Postdoctoral Fellowship
in Experimental Cell Biology

at the Laboratory of Immune System Biology
National Institute of Allergy and Infectious Diseases
National Institutes of Health, Bethesda, USA

A fully funded postdoctoral position in experimental cell biology is available in the Computational Biology Section (PI M. Meier-Schellersheim) of the Laboratory of Immune System Biology (LISB) at the National Institute of Allergy and Infectious Diseases (NIAID) in Bethesda, Maryland.

NIAID conducts and supports basic and applied research to better understand, treat, and ultimately prevent infectious, immunologic, and allergic diseases. For more than 50 years, NIAID research has led to new therapies, vaccines, diagnostic tests, and other technologies that have improved the health of millions of people in the United States and around the world. The growth of NIAID programs is also driven by unprecedented scientific opportunities in the core NIAID scientific disciplines of microbiology, immunology, and infectious diseases.

Within NIAID, the LISB is one of the most diverse laboratories (comparable to a very large university department) with regard to immunological and cell-biological research directions and applied techniques. LISB research encompasses topics such as Mucosal Immunology (Y. Belkaid), Signaling Systems (I. Fraser), Lymphocyte Biology (R. Germain), Molecular Development of the Immune System (M. Lenardo), Molecular Biology (D. Margulies), Computational Biology (M. Meier-Schellersheim), Integrative Immunobiology (S. Muljo), Cellular Networks Proteomics (A. Nita-Lazar), Cellular Immunology (E. Shevach), Cell Signaling and Immunity (P. Schwartzberg), Systems Genomics and Bioinformatics (J. Tsang), and Molecular and Cellular Immunoregulation (J. Zhu). The LISB pursues many projects with a systems biology approach, combining conceptual and technical elements from multiple sections. This allows postdoctoral fellows to take advantage of its full infrastructure and broad spectrum of research.

The Computational Biology Section combines quantitative experimental data and computational modeling to explore intra- and inter-cellular signaling processes and cellular behavior. Ongoing projects include 1) experimental and computational exploration of pathway crosstalk, 2) in-vitro reconstruction and computational models of extracellular matrices to investigate how cellular morphology and migration behavior is determined by the extracellular environment, 3) development of tools to analyze and simulate reaction-diffusion processes at the level of single-particle dynamics, and 4) the investigation of long term changes in T cell behavior due to specific environments (ECMs).

The current available position will address questions of pathway crosstalk using a variety of quantitative experimental methods. This work will be tightly integrated with computational modeling and other quantitative projects within the section. The LISB offers great opportunities to develop ideas and take the initiative in shaping the direction of the research. Candidates should have an interest and experience in cell signaling pathways and in addressing scientific questions through various quantitative techniques.

Please send applications with a statement of research interests, a CV, and contact information for three references to mms@niaid.nih.gov.

HHS, NIH, and NIAID are equal opportunity employers.