Post-doctoral Associate position, Nov. 2016

Redox regulation of obese asthma

Area of study: Obese asthma is a tremendous clinical problem, as this affects large numbers of patients worldwide, and obese asthma tends to be severe and poorly controlled with existing medications. Our laboratory has discovered that obese asthma is accompanied by severe oxidative stress. We are investigating the actions that oxidants (cysteine oxidations) play in obese asthma, and notably the role of protein S-glutathionylation, the covalent attachment of glutathione to proteins, which regulates structure/function. We want to discover mechanisms by which S-glutathionylation changes metabolism, and the subsequent impact for immune function alterations and disease severity.

The post-doctoral candidate will employ redox proteomics and metabolomics to the identify S-glutathionylation targets in obese asthma, and determine how these S-glutathionylation events control metabolic alternations, and immune modulation. The candidate will investigate how specific S-glutathionylation targets reconfigure metabolism, and will utilize specific interventions targeting these events. This project explores the enzymes that catalyze S-glutathionylation reactions, notably glutathione S-transferases (GST), and enzyme known to play a role in metabolism. We are interesting in discovering the structural/molecular determinants whereby GSTP recognizes and targets proteins for S-glutathionylation.

Training Environment: The University of Vermont Redox Biology and Pathology Program offers a trans-disciplinary training environment with strong mentoring towards a future career success in science. The environment is friendly, collegial and vibrant. Beautiful Vermont has a lot to offer for outdoor enthusiasts.
The applicant will have **strong work autonomy**, and **opportunities for career advancement to the level of Research Associate**. The applicants' opinion will be will valued in major decisions concerning research directions and grant submissions.

Desired Skills and Expertise: Publication record, with peer-reviewed manuscripts. Strong experience with **cell and molecular biology** and **redox biochemistry**. Preferred applicants are a permanent resident or US Citizen. Enrollment in NIH-funded training programs is possible.

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