VALENCELL, INC.

When the supply chain for wearable devices began maturing around 2006, large electronic powerhouses were positioning themselves to be the leaders in the industry. The first entry point into the marketplace seemed to be fitness, and suddenly people were interested in how many miles they were walking, calories burned, flights of stairs climbed per day, and other statistics that were never before available.

PHASE III SUCCESS
Valencell's technologies can be found in devices manufacturered by LG, Sony, Scosche, Jabra, INTEL, and SMS Audio; revenues are more than doubling on a yearly basis.

AGENCIES
HHS

SNAPSHOT
By leveraging just three SBIR awards, Valencell developed its patented PerformTek® which provides clinical-grade accuracy for high-performance biometric monitoring. PerformTek is found in many wearable devices on the market today.

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Meanwhile, over at General Electric, Dr. Steven LeBoeuf was a scientist working in the company's research and development facility with a focus on electrical engineering and solid-state device science. After resigning at GE, he began looking for big opportunities to make an impact in the healthcare marketplace. At the time, portable health monitors were clunky, uncomfortable, and error-prone. His background in device science convinced him that electronics and advanced signal processing could be used toward the monitoring of biological and physiological information in truly consumer-wearable devices. His vision went far beyond just fitness – he believed he could provide critical information to users that would help them to assess their overall health and productivity. And with that vision, Valencell was founded.

"We are the only company in the marketplace that has its sole business model as a technology provider for wearable biometrics – there are several consumer products out there, but no other company focuses all of its resources on providing biometric sensor technology to these consumer brands," says Dr. Steven LeBoeuf, Founder and CEO of Valencell. "We see where the future is going and realize the market is moving from fitness to health monitoring. When you wear these devices, you can learn a number of things - what foods are making you sick? What exercises work best for you with your own unique physiology and lifestyle? Is your health improving? Why or why not? Soon, all of these answers are going to be available."

When the company first got started, it turned to the Small Business Innovation Research (SBIR) program through the U.S. Department of Health and Human Services (HHS) to fund some of its early stage development. Dr. LeBoeuf responded to three SBIR solicitations, and won awards for each.

"We were such a small team in the beginning that SBIR really helped to validate our technology and get us to a point where it was proven," added LeBoeuf. "It made it easier to approach companies and license our technology."

Companies such as LG, Sony, INTEL, SMS Audio and more contact Valencell when they have a product concept that needs accurate biometric sensing. One of these end products which uses Valencell's PerformTek® technology is the Sony Smart-B Trainer, which retails for $250. The Smart B-Trainer is branded by Sony as a new "Smart Sport Gear" option, which combines a sport device which measures and records training statistics while being able to play back music in a single device, and a supplemental app which provides management of training sessions and various training menus. Another product is the ATLAS Wristband, which provides advanced exercise detection utilizing biometric sensing to identify exercise reps and sets, calculate calories burned, and evaluate the user's form. This device also retails for $250.

Valencell's PerformTek® technology is being evaluated for use by the fleet in order to track vital biometric information for soldiers. It is also applicable for first responders, who need real-time and high performance monitoring during emergency situations.

Valencell's PerformTek® can be found in over a dozen products on the market today. While 100% of the company's revenue has derived from commercial sales, the team is currently exploring opportunities within the federal government to provide enhanced capabilities to the fleet. DARPA is exploring technologies that will increase solider safety with specialized apparel that will communicate physiology to the user. It can provide essential biometric monitoring and inform a central base whether the solider is overheating, or in need of medical attention. The same technology could also be beneficial to first responders.

Valencell is currently expanding business with a new product line – BioPack. These devices are essentially pre-configured biometric sensor systems that can be inserted into a wristband, armband, legband, clothing, etc. and can communicate wirelessly with the user's smartphone.

LeBoeuf attributes part of the company's success to its location in North Carolina, one of the very few states that provides matching funds to SBIR federal dollars.

"The North Carolina matching funds program is phenomenal," adds LeBoeuf. "Whereas the federal SBIR program does have certain restrictions on use of the funds, the state funds do not have stipulations; you can use them to file patents, for travel to tradeshows, marketing efforts, and other inevitable expenses, and there is not an additional review process."

With over $13.5 million in investment money pouring in from people who want to get in on the action, Valencell is poised to be a breakout star over the coming years. LeBoeuf acknowledges the arduous journey that many research and development firms must undertake, but praises the SBIR program for assisting scientists with strong technical backgrounds.

"If you are developing a new medical device where a substantial amount of science is involved, you are going to need more capital over a longer period to leverage that technology into positive business outcomes," explains LeBoeuf. "And for that, the program is quite effective. With costs of business and filing provisional patents, we really could not have survived as an advanced technology provider without that funding."