



**Abraham Shaked, MD, PhD** is the Eldrige L. Eliason Professor of Surgery, and Director of the Penn Transplant Institute. Dr. Shaked received his MD degree from the Hebrew University in Israel and completed his general surgery training at Mount Sinai Hospital in New York, where he also accomplished a degree of Doctor of Philosophy in molecular pathology and immunology. He then completed an accredited transplantation fellowship at the University of California, Los Angeles (UCLA), where he served for 5 years as the Associate Director of the busiest liver transplant program in the country. In 1995 Dr. Shaked was recruited to lead the liver transplant

program at the University of Pennsylvania and the Children's Hospital of Philadelphia. Since then the combined program has become one of the 10 busiest in the country. His clinical activity is focused in adult and pediatric liver transplantation, complex hepatobiliary surgery, biliary reconstruction, and minimization of immunosuppression.

Dr. Shaked is a nationally and internationally recognized leader in the field of transplantation and served as President of the American Society of Transplant Surgeons. Dr. Shaked's academic record is reflected by his outstanding achievements in basic laboratory research, translational research, and support for clinical science investigation. His laboratory efforts focus on the exploration of early gene expression in organ donors and using molecular identifiers to determine the relationship of proinflammation and the activation of the alloimmune response. These studies are extended to determine biomarkers of rejection in blood and urine of organ recipients. He is supported by continuous NIH funding since 1992. He has published over 150 manuscripts, and is a member of the Editorial boards of *American Journal of Transplantation*, *Transplantation*, and *Liver Transplantation*.



**Kim M. Olthoff, MD** is the Donald Guthrie Professor of Surgery in the Division of Transplantation at Penn, Chief of the Division of Transplantation at Penn, and the Vice Chair for Faculty for Development. She attended the University of Chicago Pritzker School of Medicine, and completed a residency in general surgery at UCLA followed by a fellowship in transplantation and hepatobiliary surgery at the Dumont – UCLA Transplant Center, and joined the faculty at Penn in 1995. Dr. Olthoff's clinical practice focuses on adult and pediatric liver transplantation, living donor liver transplantation, and surgery for hepatobiliary malignancies and benign liver tumors. She co-directs the multidisciplinary hepatobiliary

tumor conference and the Liver Tumor Clinic at the Penn Transplant Institute, and is the Surgical Director of the Liver Transplant Program at CHOP.

Dr. Olthoff is a Past-President for the American Society of Transplant Surgery and was previously the Chair of the Liver-intestine Committee and on the Board of Directors of the United Network for Organ Sharing (UNOS)

Dr. Olthoff has an active research laboratory in translational and clinical research and a recipient of NIH funding for studies in liver regeneration, early allograft dysfunction, living donor transplantation, and transplant genomics. She has authored or coauthored over 200 original papers and book chapters.

## PENN TRANSPLANT SURGERY FACULTY FY19

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**Peter Abt, MD** attended Brandeis University and received his medical degree at Dartmouth. He completed his general surgery residency at the University of Rochester in 2001 followed by a research and clinical fellowship in transplantation at the University of Pennsylvania. After fellowship he joined the faculty at the University of Rochester and was recruited back to Penn in 2007. Dr. Abt is the director of the abdominal transplant fellowship transplant program at Penn. Dr. Abt's clinical practice focuses on adult and pediatric liver, kidney, and pancreas transplantation as well as living kidney and liver donation. In addition, he has an active practice in dialysis access and laparoscopic liver surgery.

Dr. Abt's research interests primarily involve answering clinical questions related to transplantation through the use of national and regional data registries. Current investigations focus on understanding the benefit of kidney transplantation in non-renal transplant recipients and dual organ transplants. Ongoing translational studies address acute kidney injury in liver transplant recipients. Dr. Abt has authored or coauthored over 150 papers and book chapters, is an Associate Editor of the *American Journal of Transplantation*, and on the editorial boards of *Liver Transplantation* as well as *Clinical Transplantation*. Dr. Abt has served on various committees for the United Network of Organ Sharing (UNOS) as well as the American Society of Transplant Surgeons, where he is a Councilor-at-Large.



**Clyde F. Barker, MD** is a native of Salt Lake City, a graduate of Phillips Exeter Academy, Cornell University and Cornell University Medical College. His entire subsequent career has been at the University of Pennsylvania. After internship, residency in surgery and fellowship in vascular surgery, he studied transplantation biology under Rupert Billingham as a Post Doctoral Fellow in the Department of Medical Genetics. In 1966, his first year on the faculty, he initiated the University's transplant program by performing a kidney transplant, now one of only a small number in the world that still functions 46 years later. From 1966-2001 he was Chief of Transplantation Surgery, from 1982-2001, Chief of Vascular Surgery and from 1983-2001 John Rhea Barton Professor and Chairman of the Department of Surgery.

Dr. Barker's research interests have been primarily in transplantation, especially transplantation of the kidney, pancreas and isolated pancreatic islets. His research was continuously funded for over twenty-five years by grants from the National Institutes of Health, including an NIH Merit Award from 1987 to 1995. Dr. Barker has published more than 430 scientific papers and served on 12 editorial boards.

Dr. Barker's scientific memberships include the College of Physicians of Philadelphia, the American College of Surgeons, The Institute of Medicine of the National Academy of Sciences, the Association of American Physicians, the American Academy of Arts and Sciences and the American Philosophical Society of which he is now President. He has been President of the American Society of Transplantation Surgeons, the United Network for Organ Sharing, the Halsted Society, the U.S. Chapter of the International Society of Surgery and the American Surgical Association. He has served as visiting professor at 100 different universities and is an

Honorary Fellow of the Royal College of Surgeons of England and of the Royal College of Surgeons in Ireland. Dr. Barker is the recipient of several lifetime achievement awards, including the Roche Pioneer Award of the American Society of Transplant Surgeons, the Sheen Award of the American College of Surgeons, the Medallion for Scientific Achievement of the American Surgical Association, the Jonathan Rhoads Gold Medal of the American Philosophical Society and the Distinguished Graduate Award of the School of Medicine of the University of Pennsylvania. He has been designated the 2009 recipient of the Thomas E. Starzl Prize in Transplantation and Immunology and the Lifetime Achievement Award of the Society of University Surgeons, and in 2010 he was awarded the Medawar Prize of the International Transplant Society.



**Matthew Levine, MD, PhD** attended Brown University, followed by a combined MD/PhD at Yale. He completed his PhD in immunobiology in the laboratory of Charles Janeway Jr., with work focusing on the discovery of positive selection events in the peripheral development of B cells. He then went on to complete general surgery residency at the Massachusetts General Hospital and a fellowship in abdominal organ transplantation at the University of California, San Francisco. He joined the faculty at the University of Pennsylvania in 2009 in the Division of Transplantation. Dr. Levine is Surgical Director of the Transplant Center at Children's Hospital of Philadelphia. He is clinically active in liver and kidney transplantation in adults and children, pancreas transplantation, and laparoscopic kidney donation

Dr. Levine's basic science research is focused on defining the role that histone deacetylases (HDACs) and heat shock proteins (hsps) play in tolerance of renal ischemia-reperfusion, work that is now funded by the NIH. This work has demonstrated significant renal function protection via HDAC inhibition by drug and by gene knockout which has also been associated with substantial diminution of fibrosis after injury. Further work is investigating which specific HDAC pathways are involved and determining if the site of action is on the kidney or the inflammatory cascade. Additional directions of this work are defining the role that hsps play in renal ischemic damage and whether the expression of hsps is beneficial or detrimental to renal ischemic recovery. Additional work is investigating the role of gender and hormone milieu on the response to renal ischemic injury. Dr. Levine has additional collaborative basic science studies investigating the role of costimulation blockade and cytokine pathway manipulation in rejection or tolerance of limb transplantation in murine models, work that is being initiated with funding from the Department of Defense and is initiated in collaboration with Dr Wayne Hancock and Dr Scott Levin. Additional collaborative work with the Hancock laboratory involves the effects of typical immunosuppression strategies on human regulatory T cells (Treg) after transplantation.

He is active in clinical research as well, with projects pertaining to liver transplantation for hepatocellular carcinoma and efficacy and utility of renal transplantation in certain clinical scenarios, particularly pediatric transplantation. He is a national committee member of the American Society of Transplant Surgeons and the Association for Academic Surgery and a member of the Society of University Surgeons.



**Ali Naji, MD, PhD** completed his clinical residency and fellowship training in general, vascular and transplantation surgery at the Hospital of the University of Pennsylvania in Philadelphia, where he also obtained his PhD in Immunology. He joined the faculty at Penn in 1981, and is currently the J. William White Professor of Surgery and director of the kidney/pancreas transplant programs at Penn. He is the director of the JDRF-Penn Islet Transplantation Program, and Associate Director of the Institute for Diabetes, Obesity and Metabolism at the University of Pennsylvania School Of Medicine.

Dr. Naji is a well-funded investigator, whose basic research efforts have focused on the immunobiology of transplantation and immune pathogenesis of autoimmune diabetes. His investigations were the first to demonstrate the critical role of recurrent anti-beta cell autoimmunity as a basis for the failure of islet transplantation for treatment of Type 1 diabetes mellitus (T1D). Most recently, his group's efforts have focused on the role of B lymphocytes in the pathogenesis of T1D and organ transplant rejection demonstrating the requisite role of B lymphocytes as antigen presenting cells in the pathogenesis of islet inflammation and immunologic rejection. Translation of his basic research in islet transplantation studies have demonstrated the efficacy of B lymphocyte targeting for the induction of islet allograft tolerance in diabetic non-human primates. Dr. Naji and his group are investigating the clinical efficacy of B lymphocyte directed immunotherapy as part of the cooperative NIH sponsored islet transplantation consortium. He has received numerous awards for his work in diabetes, and has served as chair of the Medical Science Advisory Board of the Juvenile Diabetes Research Foundation.

Dr. Naji has published over 200 peer-reviewed manuscripts, and served on numerous NIH study sections including Surgery/Anesthesia/ Trauma, Immunological Sciences and Transplantation/ Tolerance/Tumor Immunology. He is an associate editor for the journals Transplantation, Diabetes and Transplantation Immunology.



**Paige Porrett, MD, PhD** grew up in a small town in Michigan and then moved to Chicago to obtain a BA in French and her subsequent MD at Northwestern University. Dr. Porrett came to Penn in 2001 to begin her general surgery residency and stayed for her abdominal organ transplant fellowship at the Penn Transplant Institute, completed in 2012. She also completed a PhD in Immunology under the tutelage of Larry Turka, MD at Penn, and maintains a strong interest in understanding how the activated innate immune system prevents transplantation tolerance. Dr. Porrett is the Director of the Living Donor Kidney Transplant Program Dr. Porrett's clinical practice includes living

and deceased donor kidney transplants, pancreas transplantation, liver transplantation, and general surgery in the transplant patient.

Dr. Porrett's current research studies hope to elucidate the role of the inflammasome in tolerance blockade as well as define which proinflammatory cytokines represent key barriers to tolerance induction. She is currently working in a novel area of maternal/fetal immunology and transplant. Her clinical research projects have focused primarily on the efficacy and benefit of

locoregional therapy in HCC patients awaiting liver transplantation. Dr. Porrett has authored or co-authored 13 manuscripts and 6 book chapters, and she has had the privilege of editing two editions of *The Surgical Review* and is working on the third. She was actively involved as a Fellow in ASTS activities and looks forward to expanding her involvement in the ASTS over the next several years.



**Susanna Matsen Nazarian MD, PhD** joined our faculty at Penn in 2015. She graduated from the University of North Carolina Chapel Hill and went on to obtain her MD from Johns Hopkins University School of Medicine. She stayed as a Halsted Surgical Resident and also received a Ph.D. from the Graduate Training Program in Clinical Investigation at the Hopkins Bloomberg School of Public Health. Susanna continued her training at Johns Hopkins and completed an ASTS accredited fellowship in abdominal transplant surgery in 2013. She then left Baltimore for a faculty position at the University of Washington in Seattle.

Dr. Nazarian's clinical practice focuses on kidney transplantation, living donation, and vascular access. She has developed research interests focused on the advancement of transplant outcomes and access using clinical and translational research methodology. At the University of Washington, she built collaborative efforts with physicians and scientists across the transplant specialties. Her research here at Penn will continue along these lines and also expand to more translational research in kidney transplantation and pharmacogenetics.

Dr. Nazarian has authored over 25 manuscripts and chapters, and edited and edited the Johns Hopkins ABSITE Review Manual. Surgical resident and fellow education is a key focus of her efforts here at Penn.



**Brendan Keating** received his D.Phil. (Ph.D.) in molecular genetics from the Department of Clinical Medicine at University of Oxford, UK, with lab-work completed in the Wellcome Trust. He completed a post-doctoral fellowship at the Institute of Translational Medicine and Therapeutics at UPenn, and was a visiting Scientist at the Wellcome Trust Sanger Institute, Cambridge, UK. Dr. Keating designed and developed genomic tools for cardiovascular related studies which have been used in over 200,000 DNA samples across 60 studies including the Framingham Heart Studies, and which have resulted in over a hundred genetic discoveries in various metabolic and CVD-related traits such as myocardial infarction, dyslipidemia, adiposity, Type-2 Diabetes and Blood Pressure.

Dr. Keating joined the Faculty at The University of Pennsylvania in 2012, and moved his primary appointment to the Division of Transplantation in the Departments of Surgery in 2015. His major research interests focus on the analyses of miRNA, mRNA and polymorphisms of donor and recipients genomes in heart, liver, lung and kidney transplantation, with the aim of delivering individualized treatment of immunosuppression therapies post-transplant, and prediction of

genetic signals that may underpin graft rejection and complications of rejection such as new onset of diabetes after transplantation (NODAT).

Dr. Keating is Principal Investigator of genome-wide association studies (GWAS) for solid-organ transplant studies within the Children's Hospital of Philadelphia, and instigated the formation of an international genomics consortium (iGeneTRAIN) for large-scale genomic studies using > 50,000 samples with existing GWAS data from a number of international transplant studies. Dr. Keating is also a member of the Pharmacogenomics and return of results (RoR) working groups of the NHGRI electronic medical record and genomics (eMERGE) network which is integrating clinical genetic data into patient's electronic medical records for clinical decision support in the individualized dosing of patients for a range of therapeutics. Dr. Keating has led or co-authored over 135 publications and has given over 100 presentations in 25 countries including numerous national and international conferences.



**Ty Dunn, MD, MS** grew up in eastern Iowa and attended Hamline University in St. Paul, Minnesota where she majored in Biology and Classics. She received her medical degree from the University of Minnesota in 1994. Dr. Dunn completed her residency in general surgery at the University of Illinois at Chicago where she studied hepatocyte transplantation and earned her master's degree. She then returned to the University of Minnesota where she completed her fellowship in Transplantation and Immunology. Dr. Dunn joined the faculty at the University of Minnesota in 2006 where she later became the surgical director of the Living Kidney Donor Program and the Kidney Transplant Program. She was recruited to Penn in 2018 to lead the Kidney and Pancreas Transplant Programs.

Dr. Dunn's surgical focus is in living kidney donation, kidney and pancreas transplantation, and total pancreatectomy and islet autotransplantation for chronic pancreatitis. Her clinical and research interests involve antibody mediated allograft rejection, islet transplantation, immunosuppression, and organ allocation policy. Dr. Dunn has been the PI or Co-I of more than 30 funded research trials and has authored or coauthored over 125 peer reviewed publications and book chapters. She serves as a reviewer for American Journal of Transplantation, Transplantation, and Clinical Transplantation. Dr. Dunn currently serves as Chair of the Scientific Studies Committee of the American Society of Transplant Surgeons and has previously served terms on the Kidney Pancreas Committee and Clinical Policy Board for LifeSource, as well as represented Regions 7 and 8 on the UNOS Pancreas Committee.