terragia
15 Thayer Drive
Hanover, NH 03755

Terragia (terragiabiofuel.com) is a startup founded in October, 2022 dedicated to development and commercial deployment of low-cost technology for production of cellulosic biofuels. Built on decades of pioneering research led by Dartmouth Professor Lee Lynd, Terragia's unique consolidated bioprocessing (CBP) technology has documented potential to be cost-competitive with fossil fuels while realizing net removal of carbon dioxide from the atmosphere. The company seeks to hire 10 people with a diversity of skills to staff a joint development project undertaken with a strategic partner. We are inspired by the prospect of playing a key role in climate stabilization and rural economic development and are looking to rapidly add capable individuals to our R&D team.

Project: Organism and process development for ethanol production via CBP using engineered thermophilic bacteria. A project is underway to develop anaerobic bacteria and fermentation systems for converting cellulose- and hemicellulose-containing biomass to ethanol in an advanced CBP configuration. This involves using a defined consortium of engineered thermophilic anaerobic bacteria without thermochemical pretreatment, exogenous enzymes, or yeast. The workplan involves diagnosing the cause of performance limitations, overcoming these limitations via strain and fermentation process development, and technoeconomic analysis to guide our efforts and evaluate progress.

Expertise, *skills*.

Strain development. *Genetic engineering of bacteria, adaptive laboratory evolution, metabolic pathway engineering. Experience with genetics and isolation of non-model microbes is a plus.*

Fermentation and bioprocess development. *Optimization of fermentation systems. Experience with anaerobes, continuous culture, culture stability/contamination control, automation, and custom configurations is a plus.*

Bioorganic analytical chemistry. *Identification and preparative separation of complex carbohydrates and other aqueous products of microbially-mediated biomass solubilization.*

CAZyme biochemistry. *Identification of desired activities and genes from analysis of residual soluble and surface-bound carbohydrates, validation of activity.*

Technoeconomic analysis. *Develop spreadsheet and simulation process models useful for sizing and costing equipment, evaluating economics at commercial scale, and anticipating piloting.*

Qualifications.

Bachelors, Masters or PhD in microbiology, chemical / biological engineering, chemistry, molecular biology, biotechnology, biochemistry or related fields as appropriate for the specific position. Relevant industry experience preferred. Demonstrated aptitude in the laboratory is essential. Experience and knowledge of conversion of lignocellulose into fuel via anaerobic thermophilic bacteria is particularly sought.

General attributes.

- Collaborative goal-oriented team player with independence and responsibility commensurate with level.
- Keep careful records and report outcomes to team members.
- Good communication and interpersonal skills as well as a sensible, adaptable, and innovative attitude.

Compensation. Industry-competitive for industrial biotechnology.
Levels. Applications invited at all levels with titles depending on education and experience.
Location. Rented facilities at Dartmouth College, Hanover, New Hampshire.
Applications. Submit your application (cover letter, CV or resume) via the Careers link on our website, addressed to Dr. Chris Herring, VP Technology Development, https://terragiabiofuel.com/