Company Profile

Industry Sector: Product Development, Medical Devices, Engineering Services for Life Sciences

Company: Quest Product Development provides product and technology development, focusing on medical devices and instrumentation. Quest Technology includes tech transfer, joint development ventures with large and small companies, grant and program management, and commercialization activities. We enjoy collaborative work doing early stage technology development, prototyping and commercialization.

Target Market: Cardiac Synchronization™ Technology (CST) is a new CPR therapy for sudden cardiac arrest, used for pre-hospital and hospital Emergency Room and Intensive Care emergency medicine. Cardiac Sync can be integrated into automated life support/resuscitation devices.

Key Value Drivers

Technology*: CST aims to increase survival rates for patients experiencing pulseless cardiac arrest by synchronizing automated life support devices to the residual heart rhythm and aortic pressure pulse. Its application is important for the aging U.S. population where cardiac arrest is a major health issue and cause of death. Improvements in resuscitation techniques and CPR would have tremendous societal, economic and personal benefits.

Competitive Advantage: There are no current resuscitation devices that employ Cardiac Synchronization™. Quest’s Phase I study successfully accomplished synchronization showing a 110% increase in coronary perfusion pressure critical to survival, and establishing the importance of precise synchronization for improved outcomes. Cardiac Synchronization could be integrated into emergency medicine/resuscitation devices, leading to improved outcomes.

Plan & Strategy: An NIH Phase II SBIR program will develop the 2nd generation CST device and conduct animal studies to determine efficacy. If Phase II data support the effectiveness of CST, it would be licensed and integrated into chest compression devices, AEDs and patient monitors. Markets include pre-hospital Emergency Medical Services, hospital ERs, Intensive Care and Cardiac Catheter ORs, possibly integration with AEDs, and spin offs of new technology including external, non-invasive blood flow sensing.

Product Development

Management

Leadership:
- James M. Houston, CEO
- Jon VonOhlsen, VP and Principal Investigator
- Alan Kopelove, Director, Business Development
- Dr. Todd Larabee, MD, co-Investigator
- Dr. Charles Little, DO, co-Investigator