

Upstate Trains Physicians in a Setting of Science and Scholarship



Steven J. Scheinman, MD

The education we provide to our medical students is enriched by the environment of scholarship and inquiry created by our productive faculty. There is a great deal of groundbreaking research done at Upstate, both by faculty members of long standing and others just recently recruited. There is

too little space here to describe more than a few, but I want to share with you some of their activities.

Our Department of Microbiology and Immunology houses a unique SCID mouse facility, in which immunodeficient mice, engrafted with human stem and immune cells, are a remarkably robust animal model with a human immune system. This allows our faculty to study growth of human cancers, effects and metabolism of chemotherapeutic agents, and gene therapy, as well as antiviral agents and for the study and development of human vaccines. Led by Drs. Rosemary Rochford, Gerold Feuer, and Jennifer Moffat, it is supported by major grants from the NIH and the NYS Stem Cell Board. Tim Endy, MD, MPH, chief of Infectious Diseases in the Department of Medicine, is expressing the human receptor for dengue virus in these mice rendering them susceptible to infection and creating an animal model for human dengue disease.

The SCID facility was one reason that Bill Kerr, PhD chose to come to Upstate. Dr. Kerr is an Empire Scholar in Microbiology/Immunology and Pediatrics and the Murphy Professor supported by an endowment through the Golisano Children's Hospital campaign. His work has had a major impact on our understanding of graft-versus-host disease in bone marrow transplantation, and childhood leukemia.

Dr. Ruth Weinstock has built the Joslin Diabetes program into a substantial center for research into the delivery of care to diabetics,

with major active trials into new therapies and approaches, such as using computers and video connections to manage diabetes from a distance. Meanwhile, in the laboratory, George Holz, MD, Empire Scholar and Professor of Medicine, is studying a new class of glucose-lowering agents, incretin mimetics, which hold the promise of more effective and safer therapy for type-2 diabetics.

Our Center for Vision Research comprises faculty from the departments of Ophthalmology, Biochemistry, and Molecular Biology working on retinal function and diseases. Leaders such as Francesca Pignoni, PhD, our third Empire Scholar, and Barry Knox, PhD, professor of Biochemistry and Molecular Biology, work on retinal development and the molecular structure of photoreceptors. It is one of the most significant vision research programs in the nation.

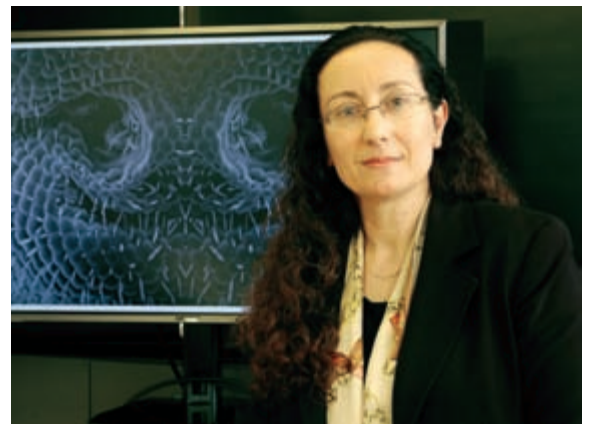
On another occasion, I will fill you in on our nascent Cancer Research Institute, headed by our new chair of Pharmacology, Ziwei Huang, PhD.

Altogether, research at Upstate is growing even at a time of financial austerity because it is so essential to our identity as an academic medical center and to the climate in which we train future physicians. Our research funding is now at the highest level ever in our history. Recruitments for researchers are currently active in most of the basic science departments as well as in several clinical departments, seeking investigators who can bring discoveries from the bench to the bedside—as well as the classroom.

Medicine is a learned profession, and not merely a trade, and the best physicians—the kind produced by Upstate—are prepared for their careers in a setting of science and scholarship.



Ruth Weinstock, MD, HS '85



Francesca Pignoni, PhD