

Postdoctoral position - Nicolson Lab, Oregon Hearing Research Center and the Vollum Institute, OHSU, Portland, Oregon44

Topic: Sensory Biology

We study the molecular basis of hearing and balance in zebrafish with a focus on the development and function of mechanosensory hair cells, and more recently, the peripheral and central auditory system. We use both forward and reverse genetic approaches to isolate mutants with auditory/vestibular behavioral deficits; to date, the majority of the genes we've identified via forward screens are implicated in human deafness. Lab members use a wide range of methods for their projects including molecular, behavioral, physiological and imaging analyses. Postdocs will be trained in multiple areas to acquire a diverse skill set. Support for writing and speaking skills along with career development is provided. Many former postdocs have gone on to jobs in academia or the biotech industry (see lab alumni section on Vollum website).

Desired training/skills for the successful candidate:

Proficiency with the usual skills of working with zebrafish or a similar animal model (husbandry, transgenesis, CRISPR, in situ hybridization, immunohistochemistry, EM, etc.). Experience with calcium imaging and electrophysiology is a plus!

Please send a letter of interest, curriculum vitae, and the names of three references to nicolson@ohsu.edu.

Recent papers of interest:

Maeda, R., Kindt, K. S., Mo, M., Morgan, C. P., Erickson, T., Zhao, H., Clemens-Grisham, R., Barr-Gillespie, P.G., and Nicolson, T. (2014) Tip-link protein protocadherin 15 interacts with transmembrane channel-like proteins TMC1 and TMC2. *Proc. Natl. Acad. Sci.*, 111 (35): 12907-12912.

Erickson, T. and Nicolson, T. (2015) Identification of sensory hair-cell transcripts by thiouracil-tagging in zebrafish. *BMC Genomics*, 16:842.

Maeda, R., Pacentine, I., Erickson, T., and Nicolson, T. (2017) Functional analysis of the transmembrane and cytoplasmic domains of Pcdh15a in zebrafish hair cells. *Journal of Neuroscience*, 37: 3231-3245.

Erickson, T., Morgan, C., Olt, J., Hardy, K., Busch-Nentwich, E., Maeda, R., Clemens-Grisham, R., Krey, J., Nechiporuk, A., Barr-Gillespie, P., Marcotti, W., and Nicolson, T. (2017) Integration of Tmc1/2 into the mechanotransduction complex is regulated by Transmembrane O-methyltransferase in hair cells. *eLife* 6:e28474.