

Division Chief Barbara Murphy, MD, Irene and Dr. Arthur M. Fishberg Professor of Medicine, shares the compelling vision of overall growth she and her colleagues have witnessed in every area of activity within the Division of Nephrology.

Division of Nephrology

Currently, the Division manages one of the largest National Institutes of Health research budgets of its type in the country. It also bears the reputation as one of the best kidney research, treatment and transplantation centers in the country, with faculty members who are leading international experts in renal development, polycystic kidney disease, HIV-associated nephropathy, diabetic renal disease, hypertensive renal disease, gene therapy, transplantation, peritoneal dialysis, and hemodialysis.

Following are highlights of the many outstanding achievements of the Division of Nephrology during the past year.

- Dr. Murphy became President-Elect of the American Society of Transplantation. She also received the prestigious Lester Hoenig Award from the Kidney and Urology Foundation of America.
- Michael Lipkowitz, MD, Associate Professor, was elected to the editorial board of the *Journal of the American Society of Nephrology*.
- Four junior faculty members were awarded NIH-mentored scientist awards, K awards. This brings the total number to eight K awards within the Division. Of note, two of the eight K award recipients recently received their first R awards under the mentorship of Paul Klotman, MD, Professor and Chair.
- Peter Mundel, MD, Professor, and colleagues identified the role of the protein dendrin in signaling related to glomerular injury. In the paper published in the *Proceedings of the National Academy of Sciences* the authors noted that dendrin may provide a molecular target for tackling proteinuric kidney diseases.
- Paul Klotman, MD, Professor and Chair of the Department of Medicine, is Chair of the Research Committee of the Association of Professors of Medicine. This organization of departments of internal medicine represented by chairs and appointed leaders leads academic internal medicine, specifically in the education, research, and patient care arenas.
- Peter S. Heeger, MD, Professor, and coworkers discovered that immune cell-produced complement is a key factor regulating in vivo T cell immune responses. Results published in the *Journal of Immunology* identified complement as a potential target to prevent or treat T cell mediated disease.

TRILATERAL APPROACH TO BATTLING KIDNEY DISEASE IN THE COMMUNITY

According to the National Kidney Foundation, an estimated 26 million American adults suffer from chronic kidney disease (CKD), a condition that is usually asymptomatic in early stages, yet becomes associated ultimately with high rates of cardiovascular events, morbidity, and mortality—even in younger patients.

Cognizant of the disease's prevalence within the local community, over the past 14 months the Division has instituted a tripartite program that addresses the disease from the perspectives of physician education, patient awareness, and disease identification and intervention.

Initially, the Division instituted education for physicians and other health care professionals at Mount Sinai, underscoring the need for recognition and early intervention in patients at risk for CKD.

At the institutional level, the Division then introduced automated laboratory reporting of estimated glomerular filtration rates to alert physicians and other health care providers to patients with renal dysfunction requiring follow-up and treatment.

The Division also mounted an ongoing community-based education and screening program at health fairs held at Mount Sinai and in the surrounding communities. Of the initial 869 people screened (April-October, 2007), 150 were found to have CKD, and 55 were diagnosed with Stage 3+ CKD and referred for treatment.

- Dr. Heeger received funding from the National Institute of Allergy and Infectious Diseases to study the cellular and molecular mechanisms involved in certain forms of allograft rejection.
- Studies using genetics, pharmacogenetics, and mass spectrometry were begun to identify factors predicting progression of kidney disease and effectiveness of therapy in subjects from the African American Study of Kidney Disease and Hypertension (AASK) Study. The goal: to identify patients at increased risk for progressive renal disease, and to develop novel targets for therapeutic intervention.
- Michael Ross, MD, Assistant Professor, was named co-chair of the INSIGHT (International Network for Strategic Initiatives in Global HIV Trials) Renal Interest Group. Dr. Ross is coordinating studies on renal disease in patients with HIV/AIDS who are enrolled in multicenter, international, randomized, controlled antiretroviral treatment trials.
- Dr. Ross received a grant from the National Institute of Diabetes and Digestive and Kidney Diseases to determine the mechanisms by which the ubiquitin-like protein FAT10 contributes to the pathogenesis of HIV-associated nephropathy.
- Mindful of the high rate of hypertension and end-stage renal disease in the local community, the Division instituted an ambulatory blood pressure monitoring service and a new program in geriatric renal medicine, one of the only programs of its kind in the country.
- Home dialysis expanded from 40 to 46 patients, making it the largest such program in New York City. Added support for dialysis patients significantly increased the number of patients who received transplants and also decreased complications from dialysis. Commitment to further growth has been demonstrated by the Medical Center with the opening of the new unit in the new Center for Advanced Medicine (see page 29).
- The list of patients eligible for renal transplants at Mount Sinai is the fourth largest in the country, while renal transplant survival rates remain among the best in the country. For example, one-year patient and graft survival rates were 99% and 96% for adult living donor recipients.
- Drs. Murphy and Heeger initiated new clinical trials recently to develop targeted interventions for transplant recipients at high risk of graft rejection.
- The first graduates of the American Society of Transplantation/American Society of Nephrology Renal Transplant Fellowship Training Program successfully competed for prestigious academic positions at leading centers, including Mount Sinai.

