

## CRRT Expert Will Receive the Robert G. Narins Award



**Ashita Tolwani, MD, MSc**

Ashita Tolwani, MD, MSc, will receive the Robert G. Narins Award for her many efforts in education and training of the next generation of nephrologists. Dr. Tolwani is professor of medicine at the University of Alabama at Birmingham (UAB).

Dr. Tolwani directed the UAB nephrology fellowship program from 2002 to 2010 and continues as associate program director. In that capacity, she co-directed workshops on curriculum development and assisted in developing the curriculum and teaching tools portion of the ASN website. She wrote the nephrology fellowship manual now available on the website.

A nationally known expert on continuous renal replacement therapy (CRRT) in the treatment of acute kidney injury in the ICU, she has lectured on this topic and general ICU nephrology at the ASN Board Review Course & Update every year since 2010. She founded and directs the UAB CRRT Academy, a two-day course offered annually since 2007 that is the only national CRRT training course that features hands-on training with simulation mannequins. Many nephrology fellowship programs require their fellows to take this course.

Dr. Tolwani has given educational lectures on acute kidney injury and CRRT at academic institutions throughout the United States and at national and international conferences. She has presented CRRT workshops and tutorials at international conferences in South Africa, Belgium, Italy, India, and Malaysia.

She has won virtually every award for teaching given in the UAB medical school and department of medicine, including the President's Award for Teaching Excellence. UAB medical students have nominated her for their top teaching award every year since 2007, and she has won several times.

Dr. Tolwani is co-course director of the ASN critical care nephrology early program; on the organizing committee of the Acute Kidney Injury and CRRT International Conference on Advances in Critical Care Nephrology; and a workgroup member of the ASN initiative, AKI!Now: Promoting Excellence in the Prevention and Treatment of Acute Kidney Injury. She serves on the editorial boards of *CJASN* and *Kidney International Reports*.

Dr. Tolwani received her medical degree from the UAB School of Medicine where she also did her internal medicine residency and nephrology fellowship. She became a faculty member in 1999. She also has a master's in epidemiology from the Harvard School of Public Health.

## Nobel Laureate Ratcliffe to Receive Homer W. Smith Award



**Sir Peter J. Ratcliffe**

Nobel Prize winner Sir Peter John Ratcliffe will present the Homer W. Smith Award lecture on Friday, Oct. 23. This award recognizes outstanding contributions to understanding how kidneys function in normal and diseased states. He will speak on "Understanding Cellular Oxygen-Sensing Mechanisms: Implications for Medicine."

Professor Ratcliffe is director of clinical research at the Francis Crick Institute in London as well as director of the Target Discovery Institute and distinguished scholar of the Ludwig Institute of Cancer Research at Oxford University.

After studying the physiology of renal circulation, Professor Ratcliffe became interested in the regulation of the hematopoietic growth factor erythropoietin, which is produced by the kidneys in response to reduced blood oxygen availability. In 1990, with funding as a Wellcome Trust senior fellow, he set up the hypoxia biology laboratory in the Weatherall Institute of Molecular Medicine in Oxford.

This work led to the unexpected discovery that the oxygen-sensing process underlying the regulation of erythropoietin production in the kidneys and liver operates across essentially all animal cells, irrespective of the production of erythropoietin, and that it directs a broad range of other cellular and systemic responses to hypoxia. These responses include altered energy metabolism, angiogenesis, and cell survival and differentiation decisions.

The laboratory went on to elucidate the mechanism of "oxygen sensing," an unprecedented mode of signal transduction mediated by the oxygen-dependent catalysis of prolyl and asparaginyl hydroxylation at specific sites within the key transcription factor, HIF (hypoxia-inducible factor). Prolyl hydroxylation marks HIF-alpha polypeptides for destruction by the von Hippel-Lindau ubiquitin E3 ligase. Asparaginyl hydroxylation blocks the recruitment of co-activators. In hypoxia these processes are suppressed, allowing HIF-alpha to escape destruction and assemble an active transcriptional complex with its dimerization partner HIF-beta.

His current research aims to understand the roles of signaling through protein hydroxylation and related oxidations. The work is focused both on the operation of the HIF hydroxylases themselves and on related enzymes that catalyze hydroxylations on other proteins. It aims to link these biochemical pathways to physiological control and to the pathophysiology of human diseases including cancer and ischemic vascular disease.

Professor Ratcliffe won the Nobel Prize in Physiology or Medicine in 2019. Among his many other honors, he was elected to the Fellowship of the Royal Society and to the Academy of Medical Sciences. His work on oxygen sensing has been recognized with the Louis-Jeantet Prize in Medicine, the Canada Gairdner International Award, and the Lasker Award for Basic Biomedical Research. He was knighted for services to medicine.

Professor Ratcliffe trained in medicine at Cambridge University and St. Bartholomew's Hospital in London before moving to Oxford to specialize in renal medicine. In 2004, he was appointed Nuffield Professor of Clinical Medicine at the University of Oxford, where he also served as head of the department of clinical medicine.