LightSpin Technologies, Inc.

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

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

Contact: Eric S. Harmon, Ph.D. **Location:** 314 Main St., Norfolk, MA 02056

Email: harmon@lightspintech.com **Tel:** 508-809-9052

Company Profile

Industry Sector: Photodetector Component for Medical Imaging (PET)

Company Overview: LightSpin Technologies, Inc. develops the world's highest performance solid-state photon detectors, achieving single photon sensitivity, wide dynamic range, large photosensitive area and low noise. LightSpin's photon detectors will supplant fragile, expensive, high voltage photomultiplier tubes with a low cost, low voltage, robust, solid-state solution. These detectors provide improved performance for Positron Emission Tomography (PET) scanners, enabling improved resolution, lower false positive/false negatives rates and lower radiation dose

Target Market(s): The initial target market is medical PET scanners, providing a drop-in replacement for the 100-year-old vacuum tubes currently required to provide acceptable system performance. LightSpin's photon detectors are also critical components for a wide range of light starved applications, including biomedical instruments, chemical analysis instruments, and nuclear particle physics experiments.

Key Value Drivers

Technology*: LightSpin's SSMCP technology is a true solid-state replacement for the 100-year-old vacuum tube photodetector. Vacuum tube photodetectors are still used in a number of applications where the highest sensitivity is needed, because all prior solid-state solutions provided substandard performance.

Competitive Advantage: The SSMCP technology exhibits better performance than the vacuum tube, including higher sensitivity, faster timing response, as well as the improved reliability and compact form factor expected from semiconductor solutions.

Plan & Strategy: Seeking $2.5M in Venture Capitol for Manufacturing scale up and partnership with medical equipment manufacturers**.**

*Technology funded by the *National Institute of Biomedical Imaging and Bioengineering* and being commercialized under the NIH-CAP

Management

Dick Clayton, S.M., *Chairman*
- *4 decades operational scar tissue building great companies: DEC, Thinking Machines, Adaptec*
- *$B's of products from lab to demanding customers*

David Salzman, Ph.D., *President*
- *10 years in academia and government research & management*
- *15 years as entrepreneur running high tech & govt contractors*
- *Founded, built & sold them to Teledyne, SensIrOx, Sun, etc.*

Eric Harmon, Ph.D., Vice President of Research
- *10 years manager of optoelectronics R&D for leadings firms*

Jerry Woodall, Ph.D., *Chief Scientist*
- *World's top compound semiconductor scientist*
- *Invented GaAs/AlGaAs heterojunction, IR LED, HBT, pHEMT*

Product Pipeline

Drop-in replacement component for PET (2008)

Design-in for next generation PET: (2008 – 2009)

PET/MRI
Small animal PET (pharmaceutical research)
Head/Breast/Colon cancer probes

Non-PET markets (2009)

Biomedical Instruments
Chemical Analysis instruments
Nuclear materials detectors (Homeland security)
Nuclear particle Physics experiments
Laser radar (ladar) – military and civilian (collision avoidance)