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SOPHIE'S BIO INC.

JOB OPPORTUNITY

FERMENTATION LEAD

Research & Development – Charlottetown, Prince Edward Island

About Sophie's Bio

Sophie's Bio Inc. is an international biotech startup developing scalable microalgae-based functional protein ingredients to address global food security challenges. Our mission is to make high-quality, sustainable protein accessible worldwide by proving that nutritious food ingredients can be produced locally using straightforward fermentation technology. Operating across four entities in Europe, APAC and now Canada, we combine R&D with practical bioprocess engineering to deliver functional ingredients to the global food industry. We are establishing our Canadian operations in Charlottetown, PEI—home to one of North America's leading bioscience clusters—and currently setting up our laboratory and pilot production operations at the Regis & Joan Duffy Research Centre (UPEI). This is an opportunity to join a lean, international, entrepreneurial small team at the ground floor, where your work directly shapes both the science and the business.

The Opportunity

Sophie's Bio is seeking a Fermentation Lead to scale our microalgae fermentation platform from benchtop to pilot and demonstration level of production, establishing the technical foundation for commercial manufacturing. The Fermentation Lead will be the technical lead for pilot fermentation at our NRC partner facility, developing SOPs, process control strategies, and documentation required for regulatory approval and CDMO tech transfer. A critical responsibility of this role is to advance product development and lay the foundation for our demonstration facility—progressing from pilot completion to demonstration-level production design. This position is ideal for a hands-on, systems-thinking engineer who thrives where technical rigor and entrepreneurial pragmatism coexist.

Core Responsibilities

- Lead pilot fermentation scale-up from benchtop to pilot and demonstration level of production at NRC facility
- Coordinate with APAC R&D team on strain development, media optimization, and technology transfer
- Develop and implement SOPs for aseptic operations, SIP/CIP, and seed train protocols



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- Define inoculation criteria, transfer windows, scale-up parameters, and process control strategies
- Establish upstream-to-downstream handoff criteria (harvest endpoint, biomass quality, sampling plans)
- Prepare regulatory documentation to support Health Canada submissions, including batch records and validation protocols
- Manage CDMO technology transfer activities, including process characterization and tech transfer packages
- Collaborate with leadership on demonstration site design, pilot plant strategy, and commercial manufacturing roadmap
- Contribute to grant applications to support process development and scale-up
- Lead laboratory setup and establish administrative SOPs for inventory management, ordering, equipment maintenance, and safety protocols; oversee execution as team grows
- Supervise and mentor junior team members

Required Qualifications

- Bachelor's, Master's, or PhD in Biochemical Engineering, Chemical Engineering, Microbiology, or related field, with strong industrial fermentation experience
- 5+ years hands-on experience in microbial fermentation with significant exposure to pilot-scale operations (1000L+ bioreactors)
- Deep understanding of process control parameters (DO, pH, temperature, nutrient feeding) and their impact on scale-up
- Proven track record developing SOPs and technical documentation for bioprocesses
- Experience coordinating with external partners (CDMOs, contract research organizations, pilot facilities)
- Strong analytical and problem-solving skills with ability to troubleshoot complex bioprocess issues
- Excellent project management and communication skills
- Eligible to work in Canada (no visa sponsorship available)

Preferred Qualifications

- Experience with microalgae fermentation or microbial biomass production for food applications
- Prior work in CDMO or pilot plant environments, including technology transfer and manufacturing support
- Grant writing experience for government-funded bioprocess R&D programs

Work Location & Schedule

This role is based at the Regis & Joan Duffy Research Centre (UPEI) in Charlottetown, Prince Edward Island, with frequent work at NRC pilot facility and partner sites. Regular onsite



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work is required. Due to the nature of pilot-scale fermentation and coordination with partners across time zones, this role requires flexibility and may occasionally require onsite work during evenings or weekends. Remote work is possible when not required at facilities. Occasional travel to other Canadian provinces for CDMO visits and, less frequently, to the United States or Europe for technical conferences may be required as the company scales.

Growth & Development Opportunities

Over the next 2-3 years, opportunities to advance into senior engineering or technical director positions, take ownership of demonstration facility commissioning and startup, expand into downstream process integration or commercial manufacturing roles, and contribute to IP development and regulatory strategy.

Why Sophie's Bio?

- **Mission-driven work:** Contribute to solving global food security challenges through scalable protein technology
- **Early-stage impact:** Join a team where your work has immediate, visible impact
- **International collaboration:** Work with a globally distributed team spanning Canada, APAC, and Europe
- **Professional development support**
- **Health benefits**
- **Bioscience ecosystem:** Access to Atlantic Canada's leading bioscience cluster, including world-class research facilities and pilot infrastructure
- **Facility development:** Participate in demonstration facility design and commissioning

Compensation

CAD \$80,000 - \$95,000 per year, commensurate with experience

How to Apply

Please submit your resume and a concise cover letter to olivia@sophiesbionutrients.com, with the subject line: Fermentation Lead. The cover letter should explain why you are interested in this role and how your experience aligns with Sophie's Bio's mission. Applications will be reviewed on a rolling basis.

Sophie's Bio is committed to building an inclusive team and actively encourages applications from individuals of all backgrounds, including women, Indigenous peoples, members of the 2SLGBTQIA+ community, and other groups historically underrepresented in science and technology.