

Postdoctoral position - Lung Inflammation and Lung Cancer at UCSD

Position Overview

The Raz/Bertin lab in the Department of Medicine at the University of California in San Diego (UCSD) is searching for a postdoctoral research fellow who is motivated and creative, to run a unique multidisciplinary project focused on lung inflammation and non-small cell lung cancer (NSCLC).

Our lab is pioneering research on the potential effects of chronic aeroallergen exposure on NSCLC development. Based on our recent investigations (see <https://pubmed.ncbi.nlm.nih.gov/36670473/>), we hypothesize that chronic exposure to certain aeroallergens such as house dust mites could be a risk factor for NSCLC in humans. This project aims to investigate the role of aeroallergen exposure in reshaping the lung's microenvironment and further investigates its effect on lung cancer initiation and progression using *in vitro* and *in vivo* preclinical models. A particular focus lies in uncovering the cellular and molecular mechanisms by which aeroallergen exposure accelerates lung tumor growth and identifying new preventive and therapeutic approaches for lung cancer patients.

This project is supported by a 5-year R01 grant from the NIH/NCI. The successful candidate will work with Drs. Raz and Bertin and their collaborators inside and outside UCSD to dissect the cellular networks and gene programs induced by aeroallergen exposure. The project involves working with cell lines *in vitro* and mice *in vivo*, as well as human biospecimens (e.g., plasma and lung tumor biopsies) obtained from our collaborators at the UCSD Moores Cancer Center and the NCI.

Qualifications

Applicants must have a doctoral degree (Ph.D. and/or M.D., Ph.D.) with training in immunology and cancer biology and 0-2 years of prior postdoctoral experience. Applicants should have most of the following skills and experience:

- 1) Theoretical and practical knowledge of cancer research with demonstrated ability to use current cellular and molecular biology techniques and perform independent experiments.
- 2) Experience working with DNA/RNA isolation, aseptic techniques for cell culture, ELISA, qPCR, flow cytometry, immunoblotting, and immunostaining of fixed/frozen tissues.
- 3) Experience with next-generation sequencing (NGS) techniques such as RNA-seq, scRNA-seq, whole genome sequencing, and related bioinformatics software tools for NGS data pre-processing and analysis.
- 4) Experience running open-source and custom-developed analysis pipelines in R or Python to analyze publicly available data sources (such as TCGA, TIMER, and other databases).
- 4) Experience with mouse handling and injections, such as i.p and i.v, and using mouse models of cancer.
- 5) Experience in data processing and visualization, and strong familiarity with statistical methods and analyses for biological data using Excel and Prism software.
- 6) Experience in preparing manuscripts based on original research and publishing in peer-reviewed journals.
- 7) Strong publication record.
- 8) Team-oriented with excellent written, presentation, and verbal communication skills.

Additional Details

Our team is looking for a motivated Ph.D. or M.D., Ph.D. interested in a postdoctoral position in cancer immunology for a minimum of 2 years (depending on funding available, project progress, and candidate performance). There will be opportunities to mentor trainees, including undergraduate and graduate students. UCSD is an exciting workplace, and the position provides excellent learning opportunities from world leaders in the field and possibilities for professional advancement. Pay is commensurate with qualifications and includes a comprehensive benefit package. This is a full-time position with a competitive salary (starting at \$64,480-69,342 per year based on level of experience, see https://www.ucop.edu/academic-personnel-programs/_files/2023-24/oct-2023-acad-salary-scales/t23.pdf) and full benefits package (see <https://postdoc.ucsd.edu/postdocs/benefits-services.html>).

To Apply

Please send 1) an updated resume or CV, 2) a cover letter (≤ 1 page) addressing your qualifications for the position, and 3) contact information for three references to Dr. Samuel Bertin (sbertin@ucsd.edu) with "Postdoctoral position" in the subject line. The position is available immediately and will remain open until filled.