

# Virtual SURF Showcases Power and Utility of Data-Based Approaches to Biomedical Research

The beaches have been closed but SURF's up at the University of Miami Miller School of Medicine this summer.

In response to the COVID-19 pandemic, Priyamvada Rai, Ph.D., director of the Summer Undergraduate Research Fellowship (SURF) [program](#), and the SURF team – Santos Cayetano, Sarah Sandiford, Rositsa Kalinova, Theresa Votolato, M.S., and Maya Kono, M.S. – have converted the onsite program into an innovative, fully virtual session.



# 2020 SURF

## Summer Undergraduate Research Fellowship (SURF) Participants



**Peyton Coady**  
James Madison  
University  
(Dr. Nagi Ayad)



**Larissa Dixon**  
University of  
South Florida  
(Dr. David Lee)



**Qetsia Etienne**  
Bowdoin College  
(Dr. Sulagna Banerjee &  
Dr. Santanu Banerjee)



**Antanisha Parks**  
University of Missouri,  
St. Louis  
(Dr. Ayham Alkhachroum)



**Olivia Perez**  
University of  
Notre Dame  
(Dr. Stephan Schürer)



**Sofia Perez**  
University of  
Notre Dame  
(Dr. Daniel Isom)



**Russell Perkins**  
University of  
Oklahoma  
(Dr. Sandra Rieger)



**Veronica Rodriguez**  
Florida International  
University  
(Dr. Daniel Pelaez)



**J'Zaria Simpson**  
Savannah State  
University  
(Dr. Delia Cabrera DeBuc)



**William Snyder**  
Bucknell University  
(Dr. Lucina Uddin &  
Dr. Dalton Dietrich)



**Sandy St-Hilaire**  
Florida International  
University  
(Dr. Sophia George)



**Bryan Weselman**  
College of  
William and Mary  
(Dr. Sanjoy Bhattacharya)



Program Director  
**Priyamvada Rai, Ph.D.**  
Associate Professor of Medicine

This year's 12 SURFers, who were selected by a panel of Miller School faculty from a group of nearly 100 candidates, are rising juniors and seniors at institutions across the country. Over the next 10 weeks they will be working on dataset, database and image analysis projects in the areas of cancer, neurodegeneration, ophthalmology, genetics, metabolism, viral pathogenesis and public health disparities. They will be mentored by faculty from both the Miller

School and the Gables campus.

“Our goal this year is to showcase how bioinformatics and computational tools complement and enhance bench-based scientific research,” said Dr. Rai, who is also associate professor of medicine. “We hope that by the end of our 2020 program, this year’s cohort will have gained substantive understanding of the cutting-edge technologies in these fields and how they are applied to key problems in biomedicine.”

Virtual SURF was inaugurated by Henri R. Ford, M.D., M.H.A., the Miller School’s dean and chief academic officer, who welcomed the SURFers and told them that they exemplified the diversity and breadth of experience that is needed in the next generation of physicians and scientists to lead society forward in scientific discovery.

Carl I. Schulman, M.D., M.S.P.H., Ph.D., executive dean for research and professor of surgery, Grace Zhai, Ph.D., senior associate dean for basic research and professor of molecular and cellular pharmacology, and David Lee, director of graduate programs and professor of public health sciences, also spoke to the SURFers. They emphasized the importance of multidisciplinary knowledge and teamwork for success in the students’ future careers.

In the coming weeks, the SURFers will also hear from Stephen D. Nimer, M.D., director of Sylvester Comprehensive Cancer Center, and Kerry L. Burnstein, Ph.D., associate director of Sylvester’s Office of Education and Training and professor and chair in the Department Molecular and Cellular Pharmacology.

Through this year's program, which is co-sponsored by the Office of Graduate Studies and the Sylvester Office of Education and Training, the SURFers will also participate in a mini-bootcamp on bioinformatics and data mining, and in career development and information sessions. The latter include how to write and present research effectively, how to conduct research responsibly, and how to select suitable research programs and mentors who align with their career interests.

These sessions will be led by MSOM and Gables faculty across multiple biomedical disciplines and departments. The SURFers will also interact with each other and Miller School trainees through journal clubs and coffee hours. The program will culminate in a virtual symposium in which each SURFer will present the results from their summer research.