



Cell Signaling San Diego Launches New Core Facility to Make Powerful Biosensor Technology Accessible to All Researchers

Cell Signaling San Diego announces the launch of its new **Biosensor Core Facility** to greatly expand access to sophisticated cellular imaging tools. Located on the UCSD School of Medicine west campus, this innovative facility will offer researchers of any experience level the comprehensive support they need to successfully integrate biosensor technology into their work.

Traditional biological imaging provides only snapshots of cellular processes - like trying to comprehend a movie from a single frame. By contrast, biosensor technology allows scientists to monitor biological activity in real time and space. While adopting these powerful tools has long required specialized expertise, putting them out of reach for many researchers, the new facility provides end-to-end support, allowing investigators to probe signaling pathways for hormones, drugs, neurotransmitters, nutrients and other biological regulators in cells and tissues.

"This facility addresses a critical gap in the research ecosystem," says Nathan Shaner, Ph.D., Director of the new Biosensor Core Facility and Associate Professor in the Departments of Neuroscience and Pharmacology. "Many labs would benefit from using biosensors but lack the specialized knowledge needed to implement them successfully. Our comprehensive support system makes these powerful tools accessible to all researchers."

The facility offers expert consultation on biosensor selection and implementation, custom design of new biosensors for specific research needs, access to a curated collection of well-characterized biosensors, training in quantitative imaging and data analysis and advanced microscopy support.

"A goal of Cell Signaling San Diego has been to build on the legacy of the late Nobelist Roger Tsien in designing creative ways to visualize cell signaling in real time in live cells," explains Alexandra Newton, Ph.D., Distinguished Professor of Pharmacology at UCSD and Director of Cell Signaling San Diego. "Roger would say that these tools allow us to have conversations with cells", Newton adds. "This new Core will not only provide access to biosensors, but also the expertise, training, and support that researchers need to succeed with these technologies, regardless of their starting point," explains Alan Saltiel, Ph.D. Distinguished Professor of Medicine at UCSD, co-Director of Cell Signaling San Diego and Director of the UCSD/UCLA Diabetes Research Center.

The establishment of this core facility builds on UCSD's historical strength in biosensor development, starting with the groundbreaking work of the late Roger Tsien. Through collaborations with UCSD Microscopy Cores, the facility provides researchers access to leading expertise in both biosensor technology and advanced microscopy across a wide variety of scientific disciplines and therapeutic areas.

The Biosensor Core Facility is now accepting new projects and consultations. Researchers interested in learning more about the facility's services or scheduling a consultation can contact biosensors@health.ucsd.edu.

About UCSD Biosensor Core Facility

Housed in the Department of Pharmacology, the UCSD Biosensor Core Facility provides comprehensive support for implementing biosensor technology in biological and biomedical research. Specializing in genetically encodable biosensors while also supporting chemogenetic and small-molecule indicators in live-cell applications, the facility offers expert consultation, technical support, and rigorous quality standards to accelerate research and ensure reliable experimental outcomes.

About Our Partners

The facility operates under the auspices of Cell Signaling San Diego, a center that unites researchers passionate about understanding the molecular mechanisms of cell signaling with the goal of leveraging this understanding to treat disease, and in partnership with the UCSD Microscopy Cores, which provide state-of-the-art microscopy capabilities and expertise.

About UC San Diego

The University of California San Diego is a leading public research university located in La Jolla, California. Known for its interdisciplinary approach to research and education, UCSD consistently ranks among the top universities worldwide for its scientific impact and innovation.