

Post-Doctoral Research Opportunities

Multiple postdoctoral opportunities are available in the laboratory of Dr. Robert W. Sobol, Director of the Molecular & Metabolic Oncology program at the University of South Alabama (USA) Mitchell Cancer Institute (MCI) and Professor in the Department of Pharmacology, USA College of Medicine in Mobile, AL, USA.

[Project #1](#) - This appointment will focus on the cell and molecular biology of Head and Neck Squamous Cell Carcinoma (HNSCC). This project will investigate the role that **A**ncestry **I**nformative **M**arkers (AIMs) in select DNA repair and DNA damage response genes may contribute to the biological basis for the observed health disparity among patients with regard to clinical outcome. This position will provide a unique opportunity to apply state-of-the-art cell biology, molecular biology and gene editing approaches to uncover mechanisms impacted by defects in select DNA repair and DNA damage response genes with an initial emphasis on DNA polymerase beta.

[Project #2](#) - This appointment will focus on the cell and molecular biology of the genes involved in Base excision repair (BER) in cancer, uncovering the regulation of BER and BER complexes by post-translational modification. This position will provide a unique opportunity to apply state-of-the-art cell biology, molecular biology, proteomics and gene editing approaches to temporally map the BER-interactome in response to DNA damage and uncover mechanisms of DNA repair in cancer cells using single-cell approaches.

[Project #3](#) - This appointment will focus on uncovering the role of tumor suppressors in the cellular response to DNA damage and will contribute to the discovery of DNA repair signature profiles in normal and tumor-relevant DDR defective cancer cells. This position will provide a unique opportunity to apply state-of-the-art cell biology, molecular biology and gene editing approaches to uncover mechanisms of tumor suppressor regulation of DNA repair in cancer.

[Project #4](#) - This appointment will focus on mechanisms of genotoxicity and metabolic change resulting from natural environmental toxins and chemical pollutants. The goal is to use a library of DNA repair KO cells to uncover DNA repair and metabolic signatures in neuronal cells, human lymphoblasts and PBMCs in response to environmental toxins and how such DNA repair and metabolic signatures vary in the normal population.

→ These appointments require a motivated postdoctoral fellow and will offer training in cell culture, flow cytometry, lentiviral production/transduction and molecular biology approaches, as well as confocal microscopy and gene editing techniques. [Send correspondence and your CV to: sobol.lab@gmail.com](mailto:sobol.lab@gmail.com)

[The Mitchel Cancer Institute, the University of South Alabama and the City of Mobile](#)

Dr. Sobol's lab is in the University of South Alabama (USA) Mitchel Cancer Institute (MCI), in the Molecular & Metabolic Oncology Program, of which Dr. Sobol is the Program Chief and Professor in the USA Medical School Department of Pharmacology. The MCI is a 125,000 sq. ft. facility integrating basic, translational and clinical cancer research with patient care and serves as a critical resource in the region as it is the only academic cancer center in the Gulf Coast region. The MCI is devoted to basic research programs in Molecular & Metabolic Oncology, Tumor Biomarkers and Drug Discovery. This facility contains 65,000sq ft of laboratory and office space.

Mobile is a port city on Alabama's Gulf Coast. Considered one of the Gulf Coast's cultural centers, Mobile has several art museums, a symphony orchestra, professional opera, professional ballet company, and a large concentration of historic architecture. Mobile is known for having the oldest organized Carnival or Mardi Gras celebrations in the United States. Its French Catholic colonial settlers celebrated this festival from the first decade of the 18th century. Beginning in 1830, Mobile was host to the first formally organized Carnival mystic society to celebrate with a parade in the United States. Proximity to the Gulf Coast allows for easy access to beaches (30 minutes) and a vibrant list of outdoor activities including boating, fishing, sailing, swimming etc.