



Dr. Priyamvada Rai to Co-lead Sylvester's Tumor Biology Research Program

Priyamvada Rai, Ph.D., is the new Tumor Biology Research Program co-leader at Sylvester Comprehensive Cancer Center, part of UHealth – University of Miami Health System.



Priyamvada Rai, Ph.D.

In her role, Dr. Rai will boost interactions and collaborations among Sylvester's researchers to better understand how cancer cells behave – a critical step for developing therapeutic approaches that benefit patients in South Florida and beyond, according to Wael El-Rifai, M.D., Ph.D., associate director for Basic Sciences at Sylvester, who leads the Tumor Biology Research Program with Scott M. Welford, Ph.D., and Dr. Rai.

Dr. Rai's experience as a cancer researcher, leader, and mentor within and outside Sylvester make her an ideal addition to the program's leadership, Dr. El-Rifai said.



Wael El-Rifai, M.D.,
Ph.D.

“Dr. Rai is an outstanding researcher who focuses on understanding the molecular basis of tumor initiation and progression, fitting well into the aims of the tumor biology



program,” Dr. El-Rifai said. “She is an excellent communicator who works collaboratively with Sylvester members and investigators across the Miller School of Medicine and the University of Miami.”

Dr. Rai, professor of radiation oncology and director of the Medical School Summer Undergraduate Research Fellowship (SURF) Program, joined the Miller School in 2008. She has been involved with Sylvester’s Tumor Biology Program in the past. In 2017, she was an Aim leader for the Mechanisms of Tumor Initiation and Progression component of the program, assisting program leaders with this specific aim of the original Cancer Center Support Grant for National Cancer Institute (NCI)-designated Cancer Centers.



Scott M. Welford, Ph.D.

Research Relevant to Many Types of Cancer

Her research is also in line with the goals of the Tumor Biology Research Program, focusing on the fundamental issue that underlies many cancer types.

“In some sense, my research is relevant to cancer as a phenomenon but not necessarily restricted to a specific cancer,” Dr. Rai said. “My lab has worked on a number of different cancers with the aim of tying together oxidative stress response, DNA damage, oncogenic signaling, and tumor suppression, which are key hallmarks of a lot of different tumors. My research is being developed into clinical trials. For example, in prostate cancer, we looked at mechanisms of tumor initiation, progression, and suppression, and identified novel pathways that are clinically actionable.”



Dr. Rai's work outside institutional walls helped her to stand out for the new leadership role. Since 2015, she has been an ad hoc member and now is a standing member of the National Institutes of Health's (NIH) Cancer Biology Section.

"This NIH study section gets grants from very broad areas of tumor biology, so I have had to hone and expand my expertise. We review grants and provide feedback as to their scientific merit," she said. "My membership on this study section provides me with a snapshot of cancer research trends in the U.S. in recent years."

From mentorship and leadership perspectives, Dr. Rai shines for her work directing Sylvester's SURF program, an NCI- and Miller School- funded 10-week fellowship for undergraduate students interested in oncology-focused research.



Stephen D. Nimer, M.D.

Cancer research is evolving from focusing on individual gene mutations to understanding the not only complexities of individual mutations but how genetic changes impact cellular interactions within tumors and nonmalignant tissue, according to Stephen D. Nimer, M.D., director of Sylvester, Oscar de la Renta Endowed Chair in Cancer Research and executive dean for research at the Miller School of Medicine.

"Dr. Rai has the depth of experience in cancer biology to help guide the Tumor Biology Research Program as we continue to mature as an NCI-designated cancer center," Dr. Nimer said.

Dr. Rai has long worked alongside Dr. Welford, who is professor and Biology Division chief in Radiation Oncology.



“Dr. Rai is extremely knowledgeable and resourceful. One of her greatest strengths is her ability to connect people of different research backgrounds and develop collaborative teams,” Dr. Welford said. “She will be a great addition to our leadership.”

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