# Dossier: SIVANANTHAN LABORATORIES, INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $749,960.00

**Award Date:** 2024-05-24

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Sivanathan Laboratories, Inc. (SLI) specializes in the design, development, and fabrication of advanced infrared (IR) detector technologies, primarily for defense, security, medical, and industrial applications. Their core mission is to create high-performance, low-cost IR sensors that enable superior imaging and detection capabilities in demanding environments. SLI aims to solve the limitations of existing IR detector technologies, such as high cost, low sensitivity, and complex cooling requirements. Their unique value proposition lies in their expertise in Type-II Superlattice (T2SL) materials, which allows them to produce IR detectors with high quantum efficiency, low dark current, and improved operating temperatures compared to traditional materials like mercury cadmium telluride (HgCdTe). This results in sensors that are more sensitive, require less cooling (or no cooling at all), and are more cost-effective for a wider range of applications.

**Technology Focus:**

* Development and manufacturing of Type-II Superlattice (T2SL) infrared detectors covering short-wave infrared (SWIR), mid-wave infrared (MWIR), and long-wave infrared (LWIR) spectral bands.
* Design and fabrication of uncooled IR detector arrays based on T2SL technology, enabling high-performance imaging without the need for cryogenic cooling, crucial for portable and low-power applications.
* Advanced epitaxial growth techniques using molecular beam epitaxy (MBE) to precisely control the composition and structure of T2SL materials, optimizing performance characteristics.

**Recent Developments & Traction:**

* In 2022, SLI received multiple Small Business Innovation Research (SBIR) Phase I and Phase II awards from the Department of Defense (DoD) for the development of advanced IR detector technologies for missile defense and situational awareness applications.
* In 2023, SLI announced advancements in their uncooled LWIR detector technology, demonstrating significantly improved sensitivity and performance compared to previous generations. This advancement is expected to open new markets in commercial and industrial applications.
* In February 2024, SLI secured a contract with an undisclosed prime defense contractor to supply T2SL IR detectors for integration into a next-generation surveillance system.

**Leadership & Team:**

* Dr. Siva Sivanathan (CEO and Founder): An expert in IR detector technology with extensive experience in MBE growth and device fabrication. Holds numerous patents in the field.
* (Information on other leadership is limited in available web sources.)

**Competitive Landscape:**

* Teledyne FLIR: A major player in the IR imaging market with a wide range of IR detectors and camera systems. SLI differentiates itself by focusing on advanced T2SL materials and uncooled detector technology, offering potentially lower cost and power solutions for specific applications.
* Leonardo DRS: Another significant competitor in the defense IR sector. SLI's focus on T2SL and uncooled technologies can provide advantages in specific performance characteristics and cost-effectiveness in certain applications.

**Sources:**

1. [https://www.sbir.gov/sbirsearch/detail/2317738](https://www.sbir.gov/sbirsearch/detail/2317738)

2. [https://www.sbir.gov/sbirsearch/detail/2317739](https://www.sbir.gov/sbirsearch/detail/2317739)

3. [https://www.linkedin.com/in/siva-sivanathan-51166723](https://www.linkedin.com/in/siva-sivanathan-51166723)

4. [https://www.defenseconnects.com/organization/sivanathan-laboratories-inc](https://www.defenseconnects.com/organization/sivanathan-laboratories-inc)