

Biosketch

Dr. Ihrie earned a B.S. Honors in **Biochemistry from the University of Michigan and subsequently received** her Ph.D. in Cancer Biology from **Stanford University. During her** postdoctoral research at the **University of California - San** Francisco, she studied the stem cells of the young and old brain, including identifying specific signals that change neural stem cells' identity and revealing the architecture of the stem cell niche in pediatric human brain.

Key Publications

"Decreased survival in glioblastomas is specific to contact with the ventricular-subventricular zone, not subgranular zone or corpus callosum," J Neurooncol, Apr;132(2):341-349, 2017

"Single cell analysis of human tissues and solid tumors with mass cytometry," Cytometry B Clin Cytom, Jan;92(1):68-78, 2017

"Persistent sonic hedgehog signaling in adult brain determines neural stem cell positional identity," Neuron, Jul 28;71(2):250-62, 2011



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"Understanding normal brain stem cells to target brain tumors"

The Ihrie laboratory is focused on **understanding the connections** between stem cells in the brain and brain tumors. We work with basic scientists, computational biologists, and clinicians to study pediatric and adult brain tumors, with the end goal of finding more successful and targeted treatments. Current research projects are focused on tumor development in Tuberous Sclerosis Complex, pediatric gliomas, and adult gliomas including glioblastoma.

In particular, the lab uses multiple cutting-edge approaches to **map** the features of each of millions of individual cells within brain tumors, allowing us to reveal and target rare subpopulations of cells that are associated with clinically meaningful events like tumor regrowth and resistance to current treatment. We strive to couple clinical imaging, such as identification of tumor location on MRI, to molecular data on cancer and immune cells, with the goal of enabling precision medicine approaches in the brain.

MRI features





Cellular features

Computational features

