



Powers Device Technologies Case Study



Company

Powers Device Technologies (POWERS DT), a Florida-based, early stage medical device company founded in 2009, develops feedback sensor products to address the nutritional and distress (self-soothing) needs of premature and low birth weight infants in neonatal intensive care units (NICU) and at home. The Pacifier Activated Lullaby (PAL™) device addresses a long-standing problem among premature infants – delayed proficiencies in learning to suck. The PAL™ stimulates the sucking response in premature and low birth weight infants. An infant’s sucking ability is critical behavior for both survival and neurological development.

Need

Non-nutritive sucking (NNS) is considered one of the most important factors in the feeding of premature infants. It is critical for both survival and neurological development. NNS is not fully coordinated until 32-34 weeks gestation and is abruptly disrupted with premature birth. It is the precursor to oral feeding competency (survival). Additionally, without non-nutritive sucking, the premature infant will be unable to achieve the levels of quiet, non-stress and deep sleep required for normal neurological development. By increasing the likelihood that infants will mature successfully, PAL™ permits infants to be released earlier from the hospital and reduces the risk of a range of behavioral, cognitive, and motor development disabilities. Through a 5-year study conducted from 2001-2006 in Tallahassee Memorial Hospital, University of Georgia Hospital at Athens, University of North Carolina Medical Center, and Florida Hospital Orlando, the use of PAL™ I (prototype) has shown an average 5 day reduction in the length of stay for NICU infants. This translates into a cost savings of \$10,000 (\$2,000 day) per infant for the hospital.

Product

PAL™ is a patent protected, 510k FDA approved digital music delivery system that integrates an infrared sensor, pacifier, and receiver to help stimulate the sucking response in premature and low birth weight infants. PAL™ delivers a timed interval of music for each suck meeting preset pressure criteria. The device teaches the infant to suck through reinforced (contingent) music or voice. The PAL™ technology is based on research conducted at Florida State University by Jayne Standley, Ph.D. An FSU faculty member since 1976, Dr. Standley is recognized as the foremost authority on medical music therapy in the United States.

“After years of research and clinical studies in the NICU, we know that this device teaches premature infants how to feed quickly and safely. It promotes development, hastens their discharge to home, and saves medical costs. It will make a huge difference in standard medical care of preemies in the Neonatal Intensive Care Unit.” Jayne Standley, Ph.D., Florida State University



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Powers Device Technologies and the Littlebanc Team

Despite the success of the product in the hospitals, the initial owner of the technology was unable to obtain funding to scale up to production. Thus, the product was not able to be commercialized. In 2009, FSU contacted Kathy Lovell, a well known early stage entrepreneur with considerable experience in the medical device space, and missioned her with obtaining funding and bringing the much needed product to market. After analyzing the market and creating a strategy, Ms. Lovell decided to partner with Littlebanc to raise the \$1.5 million necessary to productize the prototype, hire personnel and create a company that enables a life-saving skill for premature infants. She chose Littlebanc as her financial partner because of Littlebanc's reputation and track record for getting small, high potential companies funded expeditiously at attractive valuations.

"This key partnership with Littlebanc Advisors will enable us to move this groundbreaking technology to the marketplace where it will help solve feeding and overall development issues in premature infants that impact their quality of life."

P. Kathleen Lovell, President and CEO, Powers Device Technologies, Inc.

Powers DT will use the proceeds for working capital purposes and for developing the technology into a vital device used by hospitals throughout the world.

The LB Merchant team conducted extensive due diligence on Powers including product, competitor and industry analysis to verify both product and market viability. Littlebanc also provided financial and valuation analysis in order to determine an appropriate transaction structure for LB Merchant's equity investment in the company. LB Merchant will exercise board rights and provide guidance on strategic initiatives and executive management post transaction.

"We are pleased to be associated with this important and much needed technology. This funding will enable an FDA approved technology to reach thousands of infants in need of valuable critical care." *Michael Margolies, CEO, Littlebanc Advisors, LLC.*

The company was also chosen as a recipient of a \$200,000 grant from the State of Florida University Research Commercialization Assistance Grant (SURCAG) Program increasing total funding to \$1.7 million.

March 2011

\$1.5 m Capital Raise

