

Postdoctoral Fellowships in Genomic Biology

University of Illinois, Urbana-Champaign | Urbana IL 61801 United States | posted 11/03/2011 | Full Time

Job Description

As seen in the 04 November issue of *Science*:

Postdoctoral Fellowships in Genomic Biology at the University of Illinois at Urbana-Champaign

The Institute for Genomic Biology at the University of Illinois at Urbana-Champaign offers a number of fellowships for truly exceptional young scholars who have completed their Ph.D. within the last several years, and are looking for a stimulating and supportive interdisciplinary environment to carry out independent and collaborative research in the field of genomic biology. IGB Fellows will spend up to three years conducting research in one of several research themes in the Institute, and ideally this research will also overlap with two or more of these thematic areas.

Visit www.igb.uiuc.edu/content/fellows-application for more information about the Institute, the research themes and the application procedures. The closing date for all positions is **December 15, 2011. Fellows will be announced on or about January 15, 2012.**

Biocomplexity

We seek a scientist with interests that include the evolutionary process, systems biology, and ecosystem dynamics. The successful candidate will join a multidisciplinary group exploring collective effects in biology from a strongly quantitative perspective. Ongoing research addresses the evolution of translation, the role of horizontal gene transfer in shaping communities of microbes and phages, geomicrobiology, and the systems biology of cells and ecosystems. (Nigel Goldenfeld, Theme Leader)

Regenerative Biology & Tissue Engineering

The Fellow will be involved in one or more of our multidisciplinary projects related to regenerative biology and harnessing the potential of adult/embryonic stem cells for tissue engineering applications. Of particular interest is leveraging theme expertise in biomaterials fabrication, drug delivery systems, microfluidics-based *in vitro* experimental platforms, and *in vivo* evolutionary biology and regeneration medicine studies. The ideal candidate will have experience in one or more areas of (stem) cell biology, induced pluripotent cell technology, biomaterials, microfluidics, and/or tissue engineering. (Paul Kenis, Theme Leader)

Genomic Ecology of Global Change

The Fellow will be involved in a cross-disciplinary project investigating how changes in networks of genes affect plant and ecosystem function when challenged by elements of global change, including greater carbon dioxide, ozone, drought, temperature, disease and herbivory. The ideal candidate will have a strong background in plant biology and a record of expertise in molecular biology, genomic ecology, physiology or modeling of gene networks or ecosystem function. The ability to work creatively and productively in a highly interdisciplinary and collaborative environment is essential. (Don Ort, Theme Leader)

Energy Biosciences Institute

The Energy Biosciences Institute (EBI) is an externally funded theme within the IGB. It is the largest academia collaboration to date, currently receiving \$500 million over ten years and focusing on the development of second-generation biofuels intended to significantly slow the rate of global climate change. Its research ranges from systems biology of fermentative organisms to quantification of ecosystem services provided by new sustainable biofuel crops. The full range of research can be seen at www.energybiosciencesinstitute.org. We seek an outstanding candidate across these areas interested in applying genomic biology to understanding and developing opportunities for improving sustainable biofuel production. Research can be at any point in the supply chain from improving feedstocks and their environmental sustainability to producing fuel. The appointee will work in an interdisciplinary laboratory of over 100 exceptional colleagues focused on this challenge. The appointment would also involve collaboration with our partners: UC Berkeley and BP. (Steve Long, Theme Leader)

Cellular Decision Making in Cancer

We seek an individual with interest in quantitative biology. Our theme faculty members have expertise in single molecule biophysics, genomics and chemical biology. Building on the current strengths on cell death, antiviral signaling, stem cell differentiation, live cell probing of decision making and genome instability modeling, we aim to develop a multiple-scale narrative on how single molecule events in the cell are integrated into the protein networks to determine the cell fate. Cancer is a major focus area of research. (Taekjip Ha, Theme Leader)

Mining Microbial Genomes

The Fellow will be involved in one of several multidisciplinary projects focused on (1) the discovery, design, and development of novel antibiotics, or (2) the assignment of function to novel enzymes discovered in genome projects. The ideal candidate will have a proven record of expertise in microbially produced natural products and/or enzyme evolution. We are interested in candidates with previous experience in bacterial metabolism, bacterial genetics, molecular biology, biochemistry, enzyme evolution, metabolic engineering, organic synthesis, mass spectroscopy, bioinformatics and/or metagenomics. (Bill Metcalf, Theme Leader)

Genomics of Neural and Behavioral Plasticity

We seek a biologist with strong bioinformatics skills and training in one or more of the following areas: evolutionary biology, neuroscience, animal behavior, molecular biology, genomics or systems biology. Applicants with expertise in both biology and bioinformatics will be strongly preferred. The successful candidate will join a multidisciplinary team that is using genomics to identify both conserved and novel mechanisms of neural and behavioral plasticity in diverse animal systems. Fellows are expected to conduct research that contributes to the development of the theme's goals by integrating components from theme members' individual research programs. (David Clayton, Interim Theme Leader)

Host-Microbe Systems

The Fellow will be responsible for developing DNA isolation, microbial isolation, 16S rRNA gene sequencing and other metagenomic analysis techniques for surveying microbial content of the human and nonhuman primate vaginal and intestinal microbiomes. Additional responsibilities will include the culture isolation and genome sequencing and other molecular biology techniques to examine microbial, metabolic, and immunologic contents, phylogenetic comparisons, and performing analyses using bioinformatics and other computational and analytical methods. The ideal candidate will have a strong background in microbiology, biochemistry, or a related field with experience and expertise in molecular microbial ecology and bioinformatics and/or biostatistics. (Brenda Wilson, Theme Leader)

Business, Economics, and Law of Genomic Biology

We seek an individual with training in economics, business, law, or strategy and with an interest in technology entrepreneurship, technology industries, and biotechnology. The Fellow will join a multidisciplinary group that includes business, law, and technology experts; agricultural economics faculty; and personnel from the campus Office of Technology Management. Our theme is exploring issues in university-industry technology transfer, industry evolution, intellectual property protection, the competitive and cooperative dynamics for both entrepreneurial start-ups and existing corporations, the impact that globalization of biotechnology has on the evolution of industry, and the position of U.S. firms in the global marketplace. (Jay Kesan, Theme Leader)

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www.igb.illinois.edu

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Employer provided a link where your application will be accepted. Click on the link below and follow instructions.

[Click Here \(apply to job\)](#)

Job Code

28411-K563330