UNM COLLEGE of PHARMACY

Post-doctoral Fellow: Metals in DNA repair

We have exciting opportunities for a post-doctoral fellow to pursue research on underlying mechanisms of arsenic carcinogenesis. This project is funded through an NIH ARRA award. The successful candidate(s) will be an integral member of a team of scientists. The objective of the project is to test functional determinants of high affinity arsenite binding to certain DNA repair proteins. The selected applicant(s) will work closely with Profs. Laurie G. Hudson and Ke Jian (Jim) Liu at the University of New Mexico, Albuquerque, NM.

Project Description

It has been proposed that genetic damage induced by arsenic may be due in part to inhibition of DNA repair mechanisms. Accumulating evidence has shown that diverse DNA repair systems are inhibited at low, non-cytotoxic concentrations of carcinogenic metals. The objective of this work is to investigate interactions of arsenic with specific DNA repair targets. The project will involve analytical approaches such as peptide mass spectrometry analysis and cobalt spectrophotometry to identify determinants of high affinity arsenic/protein interactions in addition to cell and molecular biology studies to assess the impact of arsenic on protein function.

The ideal candidates will have a Ph.D. degree in Chemistry, Biochemistry, Cell & Molecular Biology, Pharmaceutical Sciences, Toxicology, or a related field. Excellent communication skills (written and spoken), and the ability to work closely with others are also particularly important.

Desired skills include experience in two or more of the following: 1) analysis of DNA damage and repair both in vitro and in cellular systems, 2) general molecular biology techniques including site directed mutagenesis, 3) metals biochemistry and analytical techniques, 4) mass spectrometry, 5) metal binding and interaction with peptides and protein.

Application Instructions

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

- Cover letter (or email) briefly describing your experience and qualifications as they relate to this project.
- CV, listing educational degrees received (or expected) and all prior research experience.
- List of relevant publications
- Names of 3 references familiar with your research

Informal inquiries are also welcome. There is no deadline for applying, but candidates are encouraged to apply soon for best consideration. It is our goal to fill the position promptly. Applications will be considered until the position is filled.