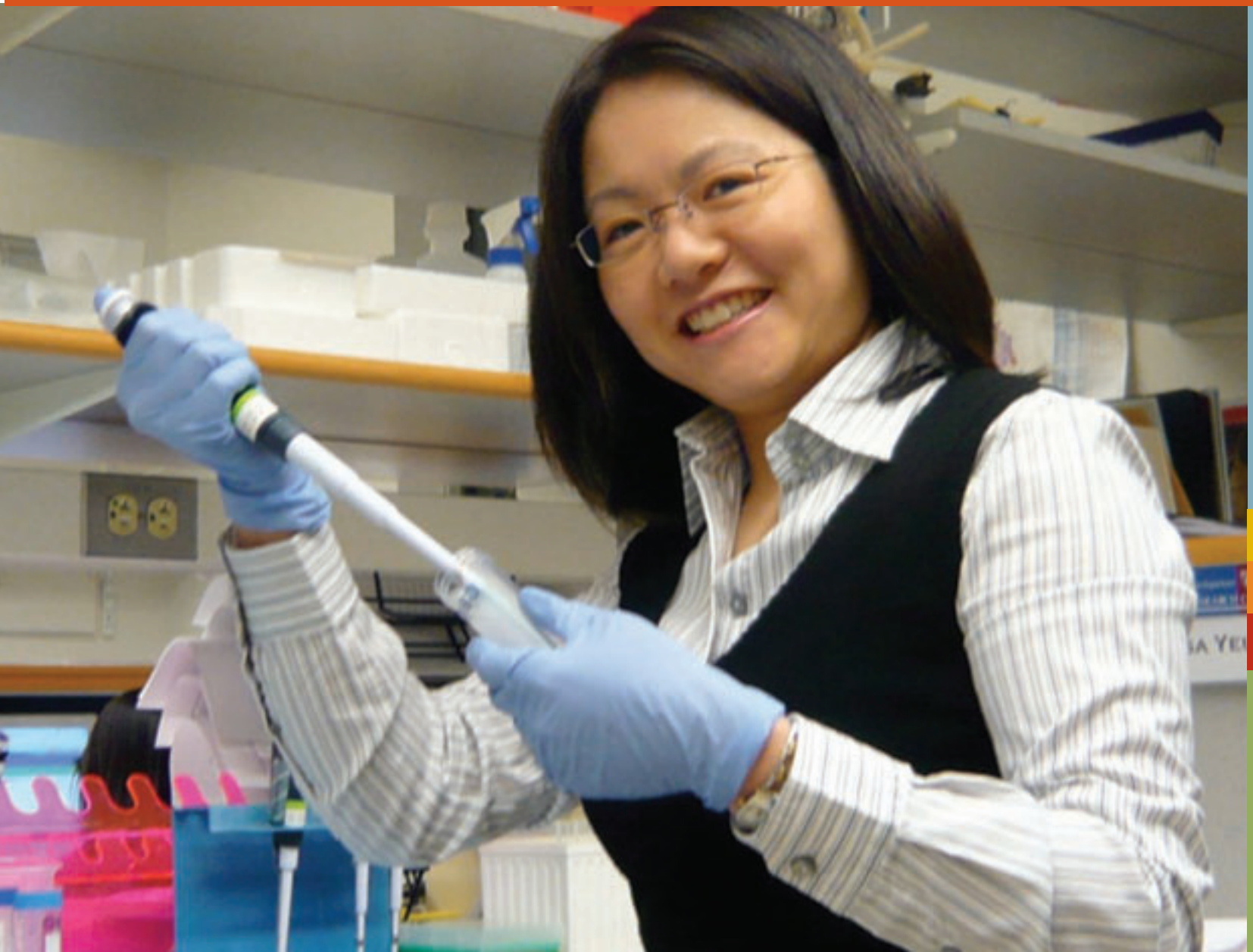
National Kidney Foundation®

2010 RESEARCH REPORT



Chronic Kidney Disease

Diabetes

Dialysis

Transplantation

www.kidney.org

THE NATIONAL KIDNEY FOUNDATION

Kidney disease is a major health problem in the United States and around the world. More than 84,000 Americans are on the waiting list for a lifesaving kidney transplant, 367,000 rely on a dialysis machine to keep them alive and 26 million Americans currently have chronic kidney disease.

Because symptoms may not appear until the kidneys are actually failing, millions of people with kidney damage remain unaware and are not taking steps to protect the health of their kidneys.

The National Kidney Foundation (NKF) is dedicated to preventing kidney diseases, improving the health and well-being of individuals and families affected by these diseases and increasing the availability of all organs for transplantation.

With local offices nationwide, the NKF provides early detection screenings and other vital patient and community services. The Foundation conducts extensive public and professional education, advocates for patients through legislative action and supports organ donation and kidney research to identify new treatments.

NKF recently launched a multifaceted collaborative initiative to *"END THE WAIT!"* for a kidney transplant in the United States in 10 years by using proven strategies to eliminate barriers to donation and institute best practices across the country.

The NKF relies on individual and corporate donations, foundation and government grants, membership and special events to support its range of programs, services and initiatives.

2010 RESEARCH REPORT

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Bryan N. Becker, MD

"There is no better time than when you read this report to take stock of the impact of this research and imagine how its future success could help us make amazing advances in kidney health care."

MESSAGE FROM THE PRESIDENT

Patient-centered science. We are committed to continuing that work through our research programs at the National Kidney Foundation. As we face the future, we see great possibilities ahead with the application of research towards kidney health care for individuals and, indeed, for populations of patients affected by chronic kidney disease and its many complications.

The strengths of our research portfolio have traditionally blended support for individuals in training with targeted funding opportunities. The National Kidney Foundation is extending our research program further into areas of investigation that broaden our understanding of kidney health care. Research questions and programs that focus on the science allied with our guideline initiatives, our screening and detection programs and our key transplant initiatives can only deliver more scientific evidence that can be applied to better kidney health care.

The National Kidney Foundation is excited about these possibilities, just as we were when we first introduced research proposals supporting our professional councils and when we recognized the need to expand our support for emerging clinical scientists. The National Kidney Foundation has delivered more than $80,000,000 of research funding into the kidney community to date. There is no better time than when you read this report to take stock of the impact of this research and imagine how its future success could help us make amazing advances in kidney health care.

Your ongoing support is so important and we hope that once again, you will consider making a contribution to these amazing endeavors.

Thank you,

Bryan N. Becker, MD

THE NKF RESEARCH PROGRAM

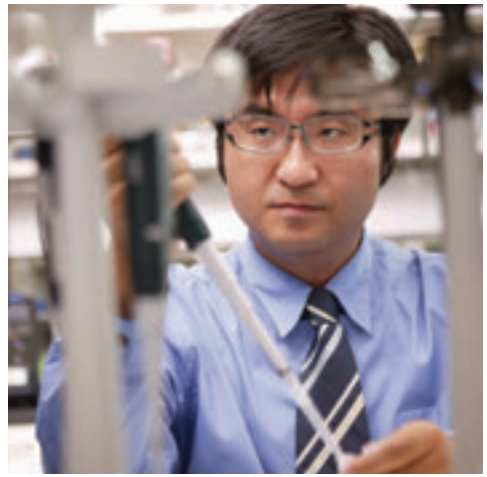
During the last 40 years, NKF has invested more than $80 million to support over 1,000 researchers investigating the causes and treatments for kidney disease. NKF and its local offices fund the work of promising young scientists in major centers around the U.S. through three categories of support –Research Fellowships, Young Investigator Grants and Clinical Scientist Awards.

This year, scientists backed by NKF studied a wide and diverse range of topics related to risk factors, chronic kidney disease and transplantation that will ultimately impact patient care.

NKF research fellows are researching non-invasive monitoring for earlier detection of possible organ rejection among transplant recipients. Other researchers are studying cellular function in polycystic disease and uncovering genetic factors that drive obesity and hypertension—two major risk factors associated with kidney disease.

NKF also expanded its research initiative with two new Kidney Disease Outcomes Quality Initiative (KDOQI) grants, each funded at the level of $150,000 annually for three years.

The aim of this expansion is to improve clinical practice guidelines, provide more authoritative guidance regarding tests and therapies, and ultimately, enhance patient outcomes. In the pages that follow, we spotlight the first two grant recipients of the KDOQI research awards.



SPOTLIGHT ON OUR RESEARCHERS

Chester H. Fox, MD: Helping Primary Care Doctors Recognize Kidney Disease

Thirty years into a career as a family practitioner, Fox says he "absolutely loves the work. It's a privilege to be a doctor. I cherish the trust that people place in me and the field I chose – family medicine—allows me to develop close, long-term relationships with my patients."

Chester H. Fox, MD

As a pre-teen, Chester Fox knew he was destined for a career in medicine. Suffering from a difficult-to-diagnose condition, his pediatrician insisted the illness was all in his head and sent him to the psychologist's couch. *(continued on next page)*

SPOTLIGHT ON OUR RESEARCHERS *(CONTINUED)*

Chester H. Fox, MD: Helping Primary Care Doctors Recognize Kidney Disease

"I wanted to stimulate other research grants with this initial study and now there'll be lots more PCPs with reminders about CKD… I can't tell how they'll respond but at least they'll have the reminders in front of them."

After finding another doctor who nailed his diagnosis, Fox was determined to become a doctor himself, if only to save people from guys like his first doctor who was so quick to dismiss his pain.

Thirty years into a career as a family practitioner, Fox says he "absolutely loves the work. It's a privilege to be a doctor. I cherish the trust that people place in me and the field I chose –family medicine—allows me to develop close, long-term relationships with my patients. I could do a college physical for a kid I delivered myself and sometimes I take care of four generations at once…you might say I get the whole picture."

As a recipient of one of NKF's first KDOQI Research grants, he's trying to ensure that his colleagues get the whole picture when it comes to finding and treating kidney disease.

When he was approached about how best to reach primary care physicians (PCPs) about implementing the KDOQI guidelines, he was ashamed to admit he had never heard of them. So his first step was to survey a group of PCP's and see if any of them knew about these evidence-based guidelines. It turned out that most hadn't heard of KDOQI. Nationally, only about 50% of PCPS recognize stage 3 kidney disease, even with the lab results right in front of them. Many don't know about controlling high blood pressure in people with kidney disease or how to recognize when kidney disease is causing anemia.

Fox is determined to change all that with the NKF research grant. He is working with 12 family practice groups to provide a practice enhancement assistant who spends time in the offices each week to help the doctors collect data from their patient charts and show them how to recognize and treat CKD.

One of the keys to his success, both as a doctor and teacher, is his ability to simplify complex concepts and distill the main points or "takeaway message" for his students and patients.

As part of the grant, Fox has developed a simple one-page clinician guide that boils down key KDOQI treatment recommendations. In keeping with the "less is more" philosophy, he's planning to condense it even further, getting it down to five bullet points before widely disseminating.

Because of this KDOQI research grant, Fox was inspired to submit a proposal to the National Institutes of Health for a grant to do the same kind of work using computer decision support in a larger national network, comprised of 40 practices throughout the U.S. He'll be able to study outcomes of computer decision making and practice facilitation. "I wanted to stimulate other research grants with this initial study and now there'll be lots more PCPs with reminders about CKD… I can't tell how they'll respond but at least they'll have the reminders in front of them."

Fox pauses, deep in thought about the next research grant, "Do PCP offices need more than computer decision-making reminders in order to react to the information in front of them? What will it take to get them to begin implementing these treatment recommendations?"

Fox is already planning his next big study, but he'll take a well-deserved break this summer to work on his golf game and spend time with his wife, college-age kids and pet dog and cat. After all, he likes to focus on the whole picture--both work and play– and it's those ongoing, long-lasting relationships in life that he enjoys most.

NATIONAL KIDNEY FOUNDATION RESEARCH AWARDS

Effective July 1, 2009

NATIONAL KIDNEY FOUNDATION FELLOWSHIPS

Tania Abi Antoun, MD
University of Pittsburgh
Pittsburgh, PA
Title of Project: ENaC Mechanosensing Domains
Sponsor: Thomas R Kleyman, MD
Sponsor: Marcelo D. Carattino, PhD

Hisham Bazzi, PhD
Sloan-Kettering Institute for Cancer Research
New York, NY
Title of Project: Centrosomes and signaling in PKD
Sponsor: Kathryn Anderson, PhD

Gautam Bhave, MD, PhD
Vanderbilt University Medical Center
Nashville, TN
Title of Project: Characterization of Novel ROMK Antagonists
Sponsor: Jerod Scott Denton, PhD

Abanti Chaudhuri, MD
Stanford University School of Medicine
Stanford, CA
Title of Project: Urinary Biomarker Discovery and Validation for Diagnosis and Risk Stratification of Acute Renal Transplant Rejection
Sponsor: Minnie M. Sarwal, MD, PhD

Preeti Chandra, MD
University of Michigan
Ann Arbor, MI
Title of Project: Heart Rate Variability (HRV) in Chronic Kidney Disease (CKD)
Sponsor: Rajiv Saran, MD

Amlan Das, PhD
University of Pennsylvania
Philadelphia, PA
Title of Project: The Role of the Exocyst in Kidney Epithelial Cell Ciliogenesis
Sponsor: Wei Guo, PhD

Wassim El Jouni, MD, PhD
Brigham and Women's Hospital
Boston, MA
Title of Project: Calcium Signaling and Cell Division in Polycystic Kidney Disease
Sponsor: Jing Zhou, MD, PhD

Kelly Anne Hyndman, PhD
Medical College of Georgia
Augusta, GA
Title of Project: Nitric oxide synthase and dynamin: a novel mechanism in ENaC trafficking in the renal collecting duct
Sponsor: Jennifer S. Pollock, PhD

Yasunori Iwata, PhD
Brigham and Women's Hospital
Boston, MA
Title of Project: Colony Stimulating Factor-1: Central to Renal Repair
Sponsor: Vicki Rubin Kelley, PhD

Vidya Malini Raj Krishnamurthy, MD
University of Utah
Salt Lake City, UT
Title of Project: Cholecalciferol therapy in calcidiol deficient, non diabetic hemodialysis patients on therapeutic doses of paricalcitol
Sponsor: Srinivasan Beddhu, MD
Co-Sponsor: Tom Greene, PhD

NATIONAL KIDNEY FOUNDATION RESEARCH AWARDS *(CONTINUED)*

Satu H. Kuure, PhD
The Trustees of Columbia University
New York, NY
Title of Project: Role and regulation of Ets transcription factors in kidney morphogenesis
Sponsor: Franklin D. Costantini, PhD

Patricia Outeda-Garcia, PhD
Johns Hopkins University
Baltimore, MD
Title of Project: Role of polycystins in the vascular system
Sponsor: Terry J. Watnick, MD

Pei-an (Betty) Shih, PhD (Third Year)
The Regents of University of California, San Diego
La Jolla, CA
Title of Project: Mechanistical and Bioinformatics Investigation of Peptide YY gene on the Risk of Obesity and hypertension
Sponsor: Daniel T. O'Connor, MD

Anushree Chaitanya Shirali, MD
Yale University
New Haven, CT
Title of Project: Nanoparticle Encapsulated Delivery of Immunusuppression during Transplantation
Sponsor: Daniel R. Goldstein, MD

Han Si, PhD
Albert Einstein College of Medicine
Bronx, NY
Title of Project: The Role of Notch in Tubulointerstitial Fibrosis
Sponsor: Katalin Susztak, MD, PhD

Arjun Daniel Sinha, MD
Indiana University
Indianapolis, IN
Title of Project: Can Volume Index Predict Blood Pressure Response to Ultrafiltration?
Sponsor: Rajiv Agarwal, MD

AMERICAN SOCIETY OF TRANSPLANT SURGEONS AND THE NATIONAL KIDNEY FOUNDATION FOLKERT BELZER, MD RESEARCH AWARD

Thomas Pham, MD
The Ohio State University
Columbus, OH
Title of Project: Investigating the role of CD8+ T cell and B cell interactions in the regulation of post transplant alloantibody production

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NATIONAL KIDNEY FOUNDATION YOUNG INVESTIGATOR GRANTS

SATELLITE DIALYSIS YOUNG INVESTIGATOR GRANT OF THE NATIONAL KIDNEY FOUNDATION

Jodie L. Babitt, MD
Massachusetts General Hospital
Boston, MA
Title of Project: Hepcidin lowering agents for the treatment of anemia in chronic kidney disease
Mentor: Dennis Brown, PhD

BRISTOL-MYERS SQUIBB YOUNG INVESTIGATOR GRANT OF THE NATIONAL KIDNEY FOUNDATION

Geoffrey Camirand, MD
University of Pittsburgh
Pittsburgh, PA
Title of Project: In Situ Visualization of tolerance in allogeneic transplantation
Mentor: Fadi G. Lakkis, MD

ROBERT W. SCHRIER, MD, YOUNG INVESTIGATOR GRANT OF THE NATIONAL KIDNEY FOUNDATION

Vipul C. Chitalia, MD, PhD
Boston Medical Center
Boston, MA
Title of Project: Role of Wnt signaling in uremia-induced endothelial dysfunction
Mentor: Elazer R. Edelman, MD, PhD

NATIONAL KIDNEY FOUNDATION RESEARCH AWARDS *(CONTINUED)*

PFIZER YOUNG INVESTIGATOR GRANT OF THE NATIONAL KIDNEY FOUNDATION

Christine B. Sethna, MD
The Feinstein Institute for Medical Research
Manhasset, NY
Title of Project: Nocturnal Hypertension in Pediatric Renal Transplantation
Mentor: Howard Trachtman, MD

VICTOR CHALTIEL YOUNG INVESTIGATOR GRANT OF THE NATIONAL KIDNEY FOUNDATION

Scott Edward Wenderfer, MD, PhD
The University of Texas Health Science Center Houston
Houston, TX
Title of Project: Immune Complex Receptors on Cells of the Glomerulus
Mentor: Michael C. Braun, MD

FRESENIUS MEDICAL CARE YOUNG INVESTIGATOR GRANT OF THE NATIONAL KIDNEY FOUNDATION

James B. Wetmore, MD
University of Kansas Medical Center Research Institute, Inc
Kansas City, KS
Title of Project: Warfarin in Dialysis Patients with Chronic Atrial Fibrillation
Mentor: Edward F. Ellerbeck, MD, MPH

NATIONAL KIDNEY FOUNDATION CLINICAL SCIENTIST AWARD

NATIONAL KIDNEY FOUNDATION / SATELLITE DIALYSIS CLINICAL SCIENTIST AWARD

Vandana Menon, MD, PhD
Tufts Medical Center
Boston, MA
Title of Project: Urinary Biomarkers in Non-Diabetic Chronic Kidney Disease

NATIONAL KIDNEY FOUNDATION KDOQI RESEARCH GRANTS

Josef Coresh, MD, PhD
Johns Hopkins Bloomberg School of Public Health
Baltimore, MD
Title of Project: Complications and Prognosis of CKD in the US Population

Chester H. Fox, MD
The Research Foundation of State University of New York on behalf of University of Buffalo
Buffalo, NY
Title of Project: Implementing KDOQI Guidelines in Primary Care Practices

NATIONAL KIDNEY FOUNDATION'S PROFESSIONAL COUNCILS RESEARCH GRANT RECIPIENTS

COUNCIL OF NEPHROLOGY SOCIAL WORKERS GRANTS

Susan Walker, LMSW
Beaumont Hospitals
Royal Oak, MI
Title of Project: Effects of Peer Mentors on Prospective Kidney Transplant Patients

Teri Browne, MSW, LSW
College of Social Work, University of South Carolina
Columbia, SC
Title of Project: The Creation of a Model Program for Dialysis Social Work Field Placements

Mary Beth Callahan, ACSW, LCSW
Dallas Transplant Institute
Dallas, TX
Title of Project: Kidney Transplant Patient Employment: Vocational

NATIONAL KIDNEY FOUNDATION RESEARCH AWARDS *(CONTINUED)*

COUNCIL ON RENAL NUTRITION GRANT

Jerrilynn Burrowes, PhD, RD
CW Post Campus of Long Island University
Brookville, NY
Title of Project: Is There an Association Between Nutritional Status and Self-Reported Sleep Quality or Sleep Duration in the Hemo Study Cohort?

NATIONAL KIDNEY FOUNDATION RESEARCH AWARDS, EFFECTIVE JULY 1, 2008

NATIONAL KIDNEY FOUNDATION STRIDES FOR IGA NEPHROPATHY RESEARCH FELLOWSHIP

John T. Sanders, MD
The University of Tennessee Health Science Center
Memphis, TN
Title of Project: Non-invasive diagnosis of IgA nephropathy
Sponsor: Robert J Wyatt, MD
Co-Sponsor: Jan Novak, PhD

NATIONAL KIDNEY FOUNDATION FELLOWSHIPS

Amandeep Bajwa, PhD
University of Virginia
Charlottesville, VA
Title of Project: Role Sphingosine-1-P receptor agonist in renal Ischemic Reperfusion Injury
Sponsor: Mark D. Okusa, MD

Assaad Antoine Eid, PhD
University of Texas Health Science Center at San Antonio
San Antonio, TX
Title of Project: NAD(P)H oxidases and Diabetic Nephropathy
Sponsor: Hanna Emile Abboud, MD

Sylvia A Hilliard, PhD
Tulane University
New Orleans, LA
Title of Project: Mdm2-p53 Pathway in Renal Development
Sponsor: Samir S El-dahr, MD

Sun Woo Kang, MD
University of California at San Diego
La Jolla, CA
Title of Project: Variants at Adrenergic Loci: Risk of Hypertensive Renal Disease
Sponsor: Daniel T. O'Connor, MD

Jeremy Seth Leventhal
Mount Sinai School of Medicine
New York, NY
Title of Project: Pathogenesis of Acute Kidney Injury in HIV-infected Individuals
Sponsor: Michael J Ross, MD

Frank Jiann-Gang Luo, MD
Palo Alto Institute for Research and Education, Inc.
Palo Alto, CA
Title of Project: Improving the Removal of Protein-Bound Uremic Solutes
Sponsor: Timothy W. Meyer, MD
Co-Sponsor: Manju Kurella, MD, MPH

Emily Louise Schopick, MD
Brigham and Women's Hospital
Boston, MA
Title of Project: Impact of Dietary & Hormonal Factors on Kidney Function
Sponsor: Gary C. Curhan, M.D., M.S., Sc.D.

Patricia Seo-Mayer, MD
Yale University School of Medicine
New Haven, CT
Title of Project: The role of AMP-activated protein kinase in acute kidney injury and renal cell polarity
Sponsor: Michael J Caplan, MD, PhD

NATIONAL KIDNEY FOUNDATION RESEARCH AWARDS *(CONTINUED)*

Neeraj Sharma, PhD
University of Alabama at Birmingham
Birmingham, AL
Title of Project: Role of primary cilia in renal cyst development
Sponsor: Bradley K Yoder, PhD

Prabhleen (Sheena) Singh, MD, MPH
University of California, San Diego
La Jolla, CA
Title of Project: Kidney oxygen consumption in early CKD
Sponsor: Roland Clement Blantz, MD
Co-Sponsor: Scott C, Thomson, MD

Kurt Metin Russell Sowers, MD
University of Maryland Medical System Foundation
Baltimore, MD
Title of Project: Plasma membrane endocytosis of Kir1.1 (ROMK) channels
Sponsor: Paul A Welling, MD

Heather Hilary Ward, PhD
University of New Mexico
Albuquerque, NM
Title of Project: Trafficking of polycystin-1 from Golgi to cilia
Sponsor: Angela Wandinger-Ness, PhD

Melissa Y Yeung, MD
Brigham and Women's Hospital
Boston, MA
Title of Project: Role of PD-1/PDL pathway in solid organ transplantation
Sponsor: Mohamed H Sayegh, MD

AMERICAN SOCIETY OF TRANSPLANT SURGEONS AND THE NATIONAL KIDNEY FOUNDATION FOLKERT BELZER, MD RESEARCH AWARD

Joseph Lillegard, MD, PhD
Mayo Clinic
Rochester, MN
Title of Project: Creation of Transgenic Fumarylacetoacetate Hydrolase (FAH) Deficient Porcine Embryos

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CENTER FOR CLINICAL PRACTICE GUIDELINE DEVELOPMENT AND IMPLEMENTATION AT TUFTS-NEW ENGLAND MEDICAL CENTER RESEARCH FELLOWS

Jose Calvo Broce, MD
Guideline Development Project: Clinical Practice Guideline on Acute Kidney Injury
Nephrology Project Mentor: Katrin Uhlig, MD MS; Ethan Balk, MD, Joseph Lau, MD
Thesis Project: Acute Kidney Injury: A Proposed Operational Definition According to Baseline Kidney Function Level
Thesis Mentor: Katrin Uhlig, MD, Bertrand Jaber, MD

Annet Deo, MD
Guideline Development Project: Clinical Practice Guidelines on Glomerulonephritis
Nephrology Project Mentor: Katrin Uhlig, MD MS; Ethan Balk, MD, Joseph Lau, MD
Thesis Project: Empiric Evaluation of Attrition in Randomized Clinical Trials in Chronic Kidney Disease- Systematic Review
Thesis Mentor: Katrin Uhlig, MD, Joseph Lau, MD

NATIONAL KIDNEY FOUNDATION YOUNG INVESTIGATOR GRANTS

IRA GREIFER, MD YOUNG INVESTIGATOR GRANT OF THE NATIONAL KIDNEY FOUNDATION
Meredith Atkinson, MD, MHS
Johns Hopkins University School of Medicine
Baltimore, MD
Title of Project: Racial Disparities in Anemia and Inflammation in Children with Chronic Kidney Disease
Mentor: Susan Lynn Furth, MD, PhD

NATIONAL KIDNEY FOUNDATION RESEARCH AWARDS *(CONTINUED)*

SHAUL G. MASSRY, MD YOUNG INVESTIGATOR GRANT OF THE NATIONAL KIDNEY FOUNDATION
Vivek Bhalla, MD
Stanford University
San Francisco, CA
Title of Project: Isoform-Specific Roles for 14-3-3 in Sodium Transport
Mentor: David Pearce, MD

AMERICAN SOCIETY OF NEPHROLOGY YOUNG INVESTIGATOR GRANT OF THE NATIONAL KIDNEY FOUNDATION
Ishir Bhan, MD
Massachusetts General Hospital
Boston, MA
Title of Project: hCAP18 and Chronic Kidney Disease
Mentor: Ravi Thadhani, MD, MPH

AMGEN YOUNG INVESTIGATOR GRANT OF THE NATIONAL KIDNEY FOUNDATION
Wai W Cheung, PhD
The Regents of the University of California, UC San Diego
La Jolla, CA
Title of Project: A novel hypothalamic mechanism in uremic bone disease
Mentor: Robert H Mak, MD, PhD

GLAXO SMITH KLINE YOUNG INVESTIGATOR GRANT OF THE NATIONAL KIDNEY FOUNDATION
Puneet Garg, MD
Regents of the University of Michigan
Ann Arbor, MI
Title of Project: Role of Cofilin in Podocyte Actin Cytoskeleton Dynamics
Mentor: Lawrence B. Holzman, MD

HILDA GERSHON SUGARMAN YOUNG INVESTIGATOR GRANT OF THE NATIONAL KIDNEY FOUNDATION
Carlo Iomini, PhD
Mount Sinai School Of Medicine
New York, NY
Title of Project: The role of polycystins and primary cilia in vascular patterning
Mentor: Patricia D Wilson, PhD

DONALD SELDIN, MD YOUNG INVESTIGATOR GRANT OF THE NATIONAL KIDNEY FOUNDATION
Denise Marciano, MD, PhD
The Regents of the University of California
San Francisco, CA
Title of Project: The Role p120 Catenin in Metanephric Kidney Development
Mentor: Louis F. Reichardt, PhD

DAVITA YOUNG INVESTIGATOR GRANT OF THE NATIONAL KIDNEY FOUNDATION
Madhumathi Rao, MD
Tufts-New England Medical Center
Boston, MA
Title of Project: Chronic Kidney Disease Anemia beyond Erythropoietin Deficiency- the Role of Mitochondrial Injury
Mentor: Vaidyanathapuram S. Balakrishnan, MD, PhD

SOLOMAN PAPPER, MD YOUNG INVESTIGATOR GRANT OF THE NATIONAL KIDNEY FOUNDATION
Matthew Hunter Wilson, MD, PhD
Baylor College of Medicine
Houston, TX
Title of Project: Transposon mediated gene therapy for Alport's syndrome
Mentor: Brendan Lee, MD, PhD

NATIONAL KIDNEY FOUNDATION RESEARCH AWARDS, EFFECTIVE JULY 1, 2007

JOHN BOWER, MD CLINICAL SCIENTIST AWARD OF THE NATIONAL KIDNEY FOUNDATION
Reza Abdi, MD
Brigham and Women's Hospital
Boston, MA
Title of Project: The Joint Role of RAS and TGF-Beta1 in CKAD

SPOTLIGHT ON OUR RESEARCHERS

Josef Coresh, MD, PhD – Bringing Together Science and People

Josef Coresh, MD, PhD

From a very early age, it was quite clear that Joe Coresh was a left-brain kind of guy – he loved math and was fascinated by science. It was no surprise, then, that he chose a career in medicine and earned a PhD in epidemiology which deals with incidence of disease in large populations.

(continued on next page)

"I love working with the NKF," says Coresh, "because it's not just about what I find out. NKF can disseminate these findings to large numbers of physicians and patients so that the research results actually impact practice all over the U.S."

"Medicine is exciting because it brings together science and people. I loved the idea of applying science and math to make a difference in people's lives," says Coresh.

As a med school student at Johns Hopkins University, where he is now a professor, Coresh realized he was destined to focus on prevention. "If you take the knowledge we have and apply it early, you can make the largest impact…informing decisions that physicians make and influencing patient thinking about their own disease process," continues Coresh.

For the last 15 years, Coresh has focused on chronic kidney disease (CKD) and in 2009, he was awarded one of the National Kidney Foundation's first Kidney Disease Outcomes Quality Initiative (KDOQI) research grants.

The idea behind his NKF-funded project is to form a consortium to create and analyze the world's largest dataset about patient outcomes at all stages of CKD. "CKD is a spectrum disease and at each stage, people experience different complications– from stroke and hypertension to infections and acute kidney disease. We're looking at how these complications impact a patient's prognosis at each stage," says Coresh.

According to Coresh, CKD patients are less likely to get preventive care like flu shots than the general population. Yet these patients are at higher risk and should really get more care. His research will point out areas where people are at risk and guide the development of future therapies.

"I love working with the NKF," says Coresh, "because it's not just about what I find out. NKF can disseminate these findings to large numbers of physicians and patients so that the research results actually impact practice all over the U.S."

A "people" person, Coresh loves the collaborative nature of the research. "Working closely with experts in epidemiology, biostatistics and nephrology is necessary for covering the wide range of expertise needed and also tremendously gratifying," says Coresh.

Coresh is seeing the fruits of his labor in some interesting places.

"I got a copy of my dad's lab results from his annual physical and noticed that his kidney function was reported using the formula we recommended. Although I'm not sure he's managing his risk factors better than anyone else, I was so gratified to see that our work is being put in practice."

On a recent visit to the vet with his cat, he was told that she was suffering from kidney disease. Even the vet informed him that "It's good to catch it early." Coresh had to suppress his ear-to-ear smile when he heard that.

Support Kidney Research at
www.kidney.org/Donate60

2010 AFFILIATE AND DIVISION RESEARCH AWARDS

Susanne Angelow, MD
Children's Hospital of Los Angeles; Los Angeles, California
"Impairment of Kidney Function in Diabetes and Potential Beneficial Effects of Stem Cells in Renal Repair."
NATIONAL KIDNEY FOUNDATION SERVING SOUTHERN CALIFORNIA

Prabhakar Baliga, MD
Medical University of South Carolina, Charleston
"Center of Excellence in the Transplant Division."
NATIONAL KIDNEY FOUNDATION SERVING SOUTH CAROLINA

Mona Doshi, MD
Wayne State University School of Medicine; Detroit, Michigan
"Medical Outcomes in African American Live Kidney Donors."
NATIONAL KIDNEY FOUNDATION OF MICHIGAN

Sommer Gentry, PhD
U.S. Naval Academy; Annapolis, Maryland
"Decreasing Waits for Kidney Paired Donation Using Realtime Matching Strategies."
NATIONAL KIDNEY FOUNDATION OF MARYLAND

Dmitry Grigoryev, MD, PhD
Johns Hopkins University; Baltimore, Maryland
"Molecular Mechanisms of Ischemia & Reperfusion of Human Renal Allograft."
NATIONAL KIDNEY FOUNDATION OF MARYLAND

John Kevin Hix, MD
Rochester General Hospital; Rochester New York
"Effect of Uremia on Wound Healing in Normal and AST-120 Fed Rats."
NATIONAL KIDNEY FOUNDATION SERVING UPSTATE NEW YORK

Yanfei Huang, MD, PhD
Johns Hopkins University; Baltimore, Maryland
"Influence of Kidney Mesenchymal Stem Cells on Inflammatory Cell Migration."
NATIONAL KIDNEY FOUNDATION OF MARYLAND

Mary Margaret Huizinga, MD, MPH
Johns Hopkins University; Baltimore, Maryland
"Development of Literacy and Numeracy-Sensitive Education Materials About Kidney Replacement Therapies."
NATIONAL KIDNEY FOUNDATION OF MARYLAND

Kamyar Kalantar-Zadeh, MD, PhD, MPH
UCLA David Geffen School of Medicine; Los Angeles, California
"Polycystic Kidney Disease."
NATIONAL KIDNEY FOUNDATION SERVING SOUTHERN CALIFORNIA

Hyunho Kim, PhD
Johns Hopkins University; Baltimore, Maryland
"Structural & Functional Characterization of a Novel PKD1 Alternative Splice Form."
NATIONAL KIDNEY FOUNDATION OF MARYLAND

Agnieszka Lis, PhD.
State University of New York at Buffalo, School of Medicine & Biomedical Science
"Defining a Nuclear Targeted Fragment of Epithelial Sodium Channel."
NATIONAL KIDNEY FOUNDATION SERVING WESTERN NEW YORK

Manchang Liu, MD, PhD
Johns Hopkins University; Baltimore, Maryland
"Chemokine KC on AKI-Induced Brain Inflammation."
NATIONAL KIDNEY FOUNDATION OF MARYLAND

James Lohr, MD and Mouhamed Awayda, MD
State University of New York at Buffalo, School of Medicine.
"Non-Invasive Assay of Renal Distal Tubule Sodium Absorption – A Potential Assay for Essential Hypertension."
NATIONAL KIDNEY FOUNDATION OF WESTERN NEW YORK

Kenneth McMartin, PhD
Louisiana State University Health Science Center in Shreveport.
"Development of Novel Citrates as Treatment for Hyperoxaluria."
NATIONAL KIDNEY FOUNDATION OF LOUISIANA

Rebecca Monk, MD
University of Rochester; Rochester, New York.
"The Safety & Efficacy of Citrate Based AntiCoagulation in Liver Disease Patients on Dialysis."
NATIONAL KIDNEY FOUNDATION SERVING UPSTATE NEW YORK

2010 AFFILIATE AND DIVISION RESEARCH AWARDS *(CONTINUED)*

Asha Moudgil, MD
Children's National Medical Center; Washington, DC
"Effect of Oral Galactose on Focal Sclerosis Permeability Factor and Proteinuria in Children with Focal Segmental Glomerulosclerosis."
NATIONAL KIDNEY FOUNDATION SERVING THE NATIONAL CAPITAL AREA

Shoba Narayan, MD
UCLA School of Medicine; Los Angeles, California
"Transplant Immunology."
NATIONAL KIDNEY FOUNDATION SERVING SOUTHERN CALIFORNIA

Sagar Nigwekar, MD
Rochester General Hospital; Rochester, New York
"Multi-center Validation of Prediction Scores for Contrast-Induced Nephropathy."
NATIONAL KIDNEY FOUNDATION SERVING UPSTATE NEW YORK

Pouneh Nouri, PhD
Georgetown University Medical Center; Washington, DC
"N-Acetylcysteine Reduces Iron-Induced Oxidative Stress in Dialysis Patients."
NATIONAL KIDNEY FOUNDATION SERVING THE NATIONAL CAPITAL AREA

Siam Oottamasathien, MD
Primary Children's Hospital; Salt Lake City, Utah
"Novel Hyaluronic Acid-Based Biomaterials for Bladder Inflammation, Fibrosis and Tissue Regeneration."
NATIONAL KIDNEY FOUNDATION OF UTAH

Bernardo Ortega, PhD
University of Maryland School of Medicine, Baltimore
"Molecular Mechanism of Loop Diuretic Resistance in DCT."
NATIONAL KIDNEY FOUNDATION OF MARYLAND

Patricia Outeda, PhD
Johns Hopkins University; Baltimore, Maryland
"The Role of Polycystin-1 in Placental Vascular Branching Morphogenesis."
NATIONAL KIDNEY FOUNDATION OF MARYLAND

Mandip Panesar, MD, Kenneth Gross, PhD, and Sandra Buitrago, DVM
State University of New York at Buffalo, School of Medicine.
"Dermal Hyperplasia in a Transgenic Renin Secreting Mouse Model: A Potential Animal Model for Nephrogenic Fibrosing Dermopathy/Nephrogenic Systemic Fibrosis."
NATIONAL KIDNEY FOUNDATION SERVING WESTERN NEW YORK

John Papadimitriou, MD
University of Maryland Medical System, Baltimore
"Role of Autophagy in Tubular & Glomerular Chronic Lesion Progression in Renal Allograft Biopsies."
NATIONAL KIDNEY FOUNDATION OF MARYLAND

Lorraine Racusen, MD
Johns Hopkins University School of Medicine; Baltimore, Maryland
"Phenotypic Characterization of Glomerulitis in Renal Allografts."
NATIONAL KIDNEY FOUNDATION OF MARYLAND

Ann Russ, PhD
University of Rochester; Rochester, New York
"A Mixed Methods Study of 'Distributed Decision-Making' About Initiating Dialysis in Late Life."
NATIONAL KIDNEY FOUNDATION SERVING UPSTATE NEW YORK

Roger Sciammas, PhD
University of Chicago; Chicago, Illinois
"Tracking B and Plasma Cell Functions During Transplantation."
NATIONAL KIDNEY FOUNDATION OF ILLINOIS

Tariq Shafi, MD, MHS
Johns Hopkins University; Baltimore, Maryland
"Markers of Kidney Function & Outcomes in Incident Dialysis Patients."
NATIONAL KIDNEY FOUNDATION OF MARYLAND

Fuad Shihab, MD
University of Utah; Salt Lake City
"Can We 'Treat' Chronic Cyclosporine Nephrotoxicity? Experimental Evidence and Molecular Mechanisms."
NATIONAL KIDNEY FOUNDATION OF UTAH

2010 AFFILIATE AND DIVISION RESEARCH AWARDS *(CONTINUED)*

Stephen Sozio MD, MHS
Johns Hopkins University; Baltimore, Maryland
"A Novel Localization of Polycystin-1 and Its Effects in Renal Cell Morphology."
NATIONAL KIDNEY FOUNDATION OF MARYLAND

Mary Taub, PhD and James Springate, MD
State University of New York at Buffalo, School of Medicine
"Studies Using an In Vitro Model of Nephropathic Cystinosis."
NATIONAL KIDNEY FOUNDATION SERVING WESTERN NEW YORK

I-ChunTsai, PhD
Johns Hopkins University School of Medicine
"A Novel Localization of Polycystin-1 and Its Effects in Renal Cell Morphology."
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Sharon Turban, MD, MHS
Johns Hopkins University; Baltimore, Maryland
"Racial Differences in Urinary Potassium: Clinical Implications & Mechanisms."
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Dan Wang, MD, PhD
Georgetown University Medical Center; Washington, DC.
"The Role of TP-receptor and 20-HETE on Microvascular O2 in Hypertension."
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Dana F. Work, DO
University of Rochester; Rochester, New York
"Assessment of Renal Reserve by Iohexol Plasma Disappearance."
NATIONAL KIDNEY FOUNDATION SERVING UPSTATE NEW YORK

Puya Yazdi, MD
University of Southern California, Los Angeles
"The Role of Mitochondria in Chronic Kidney Failure, Hypertension, and Lipid Disorders."
NATIONAL KIDNEY FOUNDATION SERVING
SOUTHERN CALIFORNIA

Xiaoming Zhou, MD, PhD
Uniformed Services University of Health and Sciences; Washington, DC
"Role of Protein Targeted to Glycogen in Activation of TonEBP."
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Editorial Director: Ellie Schlam
Contributors: Joanna Kim, Christine Persinger, Bryan Van Steenbergen
Design: www.petercareydesign.com