Postdoctoral Positions in Quantitative Microbiology at Harvard Medical School

Our quantitative biology lab is currently starting up in the Department of Systems Biology at Harvard Medical School. We have several positions available for post-docs. In particular, we are searching for experimentalists with a strong background in microbiology, molecular cloning, genome editing or microscopy. While the approach of our lab relies on close coordination and mutual feedback between experiment and theory, no experience with theoretical or computational tools is required. We are looking for someone with an interest in quantitative methods and excitement about learning and collaborating; training in a variety of methods is available.

We are looking for creative, open-minded individuals, interested in venturing off the beaten track and having the determination and resourcefulness to bring their ideas to fruition.

We offer competitive remuneration and are an equal opportunity employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, gender identity, sexual orientation or any other characteristic protected by law.

Our Research Interests

Fundamental biological questions that we are interested in include the role of metabolic strategies during growth and adaptation, tradeoffs between competing evolutionary objectives of microorganisms and how cells achieve homeostasis of cell size, cell number and cellular composition. We use well-characterized model organisms like *Escherichia coli* to address such questions.

Our long-term goal is to gain a more quantitative and predictive understanding of phenotypes on the organism scale. Such a level of understanding has remained largely elusive, despite the extraordinary level of detail to which molecular interactions have been characterized over the past decades, as it is often hard to use even highly detailed molecular knowledge to predict larger-scale events.

In our lab, we try to tackle these challenges by identifying phenotypic patterns that can guide us in decoding the underlying principles that govern the behavior of complex biological systems. Our approach relies on the close coordination and mutual feedback between experimental and theoretical efforts. In particular we combine careful characterization of physiology with genetic perturbations, omics technology and theoretical models.

See also:


Please contact:
Markus Basan, markus@hms.harvard.edu