

Positions Available - Postdoctoral Researcher

We are inviting applications for postdoctoral research positions in the areas of synthetic RNA biology and DNA nanotechnology, beginning in Fall/Winter 2010.

Overview

We are interested in understanding how biological organisms process information using complex biochemical networks and how such networks can be engineered to program cellular behavior. The focus of our research is the design of synthetic biological control circuits with DNA and RNA components. We are applying engineered circuits to problems in disease diagnostics and therapy: <http://www.cs.washington.edu/homes/seelig/>

Positions

Positions are in the following areas:

(A) RNA synthetic biology: Engineering synthetic molecular circuitry based on the microRNA and RNAi pathways. We want to build synthetic gene regulatory networks that take advantage of the programmability of Watson-Crick base pairing and of existing pathways for RNA-based gene regulation.

(B) RNA synthetic biology: Developing tools for conditional gene regulation based on RNA interference. We want to develop mechanisms for targeting an RNAi response to specific cell types based on cellular RNA expression profiles.

(C) DNA nanotechnology: Building in vitro DNA circuitry and reconfigurable structures that integrate the unique recognition properties of nucleic acids with other molecules to develop novel functional materials.

Requirements

Applicants must have recently earned a doctoral degree in Bioengineering, Biology, Biochemistry, Biophysics or a related discipline. Expertise with mammalian cell culture, time-lapse microscopy and RNA biochemistry are a plus. Strong communication skills, good problem solving skills and independent thinking are required.

Application

Interested individuals should send their CV, one representative publication, and a list of three references (with e-mail addresses and phone numbers) to Prof. Georg Seelig, gseelig@u.washington.edu.