COLLEGE OF PHARMACY
METAL EXPOSURE AND TOXICITY ASSESSMENT ON TRIBAL LANDS IN THE SOUTHWEST

Post-doctoral Fellow: Studying impact of a common environmental pollutant on T cell differentiation and autoimmune disease.

Our lab is seeking a highly motivated postdoc to join our laboratory's efforts to pursue research on immunological effects of the industrial solvent and major environmental pollutant, trichloroethylene (TCE). We will use both epigenomic and transcriptomic approaches to determine whether TCE skews polarization of CD4 T cell subsets towards autoimmune-promoting (e.g., Th1 or Th17) or autoimmune-suppressing (e.g., T reg) subsets. The genomic signatures will be compared between autoimmune-prone and non-autoimmune prone mice.

The successful candidate will work with Dr. Sarah J. Blossom; Professor in the Department of Pharmaceutical Sciences, College of Pharmacy, University of New Mexico, Albuquerque, NM. The postdoc will have the opportunity to work in a multi-disciplinary collaborative environment with opportunities to work on other projects within our lab, with individual researchers within the Department, and with NIH-funded Centers in the Department.

Department of Pharmaceutical Sciences

METALS Superfund Research Program Center

Project description

Recent years have seen a rise in many autoimmune and hypersensitivity disorders. Although these diseases result in different types of tissue damage, they appear to share some inflammatory pathways. In many cases, these pathways include sustained T cell activation. Prevention of these chronic, incurable disorders is based on identifying environmental triggers that promote disease. One type of proposed risk factor is exposure to environmental chemicals including TCE. TCE promotes autoimmune disease and a range of dermal and systemic T cell-dependent hypersensitivity disorders not classified as autoimmune. Differentiated effector/memory CD4s are the main drivers of many of these disorders. Our ***goal*** is to understand *how* TCE drives CD4 cell differentiation. Our ***expected outcomes*** are to have defined how TCE alters CD4 cell gene expression/methylation patterns during differentiation. Our results will identify immune-mediated pathways for potential therapy by normalizing immune responses in TCE-exposed individuals.

Job Requirements

- PhD degree in Immunology, molecular biology, toxicology, or related field
- Record of scientific achievement through publications and presentations.
- Strong record in design and execution of experiments and a passion for science.
- Excellent written and spoken communication skills in English.
- Ability to conduct research independently; interest in basic science/mechanistic research
- Superb problem solving skills
- Exceptional interpersonal skills
- Desired lab skills include but are not limited to qPCR, western blotting, flow cytometry and analysis, cell culture, mouse work, and molecular techniques.

Application instructions

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Applicants are requested to email the following information to sblossom@salud.unm.edu

- Cover letter (or email) briefly describing your experience and qualifications as they relate to the above requirements.
- CV, listing educational degrees received and all prior research experience.
- List of recent publications.
- Names of 3 references familiar with your research (including your immediate Ph.D./ post-doc supervisors).

Informal inquiries are also welcome. For best consideration please apply by **September 1, 2021.** There is no deadline for applying, but candidates are encouraged to apply as soon as possible for best consideration as the position needs to be filled soon.

UNM's confidentiality policy ("Recruitment and Hiring," Policy #3210), which includes information about public disclosure of documents submitted by applicants, is located at http://www.unm.edu/~ubppm.

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