

Sylvester Investigator Wins Prestigious Award for Advancing Urologic Research

The Society for Women in Urology and the Society for Basic Urological Research recognize a female scientist annually for advancing the field of basic science urological research. This year the Excellence in Urologic Research Award went to Kerry L. Burnstein, Ph.D., associate director for education and training at Sylvester Comprehensive Cancer Center and professor and chair of the Department of Molecular & Cellular Pharmacology at the University of Miami Miller School of Medicine.



Kerry L. Burnstein, Ph.D., right, receives the Excellence in Urologic Research Award from Teresa Beam, M.D., immediate past president of the Society for Women in Urology.

“I was thrilled!” Dr. Burnstein said, when she found out she received this recognition, which comes with a monetary award and a free annual membership in the Society for Women in Urology (SWIU). “The previous awardees are women who I greatly admire, and I am so humbled to join their ranks.”

The joint award from SWIU and the Society for Basic Urological Research (SBUR) recognizes career research achievements. In Dr. Burnstein’s case, this means discoveries that combat therapeutic

resistance in advanced prostate cancer. Aggressive prostate tumors become resistant to androgen-deprivation therapy. The Burnstein lab identifies and exploits vulnerabilities inherent in the intracellular signaling within these specific tumors, as well as their communication with cells in the tumor microenvironment.

The findings could someday translate to more effective treatments for men with these advanced, treatment-resistant prostate tumors.

Dr. Burnstein said she would not be at this point in her career without the culture of interdisciplinary collaboration at Sylvester and the Miller School. “The success of my research in recent years has depended critically on interdisciplinary approaches – including yeast genetic screens and novel computational technologies to identify actionable targets for prostate cancer,” she said.

“Collaboration is really the only way to address important biomedical problems.”

Working with other researchers and thought leaders across campus is “also fun, rewarding, and a great benefit for my trainees,” she said. Her trainees gain an expanded network of colleagues and mentors.

“It was very exciting to collaborate with Dr. Andrew Schally, who won the Nobel Prize in Physiology or Medicine in 1977 for his discovery of hypothalamic peptide hormones,” Dr. Burnstein said.

Her current interdisciplinary research includes projects with Dr. Priyamvada Rai, Ph.D., associate professor of medicine at the Miller School. Together they are evaluating the regulation of androgen receptors and prostate cancer progression by a redox protective protein. The U.S. Department of Defense is funding this research.

Dr. Burnstein is also working with Stephan Schürer, Ph.D., associate professor of molecular and cellular pharmacology. Their collaboration uses sophisticated computational approaches to identify and test new drug combinations for prostate cancer. A Bankhead Coley Florida Biomedical Research Grant supports this study.

“I have been fortunate to remain continuously funded in this area of research for almost 30 years,” Dr. Burnstein said.

Sylvester and the Miller School also facilitate Dr. Burnstein’s research through “seed” funds. “The importance of such funding cannot be overestimated,” she said. “In general, obtaining extramural grants requires significant amounts of preliminary data – having a good idea is not nearly enough!” For example, pilot funding from Sylvester, the Wallace H Coulter Center, and the Florida Academic Cancer Center Alliance has led directly to major extramural funding from the Department of Defense, Veterans Affairs and Florida Biomedical.