

## VST LLC Class Specification

**Position Title: Molecular Biologist Manager**

**Position Class: Principal Scientist, Level VII**

*Medgene Labs helps veterinarians and producers protect livestock with precisely constructed immunological products and services. Applying a strategy of continual diagnostic surveillance and data analytics to the practice of immunology, creating vaccines for the disease-at-hand quicker and more precisely than previously possible. Medgene Labs has a single mission: To be a world-class Immunological Services Provider™ for leading livestock producers and their veterinarians.*

### **Application Deadline: Until Filled**

To apply for this position, send a current resume and cover letter to [erinh@medgenelabs.com](mailto:erinh@medgenelabs.com), or send a hard copy to: VST LLC dba Medgene Labs, 1006 32<sup>nd</sup> Ave., Suite 104, Brookings, SD 57006.

#### **A. Purpose:**

Design, implement and manage a next generation sequencing lab and its staff, in coordination and cooperation with Quality Control, Research and Development, Manufacturing, Quality Assurance and ISPrime departments in compliance with CVB Regulations, to meet the Strategic Objectives of Medgene Labs.

#### **B. Distinguishing Feature:**

The Molecular Biologist Manager is responsible for development, optimization and supervision of the sequencing, assembly, data analysis, and storage of viral and bacterial genomes, as it relates to construct development, vaccine development and vaccine manufacturing. The position is internal, requiring time at the laboratory bench and is external, requiring effective communication with customers and clients.

Candidates should have a minimum of a Master of Science, with a PhD preferred, in Microbiology/Molecular Biology/Animal Science or related field. Experience preferred, but not required.

#### **C. Functions:**

##### 1. Molecular Duties

- a. Coordinate and carry out tissue collection and preparation, DNA & RNA extraction, NGS library preparation and sequencing of libraries on in-house sequencing equipment
- b. Perform all lab-based activities: sample preparation, DNA/RNA isolation, DNA/RNA purification, library construction, DNA/RNA next generation sequencing.
- c. Perform and execute next-generation sequencing (NGS) protocols for the characterization of RNA and DNA molecules.
- d. Develop novel protocols for viral genomes and/or bacterial genomes by sequence alignment and/or primer design.
- e. Design, and implement, and maintain NGS sequencing platform/s.
- f. Conduct and implement improved methods to existing standard next generation sequencing protocols.

- g. Effectively optimizing and troubleshooting NGS library preparation and sequencing workflows, upstream data processing to ensure high level of quality and reliability of generated results.
  - h. Evaluate new methods and technologies to enable the expansion of next generation sequencing (NGS) platforms for higher throughput, lower cost applications (e.g., cheaper library prep, new approaches to DNA concentration normalization, etc.).
  - i. Training and management of laboratory scientists/technicians.
2. Next Generation Sequencing Bioinformatics Duties
- a. Design and implement NGS data storage strategy.
  - b. Develop, implement, maintain, and oversee next-generation sequencing (NGS) data processing pipelines in a high-performance computing environment.
  - c. Develop software modules to regularly perform standard data analysis routines in an automated fashion and provide visualization tools for clients, veterinarians and researchers to explore the results.
  - d. Apply a combination of theoretical and applied knowledge in order to strategize, guide and lead the NGS-related programs.
  - e. Provide high quality practical advice to others by applying broad NGS-related experimental and data analytics work experience and theoretical knowledge.
  - f. Analyze, interpret and record experimental results and present them in written/oral communications.
  - g. Work closely with diagnostic lab reports and Immunological Services for sequence analysis and tracking of disease within individual locations.
  - h. Manage timelines and deliverables and develop reports for various projects.
  - i. Training and management of data scientists/technicians

**D. Reporting Relationships:**

Typically reports to the VP of Operations with direct line to the Chief Technology Officer. Will provide work direction to Scientists, interns, students and/or other staff assigned to the laboratory.

**E. Accountability and Level of Impact:**

Multi-disciplinary project leader and/or cross-functional team member. Leads the completion of, and/or accomplishes, related objectives. Works autonomously; manages resources; consults with and updates project sponsors.

**F. Technical/Functional Expertise and Application:**

With a multi-disciplinary and commercial perspective, provides technical expertise and leadership across disciplines, and/or functions. Modifies existing processes, procedures and technologies, or develops new ones, as needed. Understands the Medgene business and animal health industry; applies to serving customer needs. Recognizes major competitors in the market.

**G. Problem Solving and Innovation:**

Drives innovative thinking; initiates, and/or manages change across teams, projects and/or functions. Assesses risks/benefits; generates best solutions, and/or resolves complex cross-functional project problems. Thrives in an ambiguous environment.

## **H. Communication, Collaboration and People Influence:**

Leads and proactively collaborates across disciplines, and/or functions. Responsible to mentor/coach colleagues. Practices active inclusion, and respect for diversity, to advance multi-disciplinary objectives. Produces internal and/ or external written communications; facilitates virtual and team meetings; presents to large groups. Establishes teams targets and objectives and conducts performance reviews.

## **I. Job Environment:**

Potential for exposure to human and animal pathogens, including blood-borne pathogens. Exposure to infectious agents, dangerous chemicals, high-voltage equipment, toxic fumes, high-pressure steam, temperature extremes, and potential mutagens.