



## **Alexander Chesler, PhD**

Senior Investigator

Sensory Cells and Circuits Section

NCCIH

*The Cells and Molecules for Sensing Touch and Pain*

Dr. Chesler is a Senior Investigator at the National Center for Complementary and Integrative Health (NCCIH), NIH. He received his Ph.D. from Columbia University studying the function and development of olfactory sensory neurons. He then completed postdoctoral training investigating the pharmacology of sensory neurons in the laboratory of Dr. David Julius at the University of California San Francisco. At the NCCIH/NIH, his lab aims to elucidate how sensory input is detected and processed by the brain to evoke specific behaviors, focusing on identifying peripheral somatosensory neurons tuned to specific types of stimuli, the molecules they use for transduction, and the neural circuits that they activate, using multiple research tools including mouse genetics, in vitro and in vivo electrophysiology, in vivo two-photon imaging, and behavioral assays. Dr. Chesler has studied patients with a rare inherited disorder affecting mechanosensation due to damaging mutations in the gene *PIEZO2*. In doing so, he defined the critical role of *PIEZO2* in human mechanosensation and probed questions about the role particular sensory inputs play in perception. Dr. Chesler received multiple NCCIH Director's awards for his mentorship and leadership in the Pain Research Center.