PAMENTERLAB

uOttawa

PhD position in Adaptations to Hypoxia in African Mole Rats

The Pamenter Lab at the University of Ottawa invites applications from a highly motivated student to pursue research exploring the cellular and physiological mechanisms that reduce energy expenditure and protect hypoxia-tolerant species. The position is open immediately but the start date is flexible. Candidates with external funding will be eligible for a generous top-up. Potential project topics include (but are not limited to):

1) *Synaptic mechanisms that conserve cellular energy stores and protect neurons during hypoxia or ischemia in hypoxia-tolerant species.*

2) *Mitochondrial plasticity following acute or chronic hypoxic exposure in hypoxia-tolerant species.*

3) *Peripheral (carotid body) vs. central (brainstem) regulation of ventilatory responses to acute and/or chronic hypoxia and/or hypercapnia in African mole rats.*

A number of model organisms are available for study in the lab, although we are particularly interested in the biology of naked mole rats, which are among the most hypoxia-tolerant mammals identified, along with other African mole rat species. The successful candidate will join a dynamic, growing, and highly collaborative research team. To learn more about current and past research projects, visit pamenterlab.ca

In addition to a broad interest in comparative physiology, candidates should have demonstrable proficiency in one of the following groups of techniques: electrophysiology and/or live-cell microscopy (preferred), high-resolution respirometry in mitochondria, or standard molecular biology (Westerns, PRC, etc). Experience in small mammal surgery (especially MCAO or similar approaches) or mitochondrial isolation would be beneficial.

The University of Ottawa is located in vibrant heart of Canada's Capital region. The lab is a member of both the uOttawa Comparative Physiology group, which is among the top-ranked globally, and also the uOttawa Brain and Mind Research Institute, which is a national leader in neuroscience research, affording a variety of exciting collaborative opportunities with leading physiologists and neuroscientists.

Candidates interested in the position should submit a cover letter outlining their interests, a CV including a list of publications, and contact information for 2-3 academic references to Matthew Pamenter: mpamenter@uottawa.ca