



**POSTDOCTORAL POSITION AVAILABLE:**

A postdoctoral position in synthetic biology is available in the Department of Bioengineering at Rice University. The position will be joint between the laboratories of Oleg Igoshin and Jeff Tabor. The project will combine computational modeling and experimental synthetic biology to engineer multicellular self-organization in bacteria. The position is part of an NSF-funded Emerging Frontiers in Research and Innovation (EFRI) collaborative project with the Drs. Ben Kerr, Eric Klavins and Georg Seelig at the University of Washington – Seattle.

**PROJECT BACKGROUND:**

Engineering living cells to assemble into differentiated patterns is a major goal of synthetic biology. Programmed pattern formation has broad applications in basic science as well as the industrial and biotechnological arenas. The aim of this project is to program laboratory strains of the bacterium *E. coli*, which forms no natural patterns, to form multicellular patterns and structures using a novel programming formalism based in both computer science and physics and implemented using engineered cell-cell communication and signal processing circuits.

**RESEARCH DESCRIPTION:**

The postdoctoral fellow will be responsible for constructing synthetic cellular sensors and signaling networks, analyzing circuit behavior using flow cytometry and time lapse fluorescence microscopy among other methods, and performing data analysis and mathematical modeling of results.

**QUALIFICATIONS:**

A PhD in science or engineering is required. The optimal candidate will have a strong quantitative background and experience in modeling gene regulatory networks and/or pattern formation along with experience in molecular genetics, microbiology and fluorescence microscopy. Candidates with publications in related areas are strongly preferred. The ability to communicate scientific concepts and collaborate with researchers in other disciplines and English proficiency are also expected.

**ABOUT RICE AND HOUSTON:**

Rice is consistently ranked as one of the nation's best teaching and research universities. It is a member institution of the world largest medical center (Texas Medical Center). The Department of Bioengineering is ranked among the nation's top 10 programs. There is a strong and systems and synthetic biology community developing across Rice the Texas Medical Center. Rice is situated in the Museum district of Houston, TX – the fourth largest city in the United States.

**CONDITIONS:**

Rice University is committed to affirmative action and equal opportunity employer and offers competitive postdoctoral salary and benefits. The position is open from September 1, 2011 until filled. The initial appointment is for 1 year with possible continuation for up to 4 years upon satisfactory performance. Please visit <http://igoshin.rice.edu/> and <http://www.taborlab.rice.edu/> for more information. Applicants should submit their resume and letter stating their research interests to [igoshin@rice.edu](mailto:igoshin@rice.edu)