



R&D Scientist, Synthetic Biology, Agilent Laboratories, Santa Clara, CA

Become part of an innovative multidisciplinary team developing next generation technologies for Synthetic Biology. Agilent Laboratories, Agilent Technologies' central research laboratories in Santa Clara, CA is seeking a Scientist for the Molecular Tools Lab to join an interdisciplinary team comprising, chemists, biochemists, molecular biologists, cell biologists, computer scientists, mathematicians, physicists, and engineers working to invent and develop advanced measurement systems, bio-reagents and informatics tools for emerging synthetic biology applications and workflows including pathway engineering, genetic device, network or system engineering, biosensor development and the development of highly engineered organisms.

As part of this team, build upon a strong working knowledge of molecular biology, microbiology and nucleic acid biochemistry to identify, innovate and investigate the necessary methods for DNA construct assembly including gene assembly design, gene assembly biochemistry, higher order (>50 kb) DNA assemblies, gene product characterization, error detection and repair, and large construct manipulation. Work with the team to integrate these various steps such that they are amenable for high throughput automated assembly of DNA constructs including genes, mini-genomes and larger constructs. The candidate will also establish and lead strategic collaborations between Agilent Labs and external researchers to develop and validate these novel methods.

In the course of developing automated DNA assembly systems, collaborate with Agilent Labs' computational biology and informatics experts to evaluate opportunities for creating new design tools in order to provide an integrated solution for gene synthesis and assembly workflows.

Communicate progress and results to management and technical leadership, to selected external organizations and, when appropriate, to the general scientific community via presentations at scientific conferences and in peer-reviewed publications.

REQUIRED QUALIFICATIONS:

- Ph.D. in Bioengineering, Chemistry, Biochemistry, Biophysics, Molecular Biology, or other relevant field plus minimum 2-3 years post-doctoral, academic or industrial experience (or equivalent).
- Demonstrated expertise in gene synthesis and assembly methods that utilize chemically synthesized oligonucleotides with experience in:
 - manipulating and characterizing oligonucleotides including purification, quantification, size determination and chemical analyses.
 - nucleic acid enzymology for DNA amplification, modification and manipulation.
 - thermodynamic or kinetic modeling of DNA structure prediction and/or gene assembly design.
- Demonstrated expertise in assembly of higher order DNAs (e.g. >50 kb constructs) and microbial genetics knowledge to creatively utilize different host organisms as required for assembly and propagation of larger constructs.
- Demonstrated initiative in forefront achievements in life sciences research as evidenced, for example, by high profile peer-reviewed publications, patents or invited talks.
- Demonstrated success innovating and developing and/or utilizing new or emerging technologies in the area of synthetic biology.
- Demonstrated initiative and pursuit of successful collaborative research projects with interdisciplinary and inter-institutional teams.
- Strong problem solving and quantitative data analysis expertise.
- Excellent communication and teamwork skills.

DESIRED QUALIFICATIONS:

- Experience with automation platforms including software and integrating hardware.
- Experience with various modeling and analysis software.

We invite you to please visit www.jobs.agilent.com and apply directly to **requisition 2037280**. Candidate must have work authorization.