



Fermentation Process Development

Position summary:

The laboratory of Professor Richard A. Gross at *Rensselaer Polytechnic Institute* (RPI in Troy, NY) performs fundamental, exploratory and applied research to address some of our planet's most challenging problems (group website <https://grossrpi.wixsite.com/gross>). The Gross group with collaborators are developing new knowledge and technologies in biocatalytic and chemo-enzymatic routes to biobased chemicals. Targets of fermentation studies include use of wild-type and engineered organisms for the synthesis of glycolipids, bacterial cellulose, enzyme catalysts (proteases, P450's, cutinases), fungal based materials, polysaccharides, polyesters and polyamides. The Gross lab currently seeks a candidate to focus on the microbial production of **polyhydroxyalkanoates**.

Job Description

The successful candidate will have experience in high cell density fermentation and process engineering to develop fermentation methods that lead to reaching target volumetric yield and productivity while producing PHAs with compositions and properties that meet specified criteria. Process work will be performed in fermenters at various scales (shake flasks, parallel fermenters at 1 L for optimization studies and subsequent runs at 15 and 42L).

Other desirable skills include experience in downstream processing of fermentations and analysis of products by chromatographic methods (e.g. LC-MS and GC-MS). Experience in mentoring students is also a plus. The successful candidate should also enjoy collaborations with scientists and engineers outside of their discipline. To be considered for this position, the candidate must have first authored publications in peer reviewed journals in the English language where he/she is first author. The position is currently open and can be occupied as soon as a qualified candidate is identified.

The successful candidate will work at RPI's Center for Biotechnology & Interdisciplinary Studies (CBIS, <http://biotech.rpi.edu/>) that serves as the primary focus of biotechnology research, training, and outreach at Rensselaer. The Center facilitates multidisciplinary research in the basic life sciences, engineering sciences, and technology development and maximizes the impact of Rensselaer's investment to benefit society.

Other Requirements

- Ph.D. in Biochemical Engineering, Biotechnology, Biochemistry, Chemical Engineering or a related discipline.
- Due to the highly collaborative nature of the position, excellent interpersonal and communications skills are an essential characteristic of a successful candidate.
- Strong organizational, problem solving, and time-management skills are essential

For an application to be complete, qualified candidates must provide a cover letter, resume, list of references. Candidates that best fit the position will then be asked to provide pdf copies of publications/patents and a brief statement of interest. This information should be sent directly to Professor Richard A. Gross at grossr@rpi.edu.

Founded in 1824, Rensselaer Polytechnic Institute is the nation's oldest technological research university. Driven by talented, dedicated, and forward-thinking faculty, Rensselaer is experiencing a dramatic expansion its research enterprise fueled by leveraging its existing strengths and focusing on five signature research areas: biotechnology and the life sciences; energy and the environment, computational science and engineering; nanotechnology and advanced materials; and media, arts, science, and technology. The research carried out by the successful candidate will bring many of the above existing strengths together to maximize the programs impact.