

Identifying the Interaction Site between α -arrestins and the G-protein Coupled Receptor Ste2 in budding yeast

G-Protein Coupled Receptors (GPCRs) are the largest class of cell surface receptors in the human genome. They respond to a myriad of stimuli and are the targets of approximately 50% of pharmaceuticals. Previous work from our lab has identified novel regulators of GPCRs in budding yeast, the α -arrestins. The goal of this SMART project is to identify regions of the α -arrestins that are important for GPCR regulation, which will expand our understanding of GPCR cell biology.



Christopher Alvaro
Ph.D. Candidate, Molecular and Cell Biology

Christopher is a 5th year doctoral student working in the lab of Professor Jeremy Thorner, studying the regulation of GPCRs in budding yeast. Christopher's main reason for pursuing a Ph.D. is to be able to teach and mentor undergraduates interested in the biomedical sciences.

He is fortunate that the SMART program provides direct guidance and experience to graduate students on mentoring undergraduate researchers.

In addition to the SMART program, Christopher has been a part of the NIH Bridges to Baccalaureate program, which provides community college students of underrepresented racial minorities the opportunity to do research at Berkeley in a STEM field.

Following graduation in December 2016, Christopher will be a STRIDE postdoctoral fellow at UCSF, spending part of his time at the bench while gaining teaching experience at SFSU.



Rebecca Kuan
Rising 3rd year undergraduate,
Molecular and Cell Biology

Rebecca Kuan is a Molecular and Cell Biology student who enjoys learning about various microscopic-level processes that allow living organisms to function. One thing she finds particularly fascinating about biology is that similar general processes can be a part of a wide range of very different functions for organisms of varying complexities. This is why GPCRs, stressed as a unifying topic during the last third of her introductory biology class, stood out to her.

She is excited to learn more this summer about GPCR regulation through work with budding yeast. She looks forward to improving her basic benchwork skills with hands-on experience in a laboratory setting and gaining a more concrete understanding of the process of research. The SMART Program is unique in providing more than just the opportunity to get involved in research but also quality mentorship to guide students in the right direction.

UC Berkeley's Student Mentoring And Research Team (SMART) is a paid professional development program that engages doctoral students in creating mentored research opportunities conducted with selected undergraduate student mentees during a ten-week period over the summer. Both participants receive compensation and training throughout their participation. SMART broadens the professional development of doctoral students and fosters research skills and paths to advanced studies for undergraduates.

Expenses associated with each team total \$10,000,000 (\$5K graduate stipend/ \$3.5K undergrad stipend/\$1.5K research and conference costs). As a donor-supported program of the Graduate Division, the majority of teams are underwritten through a combination of donor funds paired with matching support courtesy of the Graduate Division.

Learn more at smart.berkeley.edu