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U. S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health



National Institutes of Health Commercialization Assistance Program
(NIH-CAP)

Company Profile

Industry Sector: Medical Devices

Company Overview: Convergent Engineering's mission is to identify challenging real-world biomedical problems and provide solutions based on the concepts of signal processing, information theory, data fusion, and artificial intelligence. The core competency of Convergent Engineering is the use of computational intelligence to extract information from biomedical data. Convergent Engineering started as the research division of NeuroDimension Inc. in 1998 and was launched as a separate company in 2004 under the leadership of President Neil Euliano. Convergent Engineering maintains strong ties with the world-renowned Computational Neural Engineering Laboratory (CNEL) and the College of Medicine at the University of Florida

Target Market(s): The initial eToco uterine activity and eToco +fHR (fetal heart rate) devices are targeted towards monitoring of term labor in a clinical setting. Additional devices shall target the preterm labor, preeclamptic, ambulatory, remote, or home monitoring markets.

Key Value Drivers

Technology*: The eToco system uses electrodes on the maternal abdomen to extract the maternal uterine EMG (EHG) and fetal heart rate. The device embeds intelligence into a custom, inexpensive cable that allows the improved sensor to be used with existing monitors.

The eToco system is comprised of a disposable electrode mesh, highly sensitive signal amplifiers and embedded signal processing. The integrated algorithms provide results superior to traditional non-invasive fetal monitoring systems.

Competitive Advantage: The eToco fundamentally improves how delivery rooms work without requiring expensive new equipment or training. It plugs directly into existing fetal monitors that, in turn, produce the same strips that doctors already interpret every day.

Plan & Strategy: Gain FDA approval for eToco device. Seeking a strategic partner to accelerate commercialization.

*Technology funded by the NIH and being commercialized under the NIH-CAP

Management

Leadership:

Neil Euliano, PhD, President
Daniel McKenna, CTO
Shalom Darmanjian, PhD, Lead Engineer
Scott Koenigsman, MBA, Project Management and Quality Assurance

Scientific Advisory Board:

Jose Principe, PhD, *IEEE Fellow, Director of Computational NeuroEngineering Laboratory at the University of Florida*
Dr. Anthony Gregg, MD, *Professor & Director, Division of Maternal-Fetal Medicine at the University of Florida College of Medicine*
Robert Egerman, MD, *Professor, Division of Maternal-Fetal Medicine at the University of Florida College of Medicine*
Dr. Tammy Euliano, MD, *Chief, Division of Obstetric Anesthesia at the University of Florida College of Medicine*

Product Pipeline

