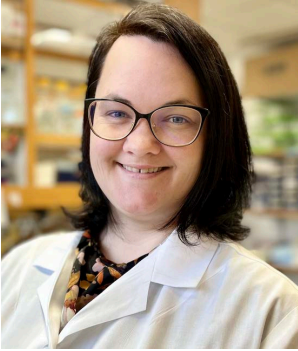


Meet the Researcher



Melissa McGovern, Ph.D.

University of Pittsburgh

McGovern received her doctorate in pharmacology and neuroscience from the Southern Illinois University. She is an assistant professor in the department of otolaryngology at the University of Pittsburgh, where she is a member of the Pittsburgh Hearing Research Center. A 2024 Emerging Research Grants scientist, she is the 2024 recipient of the Neil Segil Memorial Award in Hair Cell Regeneration.

Sensory hair cells in the inner ear detect auditory stimulation and convert it into a signal that the brain can interpret. Hair cells are susceptible to damage from loud noises and some medications. Our lab investigates how nonsensory cells are converted into sensory hair cells through genetic reprogramming.

This project will allow us to create a new model to target specific nonsensory cells within the inner ear to better understand how these cells can be converted into hair cells. We will also investigate whether the partial loss of a protein in nonsensory cells may improve their ability to be converted into sensory cells. This information will allow us to further explore possible therapeutic targets for hearing restoration in the mammalian model.

I have always been curious about the world around me. My mother loves to tell the story about how, as a child, I would survey my classmates to find out whether they preferred dogs or cats. I collected rocks that I found interesting in the woods and creeks around our home. Fossils were the most fascinating thing I'd ever seen, and I wanted to be an archaeologist when I grew up. I wanted to understand *why* things happen and *why* things exist the way that they do.

Growing up in a small rural community, I honestly thought that science was only performed by medical doctors in their spare time and that if you were a scientist you just taught science in school. In college I took a required research methods class for my psychology degree, and that's when I realized I could make science a career.

I adore the act of making something with my hands. I have always loved creating functional and useful items. I

learned to sew as a child from my mom, and I made quilts before I went to college. I recently picked up sewing again to make clothes for myself and am learning to sew zippers for pants. I am crocheting an afghan and recently knit my first pair of socks, which has been incredibly relaxing.

I sew all my clothes on a sewing machine that is over 70 years old and have started collecting vintage machines. I just snagged a mid-1950s New Home sewing machine in its cabinet for \$18 and it works! My goal is to one day own a small flock of sheep so I can collect wool, dye it, spin it into yarn, and then create fabric.

In the same way with my research, I want to get to the very beginning and most basic idea underlying how something works. I want to understand how cells in the ear work on a molecular and genetic level in the same way that I want to start at the beginning of creating a garment. —

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We need your help funding the exciting work of hearing and balance scientists. Please consider donating today to Hearing Health Foundation to support groundbreaking research. Visit [hhf.org/how-to-help](https://www.hhf.org/how-to-help).