Senior Scientist- Industrial Fermentation

Ecovative is a fast-paced, biotechnology company producing biomaterials that enable our partners and leading brands to offer better, more sustainable everyday products.

We have developed processes to grow mycelium in solid-state fermentation reactors for a multitude of applications. Our technology drives commercial-scale operations to harvest delicious bacon without the pig; biofabricate leather-like textiles without the cow; grow soft flexible foams from crop waste; produce home compostable packaging to replace plastics; and more applications are on the way. We are helping numerous companies develop new biomaterials that are positive for the planet.

Our Pilot Research group is seeking a highly motivated, creative, and collaborative Senior Scientist to join the dynamic team advancing biofabrication of mycelium biopolymers. The Senior Research Scientist, Industrial Fermentation role will work closely with engineers and scientists to coordinate and execute experiments. This role will also work with other functional R&D and Commercial teams to translate research from the bench-top to process piloting, and commercial scale-up for product manufacturing.

The Senior Scientist- Industrial Fermentation will:

- Coordinate and execute research directed at refining and optimizing the process of producing fungal-based biopolymer at scale
- Design parallel fermentation studies at pilot scale to determine the impact of various parameters on fungal biomass production
- Manage resources required to conduct large-scale experiments, such as raw material sourcing, inoculum quality, and aseptic control of processing equipment
- Generate efficient experimental designs, perform hands-on experimentation, complete experimental analyses, author final research reports, and present findings both internally and externally
- Contribute to overall project definition and objective setting as a project lead
- Suggest and evaluate experiment pipelines and strategy for continuous process improvement in the context of business and research strategy
• Collaborate with engineering and operations teams to tighten design and operational specifications for all equipment and bioprocessing workflows
• Mentor, educate and train others to enable them to rise to R&D challenges
• Translate innovation and vision into clear and realistic research plans

Required Skills:

• Experience with scale-up of bioreactor systems or fermentation processes
• Passion for bioprocess optimization and familiarity with microbiology
• Strong capabilities in design of experiment methodology and statistical analysis
• Strong technical ability to synthesize data into clear hypotheses
• Ability to screen a broad range of literature against research priorities
• Capable of coordinating projects across teams under aggressive timelines
• Able to make decisions efficiently to ensure project milestones remain on schedule
• Excellent communication skills, team mentality, and self-motivation
• Hands-on technical abilities to organize and guide the work of others
• Comfortable learning quickly when faced with unfamiliar tasks and new tools
• High level of data organization competency across multiple software platforms
• Expertise applying statistical methods, design of experiment, and data analysis/visualization programs (e.g., JMP)

Desired Skills:

• Hands-on bioreactor/fermenter experience (i.e., cleaning, setup, operation, control)
• Background in microbial physiology of fungal, bacterial, or other eukaryotic systems
• Direct, hands-on experience with solid-state or liquid fermentation platforms
• Exceptional computer skills in data manipulation, visualization, and analysis
• Proven track record of technology development and/or implementation of new technologies into existing production systems.
• Thrives in environments with a high degree of autonomy and research complexity
• Exposure to design of experiment for process improvement, including factorial, fractional factorial, response surface methodology, or machine learning methods
• Understanding of standard parametric and non-parametric statistical methods, dimension reduction, and related software (JMP, MATLAB, R, Python, SAS)
Qualifications:

- Master’s degree (thesis-based) in biology, biochemistry, biological or chemical engineering, or related discipline and 3 years work experience in fermentation or bioprocess engineering, OR Bachelor’s degree in biology or related field with minimum 5 years of relevant work experience
- Must be highly flexible, results oriented, independent self-starter who enjoys working in a fast-paced environment

Ecovative’s research group leverages a multidisciplinary approach and 15 years of innovation and leadership in the mycelium material space. Ecovative’s commercial success has been featured in *The New York Times*, *Fast Company*, *Wired*, and *Forbes* and our research collaborations with MIT, Columbia, and other institutions have led to numerous peer-reviewed publications such as these recent examples in *Nature Materials* and *Metabolic Engineering*.

The company’s R&D headquarters in New York’s Capital Region is a world-class applied fungal research facility with core competencies in molecular genetics, structural biology, and industrial fermentation — ranging from bench-scale bioreactors to large-scale cultivation chambers. In addition to state-of-the-art laboratories, the facility features an array of controlled growth chambers for serial scale-up of experiments from lab- to pilot- and industrial-scale.

Ecovative is an Equal Opportunity Employer. Please send your resume and cover letter to jobs@ecovativedesign.com