Guanine Inc.
Team
November 15, 2022

1. Management Team

Neil Gordon, B. Eng., MBA – President & Founder .

Neil is an Engineer/MBA with over 35 years experience in the management, development and commercialization of cutting edge products and services. He was one of the nanotechnology sector's first business consultants and specialized in the convergence of nanotechnology, biotechnology, information technology for detecting ultra-low levels of biological materials. He conducted a series of projects for Taiwan's national lab ITRI to integrate biological materials with semiconductors. Neil headed commercialization for the NASA-led CANEUS international consortium for Micro and Nano Technologies in the Aerospace and Defense Sectors. He spun out Early Warning Inc from NASA's Ames Research Center and commercialized NASA's carbon nanotube biosensor for electrochemically detecting bacteria, protozoa and viruses. Neil raised $10 million of private sector and government funding and oversaw a 35 person team. He co-developed an automated detection instrument, and marketed the system to water companies. Neil subsequently founded Guanine Inc. He invented the electrochemical oligonucleotide detection tag and adapted the platform for detecting sepsis targets, co-designed a mobile detection instrument and test cartridge, and is leading Guanine's seed financing round. He patented an artificial intelligence platform that diagnoses infections using pattern recognition of rashes, and assessment of symptoms, medical conditions and test results. Earlier in his career Neil was involved in the commercialization of a teller staffing system that employed a queuing model and sensors at the wait line and teller stations and was installed throughout Citibank, he co-developed an expert system for predicting the winning price on competitive bids as the knowledge engineer, and he marketed virtual prototyping tools used for developing cockpit displays and flight simulators.

Garry Palmateer, B.S., M.S. – Vice President Assays

Garry is a seasoned microbiologist with 40 years experience in the development and detection of multiple pathogens in environmental and human samples. He provided analytical support, supervision, consulting and new study methods in cooperation with many Ontario Government laboratories in the Ministry of Environment and Ministry of Health. He set up a testing lab and was a consultant to hospitals, geriatric homes, and industry. Garry co-invented the automated water sampling and detection instrument at Early Warning Inc. and worked with mechanical, electrical and chemical engineers to develop sample preparation, magnetic separation, and biodetection modules. At Guanine Inc, he is tasked with developing multiple test plans to select appropriate methodologies, and ensure that the biosensor and preparation protocols would be capable of fulfilling standard test protocols for detecting pathogenic microorganisms and other biomarkers. He provides direction and supervision on actual tests of the device methods to ensure test results would be acceptable to government regulators. Over the course of his career Garry has worked extensively in microbiology laboratories providing analysis of many pathogens including *Escherichia coli, streptococci, enterococci, Pseudomonas aeruginosa, Staphylococcus aureus, Clostridium perfringens, Salmonella spp., Campylobacter jejuni, Yersinia enterocolitica, Cryptosporidia spp. and Giardia*. He was the Principal investigator in the Walkerton, Ontario, E. coli and Campylobacter outbreaks, and a consultant following the Cryptosporidium outbreak in North Battleford, Saskatchewan.

Raj Bawa MS, PhD, MD – Vice President Business Development

Raj has over three decades experience as a medical researcher, PI, author, professor and registered patent agent. He has extensive hands-on bench experience, patent law track record and commercialization expertise. Initially trained as a biochemist and microbiologist, Raj has extensive hands-on bench experience, as well as a background in medicine, drug delivery, biodefense, sensors and diagnostics, Raj is leading Guanine's efforts to apply the technology to early stage sepsis diagnosis and will interface with medical clinicians. Raj was previously PI on Guanine's CDC-funded SBIR that applied

the platform to detect carbapenem-resistant *Enterobacteriaceae*. He is participating in the preparation and development of clinical trials and will interface with hospital collaborators. Raj has previous experience as a PI of three NCI/SBIR contracts. He successfully administered these projects (e.g., staffing, research protections, budget), collaborated with other researchers and produced reports from each project. He also ensured that all systems were in place to guarantee institutional compliance with NIH policies in animal research, data exchange and facilities requirements. Raj was previously the organizer of an international medical research conference held in Albany, NY for 14 years, was the editor of 6 books and co-author of nearly 50 publications.

Stephen Rock, PhD – Vice President Engineering (to be finalized)

Steve is a research engineer with extensive experience in mechanical and electrical design, engineering, prototyping and manufacturing. He developed Guanine's prototype hardware capable of processing fluid samples and interrogating a low cost biosensor module using electrochemical techniques with a focus on attaining a cost-efficient solution that can be readily manufactured and employing a simple and error-proof assay cartridge. At the New York State Center for Automation Technologies and Systems at Rensselaer Polytechnic Institute, he has led interdisciplinary teams on a range of complex electromechanical products, developed prototype electronics and mechanical hardware, and developed manufacturing processes for flexible electrochemical devices in the fuel cell industry. Steve also conducted research on information-driven manufacturing process development involving advanced technologies such as laser systems, industrial robotics, and ultrasonic processing. Steve previously worked in additive manufacturing on CAD/CAM interfacing, model validity checking, automated repair, topology-based slicing, and creation of an improved file format for storing facet model data. Steve invented and patented a powder-based metal additive manufacturing process, and he applied finite element modeling techniques and powder sintering models to perform shape optimization and correct for process-induced geometric distortions introduced during powder consolidation. He will leverage considerable experience in 3D printing and additive manufacturing for successful product development as part of the proposed activity.

Ara Altounian, B. Eng., MBA – Vice President Operations .

Ara is an engineer/MBA with diverse experience in engineering, retail, software design and instruments. His career spans many aspects of management, operations, and administration. He began his career in an international engineering-construction management company and was involved in marketing and project management. He subsequently worked in operations and administrative roles in software and instrument companies along with Neil. He later managed a retail business and oversaw administrative and marketing functions. Ara will oversee operations and administrative functions at Guanine.

2. Collaborators

- **Newchip** - Fund raising
- **Rensellaer Polytechnic Institute Manufacturing Innovation Center** – Prototyping
- **FuzeHub** – Low Volume Manufacturing
- **ZimmerPeacock** – Cartridge Manufacturing
- **Regulatory Approval** – Consultant being sought

3. Key Vendors

- **ATCC** - Microorganisms
- **IDT** - Oligonucleotides
- **Pall – Filtration**
- **Bangs Labs** – Magnetic particles
- **DropSens (Metrohm)** – Sensor Microtiters
- **PalmSens and Analog Devices (ADI)** – Electrochemical Components