

# Developmental Crosstalk Between Neural Stem Cells and the CSF Niche

**October 14**

**Tuesday, 12:30 pm**

**Billings Building—Rosedale Room**

**SPEAKER:**



**Ryann Fame, Ph.D.**

Assistant Professor of Neurosurgery  
Stanford University  
Stanford, CA

**Host: Vibhu Sahni, Ph.D.**

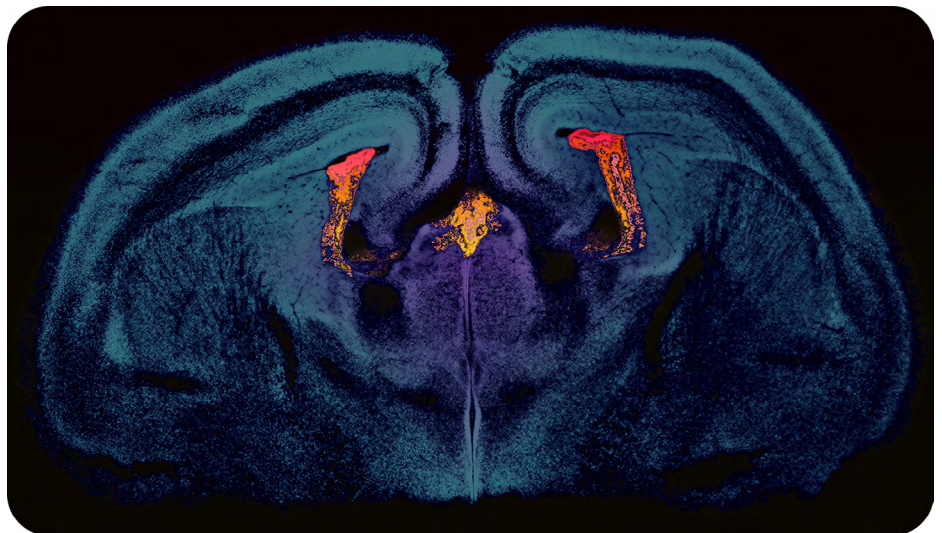
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## Abstract

Early neural progenitors supply and respond to extrinsic cues that maintain and support their potency. These stem/progenitor cells are in direct contact with the cerebrospinal fluid (CSF), which acts as part of their niche. Our research program encompasses the early neural stem cell niche, neural tube closure, CSF, metabolism, and cortical neuronal development. We are dedicated to understanding how neurodevelopment and CSF biology interact during brain development and how these signaling environments extend to modulate disease states.



## Publications

1. Fame RM, Kalugin PN, Petrova B, Xu H, Soden PA, Shipley FB, Dani N, Grant B, Pragana A, Head JP, Gupta S, Shannon ML, Chifamba FF, Hawks-Mayer H, Vernon A, Gao F, Zhang Y, Holtzman MJ, Heiman M, Andermann ML, Kanarek N, Lipton JO, Lehtinen MK. *Diurnal fluctuations in mouse choroid plexus and CSF at high molecular, spatial, and temporal resolution*. Nature Communications. 2023.
2. Xu H\*, Fame RM\*, Sadegh C, Sutin J, Naranjo C, Syau D, Cui J, Shipley FB, Vernon A, Gao F, Zhang Y, Holtzman MJ, Heiman M, Warf BC, Lin P-Y, and Lehtinen MK. *Choroid plexus NKCC1 mediates cerebrospinal fluid clearance during mouse early postnatal development*. Nature Communications. 2021.
3. Fame RM, Shannon ML, Chau FK, Head JP, Lehtinen MK. *A concerted metabolic shift in early forebrain alters the CSF proteome and depends on cMYC downregulation for mitochondrial maturation*. Development. 2019.