

## Postdoctoral fellows:

The laboratory of Nicholas Bellono is actively recruiting talented postdoctoral fellows interested in sensory biology, evolution, and/or cellular physiology. We welcome applications from candidates of diverse backgrounds to support a multifaceted approach to our scientific questions. Preferred backgrounds might include: physiology, neuroscience, cell biology, neuroethology, ion channel biophysics, or genetics/transcriptomics. We would also be interested in recruiting candidates with training in evolutionary biology, biochemistry, animal behavior, molecular pharmacology, or other related fields. Candidates will be evaluated based on their ability to successfully and independently lead a project and to contribute to a team.

Our major interest is in how organisms adapt to detect and amplify salient environmental signals based on their ecological or behavioral context. We emphasize a curiosity-based approach in which specialized, unconventional systems are exploited to reveal fundamental concepts of signal transduction and amplification, ion channel biophysics, and sensory adaptation and evolution. We then aim to understand how these molecular mechanisms impact organismal physiology, pathophysiology, and behavior. These interests span a range of biological contexts including, but not limited to: 1) electroreception in sharks, skates, and other fishes, 2) sensory physiology in octopus, 3) visceral sensation, 4) intracellular signaling and ion channels in organelles.

The lab is situated within the Department of Molecular and Cellular Biology at Harvard University, providing ample opportunity to interact with other groups interested in cell biology, neuroscience, and physiology. The lab is in close proximity to the Department of Organismal and Evolutionary Biology, enhancing interactions with scientists exploring evolutionary questions. We also share interests with labs from the Department of Neurobiology, particularly those studying ion channel biophysics and neurophysiology. Furthermore, we interact with investigators at the Marine Biological Laboratory in Woods Hole, MA. Thus, there is significant opportunity to work with colleagues within MCB, different departments at Harvard, and other institutions. Finally, we benefit from access to abundant core resources, informatics support, and numerous seminars across a range of scientific disciplines.

Candidates should send an email expressing their interest and qualifications to Nicholas Bellono at [nbellono@harvard.edu](mailto:nbellono@harvard.edu). Please include an updated CV and contact information for relevant references. Postdocs will be supported for the first year and are expected to obtain funding in the form of internal or external fellowships, both to support their professional development and their time in the lab. The PI will assist in identifying appropriate fellowship opportunities and will help with applications.

### Selected publications:

- Bellono NW\*, Leitch DB\*, Julius D (2018) Molecular tuning of electroreception in sharks and skates. **Nature** in press
- Bellono NW\*, Leitch DB\*, Julius D (2017) Molecular basis of ancestral vertebrate electroreception. **Nature** 6;543(7645): 391-396. PMID: PMC5354974.
- Bellono NW\*, Bayrer JR\*, Leitch DB, Castro J, O'Donnell T, Brierley SM, Ingraham HA, Julius D (2017) Enterochromaffin cells are gut chemosensors that couple to sensory neural pathways. **Cell** 170(1): 185-198. PMID: 28648659.
- Bellono NW, Escobar IE, Leftkovith AJ, Marks MS, Oancea E (2014) An intracellular anion channel critical for pigmentation. **eLife** 3: e04543. PMID: PMC4270065