Sensors Research Interest Group (RIG) aims to connect researchers and users of sensor materials, technologies, middleware and applications, and to provide an interface between academic and industrial research.

Student Sensors RIG led seminar series are run by a team of students and postdocs.

Interested in sensor-related research? 
Want to present your work? 
Want to join our team? 
We want to hear from you!

Website: https://research.utexas.edu/vpr-initiatives/rigs/sensors/

Email: sensors_rig_students@utlists.utexas.edu

**ENGINEERING BACTERIAL TRANSCRIPTION FACTORS TO SENSE POPPY ALKALOIDS**

October 29th, 2021
12:15 - 12:45pm

A key bottleneck in the microbial production of therapeutic plant metabolites is identifying enzymes that can greatly improve yield. The facile identification of genetic biosensors can overcome this limitation. We have developed a screening and selection approach that quickly refines the affinities and specificities of generalist transcription factors and use this method to evolve highly specific and sensitive biosensors for five poppy alkaloids. These sensors further enabled the evolution of a streamlined pathway for tetrahydropapaverine, an immediate precursor to four modern pharmaceuticals.

**SIMON D’OEULSNITZ**
Molecular Biosciences
The University of Texas at Austin

Simon d’Oeulsnitz recently graduated from the Cellular and Molecular Biology program at the University of Texas at Austin in 2021. He grew up in upstate NY and got his bachelor’s in pharmacology at Stony Brook University where he also joined the 2015 iGEM team. His work focuses on advancing protein engineering by developing new genetic biosensors that can enable high-throughput screens, strain stabilization, and diagnostic applications. In the future he aims to commercialize genetic biosensors and enzymes to provide sustainable methods for pharmaceutical manufacturing. Besides science he loves bouldering, graphic art, and tasteful memes.

Zoom link: https://utexas.zoom.us/j/98809784870

Youtube link: https://youtu.be/KJh0ld1ar5c

Comments and questions will not be monitored on YouTube