

\$1 Million Grant from Alliance Healthcare Foundation Awarded to UC San Diego



The Alliance Healthcare Foundation has awarded the University of California, San Diego School of Medicine a \$1 million Innovation Initiative (i2) Grant to support the work of Dr. Sara Browne, associate professor in the School of Medicine's Division of Infectious Diseases. The grant is funding groundbreaking research in the use of wireless technologies in the management of personal and public health.

Browne is collaborating with colleagues at UC San Diego's Anti-Viral Research Center, using technology developed by Proteus Digital Health, which has developed a system to track how and when individuals take medications. The system utilizes an ingestible and wearable sensor platform.

The ingestible sensor records time of medication ingestion and transmits the data to the wearable sensor in the form of a patch worn on the patient's torso. The patch also collects activity and rest patterns and sends the information to a secure mobile application.

"The power of such a technology for physicians is that it reveals regular information on patients' medication taking behavior and daily health patterns, enabling them to make better informed treatment decisions and to provide tailored support to their patients," said Browne.

Browne and colleagues are using this technology to remotely monitor TB treatment, comparing it to directly observed therapy (DOT), where a health care worker personally witnesses the ingestion of medication by the patient. While DOT is the current gold standard for TB treatment monitoring, it is very time- and resource-intensive, making it unattainable for many developing countries, as well as too expensive for many domestic TB programs. Poor adherence to medication for TB is a major problem, one that exacerbates infection rates and boosts drug resistance.

“Wireless technologies have the potential to positively impact public health in San Diego and Imperial Counties,” said Browne. “This technology can ultimately impact TB treatment globally, providing new methods of TB therapy monitoring and support to many more patients. This would mean better treatment completion rates, less drug resistance and, consequently, fewer cases of TB.”

The Office of Corporate and Foundation Relations at UC San Diego plays a key role in connecting faculty, like Browne, with sources of private funding such as the Innovation Initiative (i2) Grant from Alliance Healthcare Foundation, a nonprofit organization that works to advance health and wellness for those in need in San Diego and Imperial Counties.

“The purpose of our Innovation Initiative is to identify and reward a nonprofit organization that serves the most vulnerable in our community – including those under 250 percent of poverty – and that will make a substantial impact on the health care system by decreasing costs, improving quality and increasing capacity,” said Nancy Sasaki, executive director of Alliance Healthcare Foundation.

Past Alliance Healthcare Foundation grantees at UC San Diego include the Owen Clinic at UC San Diego Health System, the Student-Run *Free Clinic* Project and the Division of Global Public Health in the School of Medicine.

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