Alta Resource Technologies, Inc.

Senior/Principal Scientist in Protein Engineering

Location: Boulder, CO
Reports To: Sr. Director of Applied Biology

About Us

Alta is reinventing how the world sources critical minerals — using protein-based chemistry to extract rare earth elements and other essential materials from challenging feedstocks with unmatched selectivity. By dramatically reducing the cost and environmental impact of mineral separation, Alta is making it possible to unlock new sources of supply for 21st-century technologies. As global demand accelerates, securing these materials has become one of the most urgent challenges facing U.S. competitiveness and national security. Backed by top investors and government partners, Alta is growing fast and hiring mission-driven scientists and engineers to help us scale our platform and transform the future of mining.

Role Summary

The Senior/Principal Scientist in Protein Engineering will develop and implement strain and process optimizations for the directed evolution of protein variants, including implementing production strain improvements and developing protein design, cloning, and expression workflows to enhance target protein production, purification, and downstream chemistries. The candidate will have experience in high-throughput genetic designs and downstream assays and be comfortable with agile process workflows. The candidate will work within a multidisciplinary team to execute on multi-scale approaches to identify lead variants by leveraging directed evolution campaigns and develop robust protocols for transfer within internal and external groups. The individual will join a group of collaborative scientists with diverse skill sets and must have strong communication and critical thinking skills with a rigorous approach to science.

Key Responsibilities

Develop and optimize high throughput protein engineering workflows

- Establish construct design and cloning workflows that enable high-throughput and multiplexed approaches for protein variant testing and selections.
- Develop high-throughput variant libraries for improving strain and protein performance including optimizing for protein production, affinity, specificity, and stability.
- Develop and implement automation and experimental strategies to support high-throughput and library-scale directed evolution campaigns.
- Collaborate with the team to develop end-to-end processes designed for workflow efficiency.

Develop and implement scale-up protein production workflows

- Apply data analysis from directed evolution campaigns to inform scale-up production of lead protein candidates.
- Design and implement protein production improvements to achieve round-over-round improvement.

Leadership and Communication

- Ensure excellent practices in documentation of all protocols and experiments.
- Effectively communicate results with stakeholders across the company.
- Develop talent through team building and project execution.

Required Qualifications

- Ph.D. in biochemistry, molecular biology, or related field with 8+ years of industry experience.
- Expertise in high-throughput molecular biology approaches and library-scale workflows.
- Expertise in protein engineering, including construct design, protein production, protein purification, and protein characterization.
- Expertise in design and implementation of automated workflows.
- Experience in microbial bioproduction (E. coli and Bacillus).
- Lead and contribute at the bench with hands-on workflow development.
- Deep knowledge of classic and state-of-the-art molecular biology and multiplex library-scale approaches to directed evolution campaigns.
- Demonstrated knowledge of experimental design, the scientific method, and statistical analysis.
- Strong written and verbal communication skills and ability to work within different teams.
- Strong organizational and documentation skills.

Preferred Qualifications

- Experience with metalloprotein biochemistry.
- Experience with bioconjugate chemistry.
- Experience with fermentation and down-stream processing.
- Proficiency in working with data science teams for scripting pipelines and bioinformatics.

Compensation & Benefits

The starting pay range for this position is $115,000 - $130,000, commensurate with educational background and work experience.

Benefits include:

- 401(K)
- Medical, Dental, Vision plans (or equivalent)
- Flexible Time Off
- Paid Parental Leave
- Paid Sick Leave
- Company Holidays

EEO

At Alta, we are committed to diversity and inclusion. As an equal opportunity employer, all qualified candidates will be considered for employment without regard to race, color, creed, religion, age, sex or gender (including pregnancy, childbirth, lactation and related medical conditions), gender identity or gender expression, sexual orientation, marital status, national origin, ancestry, citizenship status, military service or veteran status, physical or mental disability, or any other legally protected characteristic. Alta participates in e-Verify for all positions.

If you have a disability or special need that requires accommodation at any point in the hiring process, please let your recruiter know.

How to Apply

To apply, please email your resume and a cover letter (see below) to **talent@altatech.io**.
Include your name and the job title in the subject line (i.e., [Your Name] – [Job Title]).

All applications **must include** a one-page cover letter. The cover letter should clearly state your interest in the position and our company, outline 2–3 specific technical skills or accomplishments relevant to the role, and demonstrate how your experience aligns with our mission and technology platform. We expect concrete examples that illustrate measurable impact and collaborative problem-solving in technology development. Applications submitted without a cover letter will not be considered.