to mind was: I felt we could have done more at that time with the ASTS Foundation. In the initial conversations, we were still concerned about some issues with AST and sharing the profits from joint projects. We felt if we had a separate Foundation, that could help us in some ways. But as the business concerns resolved, enthusiasm for the Foundation diminished as did the impetus for its development. I was hoping that the Foundation would support broad educational efforts.

Ms. Gifford: We have undertaken a big redevelopment of ASTS.org over the last year, and we had three phases or components, and now that we're down to working through the hurdles of the last phase, part of me thinks that should have been the first one.

Dr. Peters: What is your legacy?

Ms. Crist: I consider my legacy the National Living Donor Assistance Center. I was told no initially but I kept advocating for it in partnership with the University of Michigan. It's one of those things that had a high probability of not becoming a reality if I hadn't been a strong advocate for it. Now it's helped thousands of patients and families, so that feels really good.

Ms. Durant: I felt I was able to make the Society become a truly independent organization. I felt very proud of that.

Ms. Gifford: I feel like I should defer my answer to the 50th anniversary. I think that building on the successes that both Gail and Katrina put in place has been very rewarding, and watching the Society grow and become even more independent and self-assured and representing the surgical side of the specialty.

Dr. Peters: I think each of you have placed an important mark on the organization. Let's wind up with the one story you would like to tell, if there is one that has not yet been told.

Ms. Crist: I often get asked, what's it like working so closely with so many surgeons? For me, it was a privilege. I have the deepest respect and admiration for transplant surgeons. Your commitment just shines through every individual member to advancing the clinical practice and the scientific research. It's really unparalleled.

Ms. Durant: There are tons of things that come up. Like I said, moving the office was hectic but also exhilarating. But if you just look back at the body of the work and the people, they never cease to amaze me. I am a morning person so I was always in the office very early, but no matter how early I would arrive there usually was an email from Bob Merion or another member that had come in even earlier. They were all so dedicated.

Ms. Gifford: It's an amazing field to work in. It's challenging on an ethical basis and on a scientific basis. To be part of that and to be able to engage in these issues and really help build around the pillars of the mission and continue this path of success that people have put so much effort and energy into is humbling, and I'm thrilled to be a part of it.



ASTS 40th Anniversary Gala

ASTS kicked off its anniversary year with a formal gala at the 14th Annual State of the Art Winter Symposium at the Loews Miami Beach Hotel on January 25, 2014. The event began with cocktails on the Americana Lawn, after which guests made their way to dinner through a grand corridor transformed into Memory Lane.

At dinner, Thomas G. Peters, MD, ASTS Historian, introduced a special video of Dr. Thomas E. Starzl, ASTS' first President. Dr. Starzl noted that "the origins of the Society occurred ...right around 1974.... Fred Merkel, myself, and I think Roy Calne was involved in some of these discussions But the one meeting that I remember most distinctly was the one in Miami which took place during the Annual Meeting of the American College of Surgeons. There the idea of formulating a surgical transplant society was discussed explicitly."

Dr. Peters then introduced the 40th ASTS President, Alan N. Langnas, DO, who welcomed attendees and recognized the past presidents and charter members in attendance. Special lapel pins were presented to these distinguished guests.



Guests at the 40th Anniversary Gala had a chance to reminisce as they viewed panels with memorabilia from ASTS' history on the way to the Gala dinner.



Past Presidents at 40th Gala: From left, Barry D. Kahan, PhD, MD; Robert M. Merion, MD; Michael M. Abecassis, MD, MBA; Richard J. Howard, MD, PhD; Kim M. Olthoff, MD; Ronald M. Ferguson, MD, PhD; Abraham Shaked, MD, PhD; Nancy L. Ascher, MD, PhD; Mitchell L. Henry, MD; James A. Schulak, MD.

Kim M. Olthoff, MD, President of the Foundation of the ASTS, reminded guests about the role of the Foundation in supporting ASTS Research Grants. She encouraged everyone to support the Foundation 2014 goal to raise \$100,000 from member contributions to advance research in transplantation.

Dr. Langnas then gave a toast to ASTS and its members, and dinner was served. After dinner, a cake complete with sparklers was presented and

guests saluted ASTS by singing “Happy Birthday.” Afterward, DJ Dorry (a.k.a. Dorry L. Segev, MD, PhD) took over the festivities, and attendees danced the night away.



ASTS President Alan N. Lagnas, DO, led a champagne toast to ASTS and its members.

ALL PHOTOS BY TOM WEBER



A New Beginning: The Future of ASTS

MICHAEL B. ISHITANI, MD, ALAN N. LANGNAS, DO, THOMAS G.
PETERS, MD, KIMBERLY A. GIFFORD, MBA

Predicting future events and trends has always been a chancy business, but it is also something that can be done with some degree of confidence if one looks at trends from the past for guidance. No one, of course, knows what will truly occur, but we of ASTS do have some themes from the past 20 years that we may examine and use to make predictions as to where ASTS will go in future years. We might start with the ASTS mission statement.

For many years, the mission statement read:

... leading the way in the 21st Century in fostering and advancing the practice and science of transplantation for the benefit of patients and society; guiding those who make the policy decisions that influence the practice and science of transplantation; increasing organ donation; defining and promoting training and the career-long education of transplant surgeons, scientists, and physicians; and advancing the professional development and careers of transplant surgeons, scientists, and physicians.

As ASTS approached its 40th anniversary, the ASTS Council gathered for a strategic planning session in New York City. At the conclusion of these deliberations, the Council had developed four strategic goals that represent

ASTS' core competencies and where resources will be focused to achieve the mission. These goals are:

Advocacy: To engage other stakeholders and strategic partners to effectively represent the interests of our members and the patients they serve.

Research: To promote basic, translational, and clinical research in the field of transplantation.

Training and Professional Development: To provide life-long learning and educational opportunities for professionals involved in transplantation.

Optimal Patient Care: To create a network of resources that are ethical, safe, timely, and effective for learning and dissemination of knowledge focused on optimal patient care.

Additionally, the Council revised the mission statement to read:

To advance the art and science of transplant surgery through leadership, advocacy, education, and training.

To carry out its mission, ASTS will continue to need strong leadership, engaged members, and of course excellent administrative support provided by the ASTS staff. The first predictions (in bold type) to be made, therefore, are about ASTS itself and as an organization.

ASTS will continue to be needed in the future. There is little doubt that ASTS will continue to be needed in the future. Our patients, colleagues, and members all benefit from the leadership and programs developed by ASTS. In addition, ASTS serves important educational, research, and policymaking roles in the field of transplantation.

The ASTS staff and office will experience responsible and steady growth. Over the last 20 years, the ASTS staff has grown from one part-time, contracted administrative person, Ms. Katrina Crist, to eight staff devoted wholly to ASTS with an additional three staff working on the National Living Donor Assistance Center. The overall budget for ASTS, including NLDAC operations, in 2014 approaches \$5.8 million, a figure that will likely grow as ASTS staff play a key role in supporting an increasingly active and growing organization. Many of the ASTS staff have been with the Society for years, which has helped provide the institutional memory so important for continuity, since elected councilors and officers regularly rotate into and out of leadership positions. Staff responsibilities are also likely to grow to maintain and monitor the ever-increasing legal and regulatory constraints of

our specialty and to serve our growing membership base. In the future, liaisons with other professional organizations will require senior “staff-to-staff” interactions to guide members of all stripes through the ever more complex medical world in which ASTS members practice.

ASTS membership will increase. It seems likely that efforts to increase organ donation or the development of currently unforeseen sources of organs over the next several decades will lead to more organ transplants and thus an increased need for more transplant surgeons. An increase in the number of ASTS international members to enrich the Society may also occur, allowing their access to the training (Academic Universe) and professional education resources (Trans-SAP) that ASTS has developed. Importantly, the number of allied health professionals who will join ASTS and partake of its many programs should grow substantially. Finally, as the medical profession evolves, multi-disciplinary quality of care linked to relevant professional education will be, of necessity, specialty-specific; thus, even non-surgeon transplant physicians may come to look upon the ASTS programs as an effective and convenient way of fulfilling their licensing and related regulatory needs.

In the future, as ASTS grows to meet the needs of our members and patients and seeks to fulfill its mission, the Society will continue to be involved with manifold issues including advocacy, research, training and professional development at all professional levels, and optimal patient care.

The Foundation of the ASTS will become an influential aspect in all areas of the Society as the Foundation’s fiscal strength grows in a manner that should, at some future time, enable the Foundation to independently and continuously support key missions of the Society.

Advocacy

A major aspect of the ASTS mission has been to influence public policy to benefit its members, their patients, and the institutions that support organ transplantation. Public policy achievements have also secured the place of transplantation as a recognized multidisciplinary field in an ever-changing landscape of modern health care.

The public policy roles enjoined by ASTS will become more important as years go by. Because health-care dollars will be sought by many different competing entities, ASTS will remain vigilant in protecting our transplantation specialty and our patients from injudicious and uninformed

political and financial decisions. Maintaining a strong voice in Washington in conjunction with our medical colleagues is of paramount importance, since it appears likely that expenditures for health care will come under increasing scrutiny.

Support of organ donation will continue, as this is necessary for the care of our patients. Developing and articulating policies in a controversial legal and ethical environment concerning organ donation will be necessary for ASTS. Agreeing on international standards of ethics and care will occupy the attention of ASTS as other countries develop their own programs based upon their own cultures and societal norms. Reaching consensus on these issues may be problematic and will require thorough assessment and discussion within ASTS.

Research

ASTS will maintain some research support efforts, but levels of financial support will not substantially increase. ASTS has historically made a strong and concerted effort to support the clinical and basic science research of members as well as trainees and colleagues. Some level of support will surely endure, but diminished resources could severely limit growth of the many grants now offered by our Society. Partnerships with pharmaceutical manufacturers and other industry entities have become increasingly difficult due to regulatory roadblocks and the societal notions that for-profit companies have no place in the halls of academic medicine. In addition, the time, cost, and resources needed to do both basic and clinical investigation impact the ability of transplant surgeons to pursue research. Academic medical centers require us to be clinically productive, meaning that they want dollars added to the practice plan. New ASTS revenue streams will be needed to maintain and increase levels of research funding.

ASTS will advance research through advocacy efforts to reduce barriers and create opportunities for research. In the face of declining funding for ASTS sponsored grants, ASTS will increase efforts to interface with government agencies to set the research agenda. ASTS will play a key role in addressing the scientific, ethical, regulatory, and logistical barriers to the optimal design, implementation, and execution of research in organ transplantation.

Outcomes research, quality improvement initiatives, and best practice models will be developed by ASTS. There is far-reaching emphasis on

efforts to reduce clinical costs and improve quality of care (i.e., add “value”). As these efforts grow nationally, ASTS will become ever more important in helping its members navigate the many clinical and regulatory mazes clinicians will face. Assessing the results of quality improvement programs may supplant, at least in part, the kinds of clinical research now undertaken and supported by ASTS and its members. A Transplant National Surgical Quality Improvement Program (NSQIP) developed with strong ASTS input would be a vehicle to improve clinical care and provide an avenue for clinical research.

Training and Professional Development

ASTS will move from accrediting fellowship training programs to certifying individuals who have completed accredited fellowship training programs. Discussions with accrediting and certifying organizations have led to early efforts to design a certifying examination for transplantation surgery. An ASTS-developed national certifying examination will be based upon the ASTS curriculum, now available as the Academic Universe. Eventually an oral board testing program may be developed so certification would be similar to other American Board of Surgery specialties. Given the national mandate for duty hour restrictions, it is possible that more didactic and computer-based training techniques will come into being, although the nature of transplantation surgery (organ availability and preservation time limits) may allow for a special dispensation for flexible duty hours in transplant fellowships. Finally, at the fellowship training level, ASTS will seek to set the standards for all training programs worldwide.

ASTS will broaden its offerings for medical student and general surgery resident education in the future. Many aspects of the ASTS educational curriculum for fellows can be modified and adapted for use by medical students and general surgery residents. Efforts are underway to improve access to these materials to online curricula developed for general surgery resident education and medical students.

ASTS will continue to meet the educational and practice needs of its members. For over a decade, ASTS has provided valuable and innovative learning opportunities for its members. Through continuing medical education (CME), ASTS will build upon the success of past ASTS educational programs and continue to offer up to date, relevant, effective, practice-based CME that supports health care quality improvements. To stay

current with the rapid advances in transplantation medicine and changing professional requirements, the ASTS CME Committee will introduce new educational offerings designed to meet maintenance of certification (MOC) and regulatory requirements and the ever-changing educational and practice improvement needs of ASTS members.

Optimal Patient Care

Over the past 40 years, there has been development and multidisciplinary standardization of kidney, liver, heart, pancreas, and cornea transplantation. Although nuances and differences remain between and among transplant centers, basic clinical endeavors and surgical techniques are similar throughout the Americas, leading to excellence in results for the most part across the country. Important advances have been made in lung, islet, intestine, and multi-visceral transplantation, although substantial work remains to achieve predictably successful outcomes with these organs.

ASTS will continue to lead the way in new frontiers of transplant patient care. Simply put, transplantation in most cases still requires precise high-level surgical expertise that cannot be provided by any other discipline. New efforts in the evolving fields of limb, face, and tissue transplants affirm the need for multidisciplinary surgical teams with wide and diverse expertise. Donor organ shortage remains the main obstacle to providing transplant care to many patients; therefore, exciting future efforts in xenotransplantation, stem cell applications, tissue scaffolding, and 3-D printed techniques are being studied or investigated by ASTS members. Perhaps in the future we may even see neural tissue-based transplants.

ASTS will continue to contribute to advances in immunosuppression. Immunosuppression has evolved over several decades from just a few agents with low efficacy and high morbidity to multiple agents with high efficacy and lower morbidity. New agents and approaches are constantly being brought forward by the pharmaceutical industry and basic science laboratories. To confirm improvements, clinical trials by ASTS members and presentation of outcomes at ASTS meetings will remain a hallmark of clinical advancement.

ASTS will lead the way with the implementation of standardized patient care algorithms and with development of best practices models and quality control. Surgeons have always been leaders in development of standardized quality measures and best practice models. Experience with the

ACS NSQIP has led to major improvements in morbidity and mortality in multiple surgical specialty areas across the United States and Canada. ASTS is in the process of developing a Transplant NSQIP program that will seek to benchmark and risk-adjust transplant outcomes across the country, allowing for the development of quality improvement programs for transplant centers and surgeons. This will ultimately lead to better and more standardized care across the country as centers will come to depend on the data, expect the data, and rely on the data to guide their efforts to better care for their patients.

Organ shortages will continue to plague organ transplantation. ASTS members have been in the forefront of issues and debates regarding many aspects of organ donation and the ethical matters pertaining to topics such as financial incentives in both deceased and living kidney donation and other moral and ethical issues in transplantation. While exciting developments in xenotransplantation, stem cell transplantation, tissue engineering, and biomechanics show some promise, transplantation using viable human organs is likely to remain the “gold standard” of vital organ replacement. But human organs are likely to be relatively scarce for years to come. Efforts to increase donation efficiency by innovative matching programs and changes in public policy will continue, perhaps through regional or national exchange programs. Positive evolution of outdated policies and regulations may also have a positive impact. And some relief in organ shortages could come from better preservation and matching methods as well. Perhaps in the next 20 years or so, as yet unforeseen breakthroughs will allow the field of transplantation to provide beneficial services to all patients in need.

Conclusion

Over the last 40 years, the American Society of Transplant Surgeons has been the transplant surgeons’ professional shepherd and the organization through which the extraordinary changes in our chosen specialty were conceived, debated, adopted, and improved. The focus of ASTS has always been on the needs of our patients, the quest to know, and the education of its members as well as our trainees; the Society has also been our professional home. As we look forward, the future is bright. ASTS will help us continually refine our craft and improve our care of patients who need our skills. And the most certain prediction of the future is that ASTS will be there for our patients, for our institutions, and for us.



ASTS Council

1994-1995

President

Mark A. Hardy

President-Elect

Nicholas L. Tilney

Immediate Past President

Frank P. Stuart

Past President

Clyde F. Barker

Secretary

Ronald M. Ferguson

Treasurer

Ali Naji

Councilors-at-Large

Darrell A. Campbell, Jr.

Marc I. Lorber

James F. Burdick

David L. Dunn

Nancy L. Ascher

Richard J. Howard

1995-1996

President

Nicholas L. Tilney

President-Elect

Hans W. Sollinger

Immediate Past President

Mark A. Hardy

Past President

Frank P. Stuart

Secretary

Ronald M. Ferguson

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James F. Burdick

David L. Dunn

Nancy L. Ascher

Richard J. Howard

Donald C. Dafoe

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1996-1997

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