Research Associate

Tizzano Laboratory | Monell Chemical Senses Center

Dr. Marco Tizzano's laboratory at the Monell Chemical Senses Center is now accepting applications for a Research Associate position beginning in Summer/Fall 2019. The Monell Chemical Senses Center in Philadelphia is a world-renowned institute focusing on taste and smell research. It is closely associated with the University of Pennsylvania and provides a highly vibrant, collegial and intellectually stimulating environment.

Harmful compounds and xenobiotics carried in inhaled air or ingested food continually assault the nasal and oral cavities and can cause severe inflammatory conditions. Chemosensitivity of the respiratory and oral mucosae plays an important role in airway inflammation and oral health disorders. Solitary chemosensory cells (SCCs), specialized chemosensitive sentinel cells of the epithelial mucosa, respond to bitter-like chemicals and bacterial metabolites by triggering inflammatory and behavioral protective mechanisms. As such, fundamental questions arise as to how animals sense dangerous compounds and bacterial infection and how the mucosal immune system interact with epithelial cells to control pathogens. Using multiple approaches ranging from genetics to molecular biology, imaging, physiology, electrophysiology and behavior, the Tizzano's lab aims to address the molecular and cellular mechanisms of SCC function as mucosal protective element and its interaction with the immune system to promote the elimination of the pathogen.

REPRESENTATIVE PUBLICATIONS

• **Tizzano M**, Gulbransen BD, Vandenbeuch A, Clapp TR, Herman JP, et al. Nasal chemosensory cells use bitter taste signaling to detect irritants and bacterial signals. Proc Natl Acad Sci U S A. 2010 Feb 16;107(7):3210-5. PubMed PMID: 20133764; PubMed PMCID: PMC2840287.

• **Tizzano M**, Finger TE. Chemosensors in the nose: guardians of the airways. Physiology (Bethesda). 2013 Jan;28(1):51-60. PubMed PMID: 23280357; PubMed PMCID: PMC3736818.

• Barham HP, Cooper SE, Anderson CB, **Tizzano M**, Kingdom TT, Finger TE, Kinnamon SC, Ramakrishnan VR. Solitary chemosensory cells and bitter taste receptor signaling in human sinonasal mucosa. Int Forum Allergy Rhinol. 2013 Jun;3(6):450-7. PubMed PMID: 23404938; PubMed PMCID: PMC3655139.

• Saunders CJ, Christensen M, Finger TE, **Tizzano M**. Cholinergic neurotransmission links solitary chemosensory cells to nasal inflammation. Proc Natl Acad Sci U S A. 2014 Apr 22;111(16):6075-80. PubMed PMID: 24711432; PubMed PMCID: PMC4000837.

QUALIFICATIONS:

The Tizzano's lab is seeking a highly motivated Research Associate interested in studying the function of SCCs as protective elements of the nasal and oral mucosae and their downstream mechanisms and interactions with the immune system. Applicants are required a Ph.D. degree. Candidates with expertise in immunology, electrophysiology, imaging, and molecular and cell biology are highly encouraged to apply for this position.

APPLICATION INSTRUCTIONS:

Interested applicants should submit the following documents to https://apply.interfolio.com/62982

- A cover letter describing your research interests, goals, and how you would integrate your interests to the Tizzano's lab research focus.
- A curriculum vitae
- The contact information of three references.