

Upstream Fermentation Scientist

Why Work at Lite-1

Our story began by thinking outside of the box to address one of the most complex issues of the time. We introduce the future of clean dye manufacturing by using microorganisms as factories of the future. Our passion for pushing scientific frontiers continues to grow everyday with the mission of making the world a better place for both humans and the environment. Our technology platforms enable the transformative science being done at the Lite-1, but a unique team of scientists and innovators make it happen. By joining Lite-1 you will become part of an exceptional mission and a multidisciplinary team of scientists and creatives operating at the leading edge of biodesign. We look for people who share our core values, science, passion, and respect to join us in our mission to provide ground-breaking solutions towards future proofing our colourful world.

We believe that equity, diversity and inclusivity are essential for the advancement of human knowledge and science. We welcome all applicants and provide all employees with equal opportunity for advancement, regardless of race, colour, ancestry, place of origin, political belief, religion, marital status, family status, physical or mental disability, sex, sexual orientation, gender identity or expression unrelated to their employment.

By joining us you will:

- Work on exciting, collaborative and impactful projects in a fast-growing environment
- Have the opportunity to take creative approaches to scientific findings and think outside of the box
- Untap and learn the unique potentials of microorganisms in building a green future
- Be a part of initiating the biodesign culture in Canada

About Lite-1

We are a young creative group of multidisciplinary scientist and designers with the mission to build the next generation of sustainable dye and pigments grown by microorganisms as the dye factories of the future. Our innovation is a proprietary patented platform biotech that biofabricates customizable microbial dye to the need of end industry user. Our dyes reduce water pollution, are safe for workers as well as the ecosystem, and eliminate our dependence on non-renewable resources. The product offers an overhaul to the dye industry to shift from one of the preeminent polluters to a regenerative and more humane industry. Our main goal is to transform the dye industry from a toxic and hazardous industry to a clean, healthy, and circular one by introducing the future of dye manufacturing.

Position Overview: We are seeking an experienced and technically proficient Senior Upstream Fermentation Scientist to join our dynamic team. This role focuses on optimizing and scaling up our fermentation processes from lab-scale to commercial production. The ideal candidate will have extensive industrial experience in precision fermentation, process optimization, and developing commercial protocols to enhance the production of microbial dyes.

Key Responsibilities:

- Design, optimize, and scale-up fermentation processes for the production of dyes, ensuring high yield, productivity, and consistency from benchtop to 10,000L reactor scale.
- Develop and implement protocols for precision fermentation, including control of critical process parameters such as pH, temperature, agitation, dissolved oxygen, and nutrient feed rates.
- Conduct experimental design and statistical analysis (e.g., DoE) to systematically optimize fermentation conditions and improve process robustness at large scale production.
- Utilize advanced bioprocess monitoring and control systems, such as sensors and automated sampling, to ensure optimal fermentation performance.
- Develop and maintain Standard Operating Procedures (SOPs) for fermentation processes, ensuring compliance with industry standards and regulatory requirements.
- Analyze and interpret fermentation data, providing detailed technical reports and recommendations for process improvements.
- Research, develop, and optimize continuous and semi-continuous fermentation processes to enhance production efficiency and scalability.
- Drive continuous improvement initiatives, including the adoption of novel technologies and methodologies to enhance fermentation efficiency and scalability.
- Troubleshoot and resolve issues related to fermentation processes, equipment, and instrumentation.
- Stay current with advancements in fermentation technology, bioprocessing, and related fields, applying new knowledge to ongoing projects.
- Prepare and present technical reports, scientific publications, and patent applications to document and communicate research findings.
- Optimize media using reliable, compliant waste-derived feedstocks to maximize yield, reduce COGs, and align with international waste and sustainability standards.
- Mentor and guide junior scientists and research associates, fostering a culture of technical excellence and continuous learning.

Qualifications:

- Ph.D. or M.Sc. in Biochemical Engineering, Microbiology, Biotechnology, Fermentation, Biomanufacturing
- 5+ years of industry experience in precision fermentation, with a focus on large-scale or commercial-scale operations.
- Proven track record of developing and optimizing fermentation processes for industrial applications.
- Think out-side-of box to develop innovative solutions
- Strong expertise in precision fermentation, including control and optimization of critical process parameters.

- Experience and knowledge in semi-continuous and continuous fermentation processes is a bonus.
- Proficiency in the use of bioprocess monitoring and control systems, online sensors, and automated sampling technologies.
- Experience with statistical analysis and experimental design (e.g., DoE) for process optimization.
- Demonstrated ability to troubleshoot and resolve complex technical issues in fermentation processes.
- Excellent technical writing and communication skills, with the ability to prepare detailed reports and presentations.
- Strong leadership and collaboration skills, with a passion for mentoring and developing junior scientists.
- Commitment to sustainability and a drive to contribute to environmentally-friendly biotechnological solutions.

Why Join Lite-1?

- Be part of a pioneering company at the forefront of sustainable biotechnology.
- Work in a collaborative, inclusive, and innovative environment.
- Contribute to transformative solutions that address critical environmental challenges.
- Opportunities for professional growth and development in a cutting-edge field.
- High opportunity for growth and promotion within this creative, interdisciplinary cleantech start-up – the ideal candidate will be an integral part of this small team and rise with the success of the company.

FAQ:

1. Can I anticipate enjoying the startup scene?

Ah, that's a great query. Working at a startup isn't everyone's cup of tea. We're fast-paced, with projects and priorities shifting rapidly. Ambiguity and uncertainty are part of the deal in this early-stage environment. Sure, there might be more lucrative offers elsewhere. The risk factor is high, but so is the reward. One thing's for sure: boredom won't be an issue. It's an opportunity for immense personal and professional growth, alongside the company's evolution. You'll be contributing to something grander than yourself, directly impacting a team dedicated to making the world better. And let's not forget about equity!

2. Is this job in person? Location?

Nova Scotia has a lot to offer! Firstly, it's among Canada's most beautiful cities and consistently recognized as one of the most up and coming places to live, especially for its beautiful nature. This job requires your physical presence in Sydney, Nova Scotia.

Interested? Here's the plan:

Get started by applying online.

If it clicks, here's what follows:

- Expect a 30-minute video call.
- Dive into your technical prowess and drive during an interview.
- If the right fit, be prepared to have a second call.
- Explore your synergy with our team, culture, and career goals in 3rd interview.
- Grab a coffee with a team member—your chance to uncover the real scoop about working at Lite-1. It's all about you!
- We'll touch base with two of your references to confirm you're our next star hire.
- Congratulations, you've got the job!

NOTE:

WE WILL ONLY CONTACT CANDIDATES WITH INDUSTRY EXPERIENCE

Email your resume to sarah@lite-1.bio