

Grant awarded for device to detect newborn heart problems

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QTScreen is an infant electrocardiogram system that would detect Long QT syndrome in newborns. The electrodes attach to the baby's chest to check for electrical abnormalities. It is designed to be used in the home. Credit: QT Medical, Inc.

Each year, some 2,000 babies are born in the U.S. with a genetic heart condition, known as long QT syndrome. If not diagnosed in time, babies with long QT syndrome can die from a sudden arrhythmia, or irregular

heartbeat.

If detected before the first symptom, long QT syndrome can be treated with medication – a beta-blocker –with great success. But detecting these electrical abnormalities in babies' hearts is difficult because there are no electrocardiogram (ECG) systems designed to record the electrical activities in the hearts of [newborns](#).

A new device is in development, and the National Institutes of Health's National Heart, Lung, and Blood Institute recently awarded a grant to QT Medical, Inc. to continue its work on developing QTScreen, the first-ever ECG device that could be used by parents at home to screen their newborns for long QT syndrome.

QT Medical, Inc. is a spinoff company from Los Angeles Biomedical Research Institute (LA BioMed), and it will be conducting its research of QTScreen in collaboration with the nonprofit research institute.

"QTScreen has the potential to save the lives of infants whose heart problems might otherwise have gone undetected," said Ruey-Kang Chang, MD, an LA BioMed lead researcher, pediatric cardiologist and founder of QT Medical, Inc. "We designed the QTScreen to be easy to use, and we have proven that parents who had no prior training or experience could follow the simple instructions for using QTScreen to perform the tests for detecting long QT syndrome. QTScreen holds the promise of being the first ECG system that parents will be able to use at home to check their newborns for long QT syndrome."

QTScreen is smaller than a matchbox and features an array of electrodes positioned to fit on the tiny chests of newborns younger than a month old. With the first installment of about \$295,000 from a nearly \$2 million grant from the National Heart, Lung, and Blood Institute to develop the device, QT Medical will partner with LA BioMed to test the

device by using it to screen 4,000 babies in Southern California for long QT syndrome.



LA BioMed is partnering with QT Medical, Inc. to test QTScreen, an ECG to measure electrical abnormalities in infants. Credit: QT Medical, Inc.

Provided by Los Angeles Biomedical Research Institute at Harbor

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