



Sr Synthetic Biologist Role Description

Role: Sr Synthetic Biologist Industrial Experience

Location: Newcastle Upon Tyne, UK, On-site

Duration: Full-time – between three and five to be mutually agreed

Salary: Matching current university salary.

About GitLife Biotech (GLB): GitLife Biotech is an impact driven, Newcastle Upon Tyne based biotech company, founded in 2023. We are leaders in biotechnological innovations focused on building a biological and digital platform for biological assets management.

GitLife Biotech is committed to diversity and inclusion in the workplace.

Role Overview: Gain paid-experience working on a fast-paced startup operating at the interface between software engineering and engineering biology. We are looking for a highly motivated and experienced Sr Synthetic Biologist to join our team for a short period of time to lead experimental work across our customers cell lines. This is a hands-on, deep-technical role for someone who thrives on designing and executing complex chromosomal engineering programs across multiple microbial hosts. As a Sr Synthetic Biologist, you will design, execute, validate, and iterate complex chromosomal engineering programs in microbes. This will be a hand-on role where as Sr Synthetic Biologist you will be capable of taking a biological objective from concept through engineered strains, sequencing-based validation, and interpretation under stress or evolutionary conditions.

Key Responsibilities:

Genome Editing

- Design and execute scarred and scarless chromosomal integrations (50–2,000 nt) in diverse microbial hosts, including (but not limited to) *E. coli*, *B. subtilis*, *P. putida*, and *S. cerevisiae*.
- Integrate orthologous DNA and structured synthetic constructs across multiple loci.

Validation & Quality Control

- Establish and execute robust QC strategies: junction PCR, qPCR/ddPCR, and sequence verification.

Sequencing & Data Interpretation Experience

- Design DNA- and RNA-seq experiments aligned with engineering objectives.
- Interpret sequencing data to confirm edit fidelity, detect off-target effects, and guide subsequent engineering cycles.

Computational & In Silico Design

- Design homology arms and primers optimized for insert size, host, and editing strategy.
- Select genomic loci with consideration for gene dosage, chromosomal context, and expression stability.



Required Experience & Skills

Essential:

- Ph.D. in Molecular Biology, Microbiology, Biotechnology, Synthetic Biology or related fields and 2yrs experience
- Extensive experience in microbiology recombineering and new genomics technologies.
- Proficiency in genetic engineering techniques.
- Familiarity with bioinformatics tools and software.
- Excellent analytical and problem-solving skills.
- Hands-on user of Electronic Lab Notebooks (ELNs) and/or Laboratory Information Management Systems (LIMS) in a synthetic biology or strain engineering environment.

Strongly Preferred

- Multi-host experience across Gram-negative, Gram-positive, and yeast systems
- Sequencing-first engineering mindset
- Prior experience in industrial or production-adjacent strain development
- Familiarity with lab automation and digital lab systems

Why GitLife Biotechnology:

- Experience work in a cutting-edge field with a company at the forefront of biotechnological research and gain industrial perspective on biotechnology.
- Be part of a visionary team developing solutions for tomorrow's challenges that works with industry and academics groups.
- Engage in meaningful work that contributes to enhancing life through biotechnology.
- Opportunities for professional growth and development.

If interested:

Contact Natalio@gitlifebiotech.com