PhD Student Vacancy in Synthetic Biology

Where: Department of Biology at the University of Florida, Gainesville

Start date: 15 August 2024

Closing Date: 1 December 2023

Scientific fields: synthetic biology, building a synthetic cell, biomolecular engineering, directed evolution, in vitro evolution, cell-free synthetic biology.

Research Direction. The Abil lab in the Department of Biology at the University of Florida is seeking a highly motivated and collaborative PhD student with interests in synthetic biology and origins of life.

As a PhD student, the candidate will have the opportunity to contribute to exciting projects centered around bottom-up engineering of a synthetic living system. We strive to better understand the general processes of life and life's origins by engineering synthetic life from non-living components. Our strategy is based on engineering of cell-free gene circuits that close in on themselves in positive feedback loops, allowing them to self-replicate and evolve. We will study their collective biopolymer synthesis, evolutionary dynamics, adaptability, and ability to be integrated into more complex gene networks. Our research will focus on in vitro reconstitution and evolution of biomolecular networks responsible for DNA replication, transcription, translation, information decoding, and energy regeneration. Our work will provide valuable insight on essential biogenic processes, such as biogenesis of ribosomes, translation factors, and energy regeneration complexes, which are difficult research subjects in vivo.

More information about our lab can be found here: https://abillab.biology.ufl.edu/

Qualifications. The successful candidate should have a bachelor's or equivalent degree in biology, biotechnology, chemical or biomolecular engineering, molecular and cellular biology, biochemistry, biophysics, or adjacent field and have some prior research experience.

Financial Support. This PhD position is sponsored by the Biology Department graduate program at UF and will be funded through an initial two years of research assistantship. In addition, the Department will provide teaching assistantships to all students who do not receive fellowship support or research assistantships for the expected duration of the program, assuming the student continues to make timely and satisfactory progress in the program.

Application. If you are interested, please email Zhanar Abil at abilz@ufl.edu to express your interest in applying for the position and include:

1. CV including a list of relevant coursework.
2. A research statement detailing research interests, experience, and why you are interested in joining the lab.