MedImmune, Inc.

Job Description

Position #SWB29RIA

Job Title: Postdoctoral Fellow – Science without Borders
Site: MedImmune, Gaithersburg, MD
Department: Research-Respiratory Inflammation and Autoimmunity (RIA)
Duration: 2 years

We are seeking a postdoctoral fellow in the Respiratory Inflammation and Autoimmunity (RIA) department with a background in lymphocyte biology and autoimmune diseases to investigate the role of T cells in autoimmune disease. The research will be conducted in MedImmune's state-of-the-art laboratories and will contribute to the advancement of science and a better understanding of the mechanisms that underlie disease for the development of innovative new medicines. The successful candidate will benefit from daily interaction with highly accomplished scientists and postdocs in a collaborative environment. The position offers a unique opportunity for a talented scientist to work in a dynamic and innovative environment and to develop their career at the interface of basic research and drug discovery.

Major Duties and Responsibilities:
Candidates will conduct experiments and study lymphocytes in autoimmune mouse models. The candidate will independently design and execute experiments, summarize data and prepare publications.

Requirements/Qualifications:
Nationality: Brazilian citizenship or permanent residency
Education: PhD in Immunology, or related discipline
Experience: Doctoral and/or Post-Doctoral research

Special Skills/Abilities:

- Motivated and capable of working independently and collaboratively.
- Good written and verbal communication skills with publication record
- Ability to analyze data and interpret results without supervision
- Background in cellular biology and cellular immunology
- Hands on experience on isolating primary cells, FACS and histology
- Skills should include multi-color flow cytometry, quantitative PCR, and cell signaling.

Project Summary:
Increased numbers of CD8 T cells are present in kidney and skin samples from patients of systemic lupus erythematosus (SLE), however the contribution of CD8 T cells to SLE diseases is not well understood. Our studies in mouse models of SLE have identified a novel regulatory mechanisms used by CD8 T cells: many CD8 T cells express activation markers but persist in a non-functional exhausted state with diminished proliferative capacity and lack of ability to produce pro-inflammatory cytokines. We hypothesize that development of CD8 exhaustion is to dampen CD8 T cell function, thus limiting CD8 T cells attacking healthy

tissues. We propose that a defect in development and/or maintenance of CD8 exhaustion in SLE patients may ultimately lead to chronic inflammation and permanent tissue damage. In this proposal, we will first characterize phenotype and function of CD8 T cells in blood and tissue samples from SLE patients. Next, we will identify pathways that act on CD8 T cells to initiate and/or stabilize the exhausted phenotype. Lastly, we will determine significance of these pathways to SLE disease in vivo. We will test in animal models whether promoting CD8 exhaustion can reduce disease severity and whether reversing CD8 T cell exhaustion leads to accelerated diseases development. This study will advance our knowledge of CD8 T cells in human SLE and allow the development of novel diagnostic, therapeutic and preventive methods.

Application Instructions:

Please note that these postdoctoral positions are advertised under an AZ/MedImmune partnership with Brazilian Science without Borders (SWB). If you are interested in any of these positions, please apply through the SWB website specifying the position number, click here.