

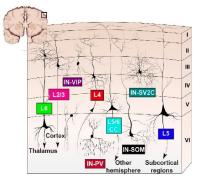
Quantitative relationship between cerebrovascular network and neuronal cell types in mice

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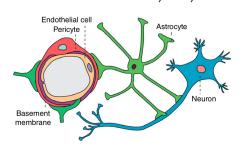
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What do we need to understand brain energy axis?



https://biccn.org/teams/u01-kriegstein

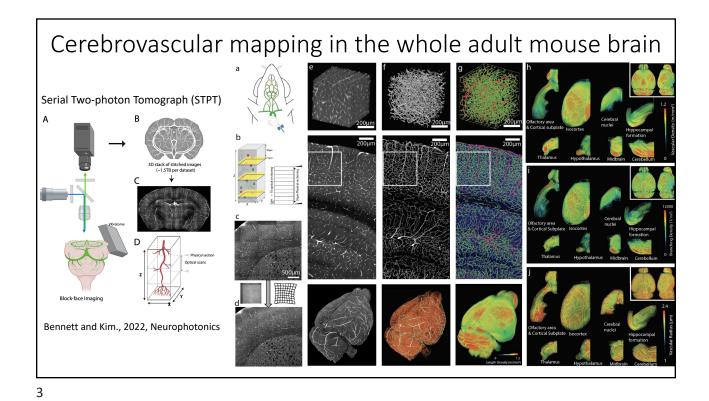
Neurovascular Unit: Neuron, Glia, blood vessel



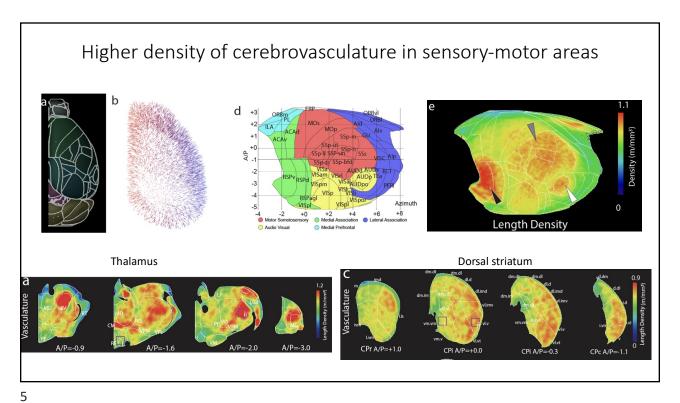
Sweeny et al., 2016, Nat Neurosci

- Map of cerebrovascular network at single capillary resolution
- Perivascular cell type to actively regulate the blood supply
- Neuronal cell type information with different energy need

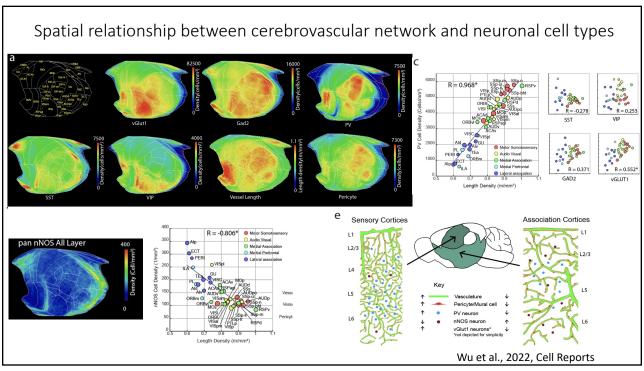
Q: Spatial relationship between cerebrovascular network and neuronal cell types



Cell density mapping of pericyte and neuronal cell types Transgenic mouse lines K Cell Types Mural cell types indlucing Pericyte PDGFRb-Cre:Ai14 pan nNOS neurons nNOS-CreER:Ai14 nNOS subtype co-expressing NPY nNOS-CreER:NPY-Flp:Ai65 nNOS subtype co-expressing SST nNOS-CreER:SST-Flp:Ai65 nNOS-CreER:PV-Flp:Ai65 nNOS subtype co-expressing PV nNOS-CreER:VIP-Flp:Ai65 nNOS subtype co-expressing VIP vGlut1-Cre:Ai75 pan glutatamatergic neurons pan GABAergic neurons Gad2-Cre:Ai75 GABAergic subtype expressing PV PV-Cre:H2B-GFP GABAergic subtype expressing SST SST-Cre:H2B-GFP GABAergic subtype expressing VIP VIP-Cre:H2B-GFP



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