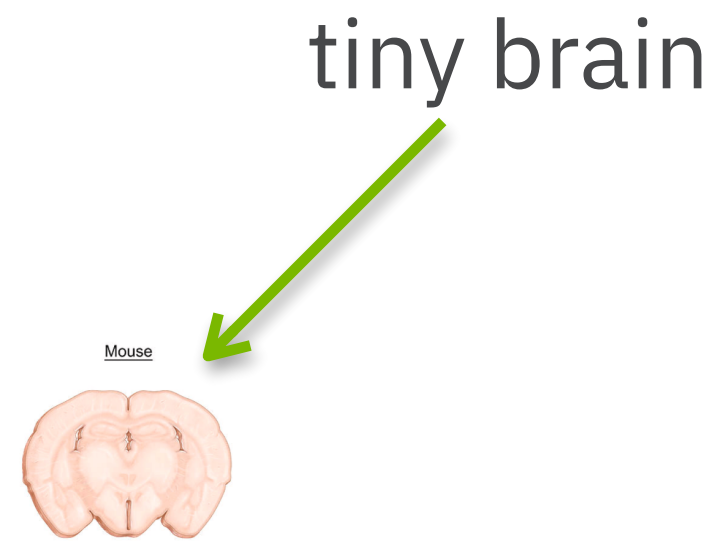


# Data Challenges in Connectomics



Mouse brain: 70M neurons



~1cm<sup>3</sup>

How much image data  
is 1cm<sup>3</sup> ? ~**1EB**

Human brain: 80B neurons



~1000cm<sup>3</sup>

How much image data is  
1000cm<sup>3</sup> ? ~**1000 EB**  
(6nm x 6nm x 40nm)

**Reconstructed data  
will be much larger:**

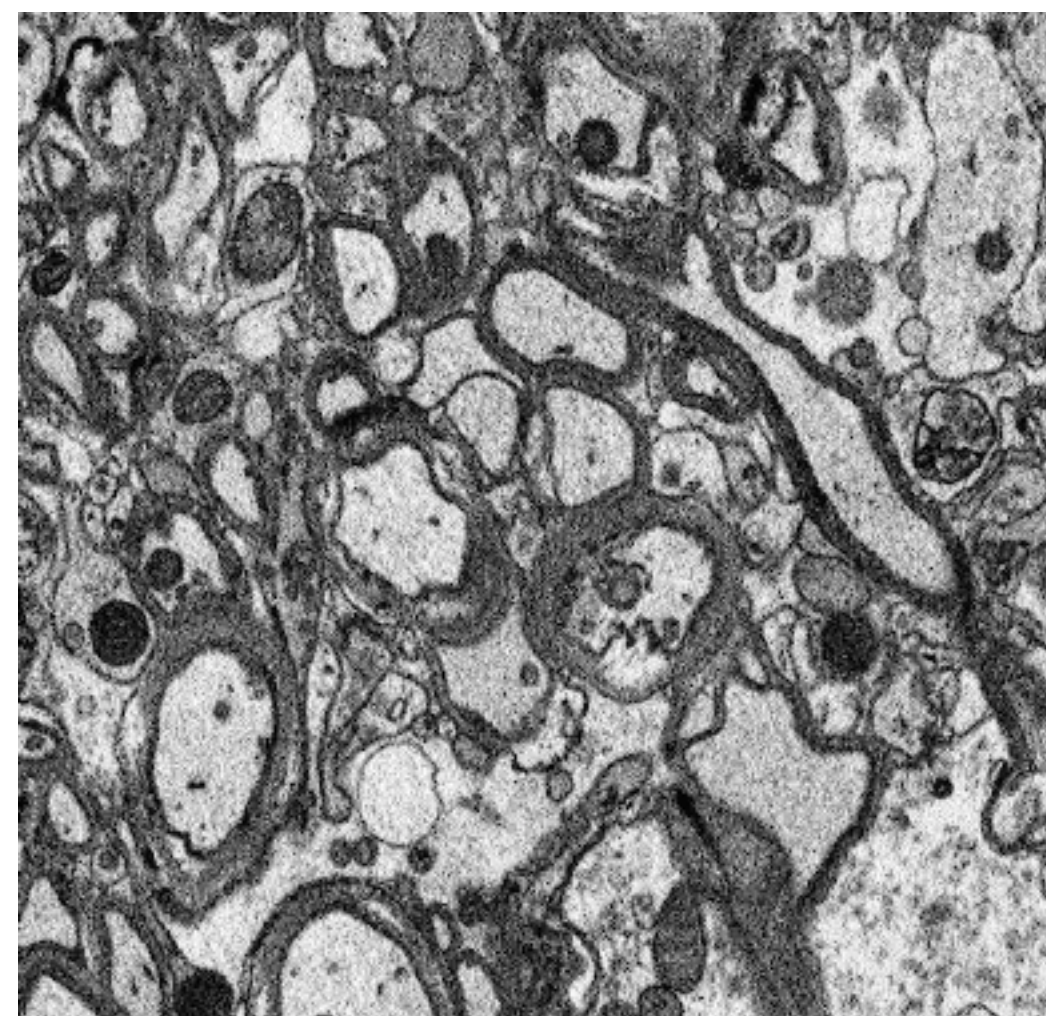
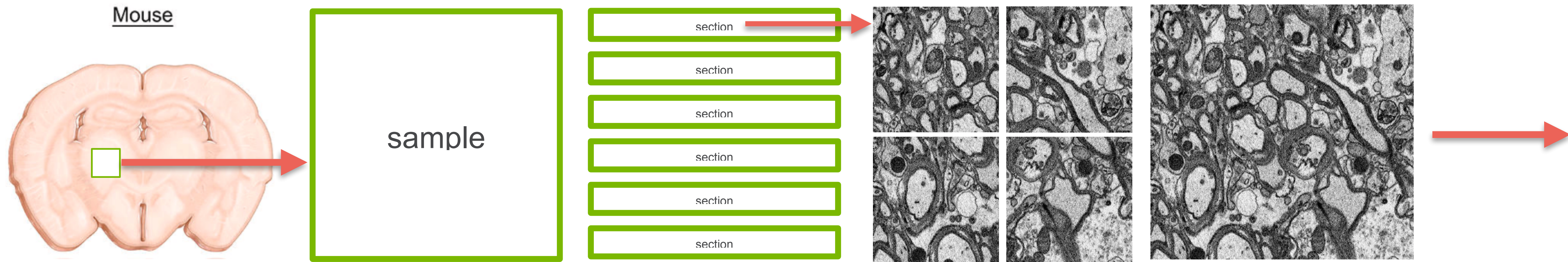
- Segmentation labels for each voxel
  - 4x voxel data
- 3D Mesh
- Skeleton

The structures are expected to be used to seed simulations to study flow in neurotransmitters, in better modeling the brain, among others.

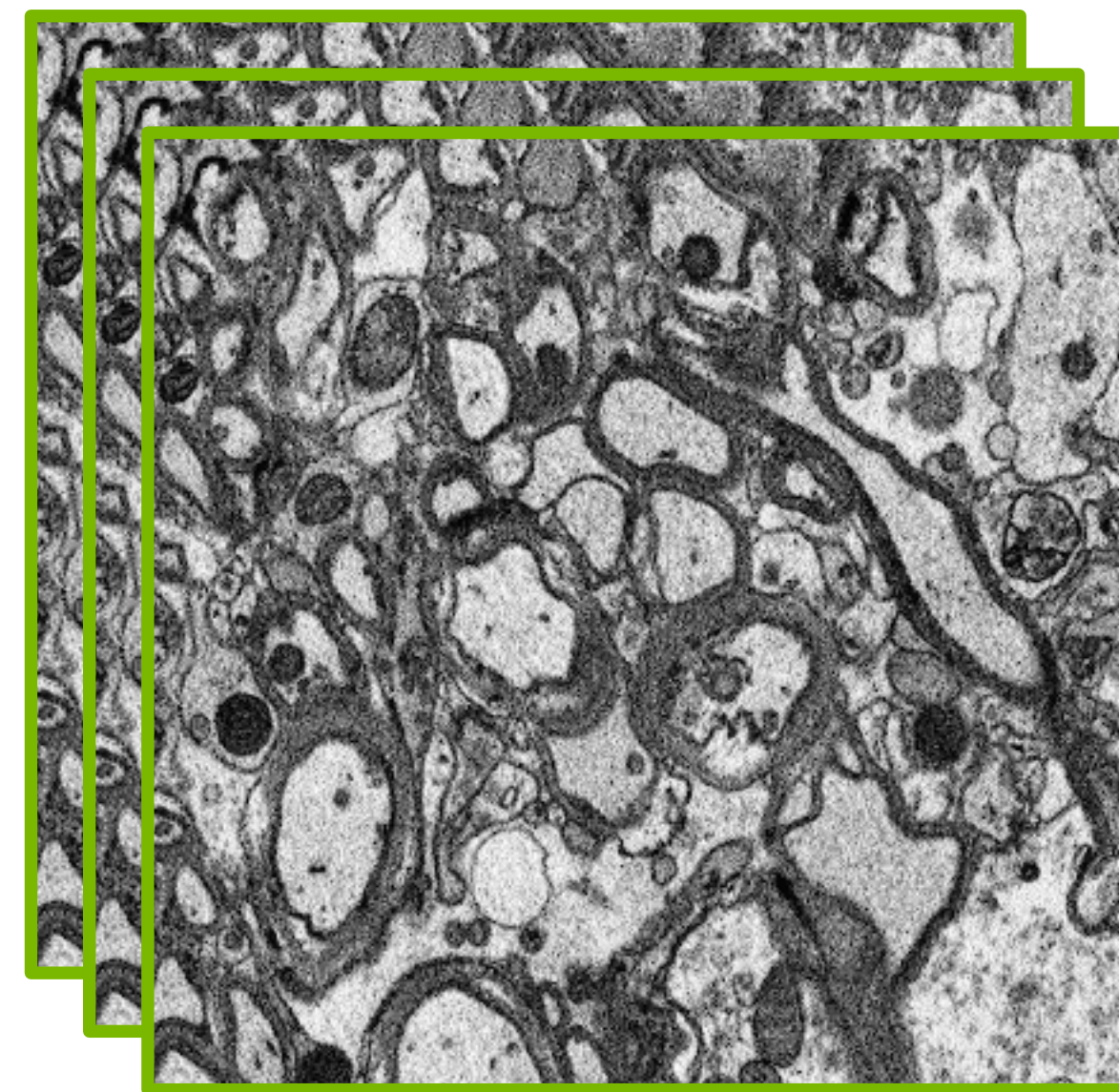


# Connectomics Processing

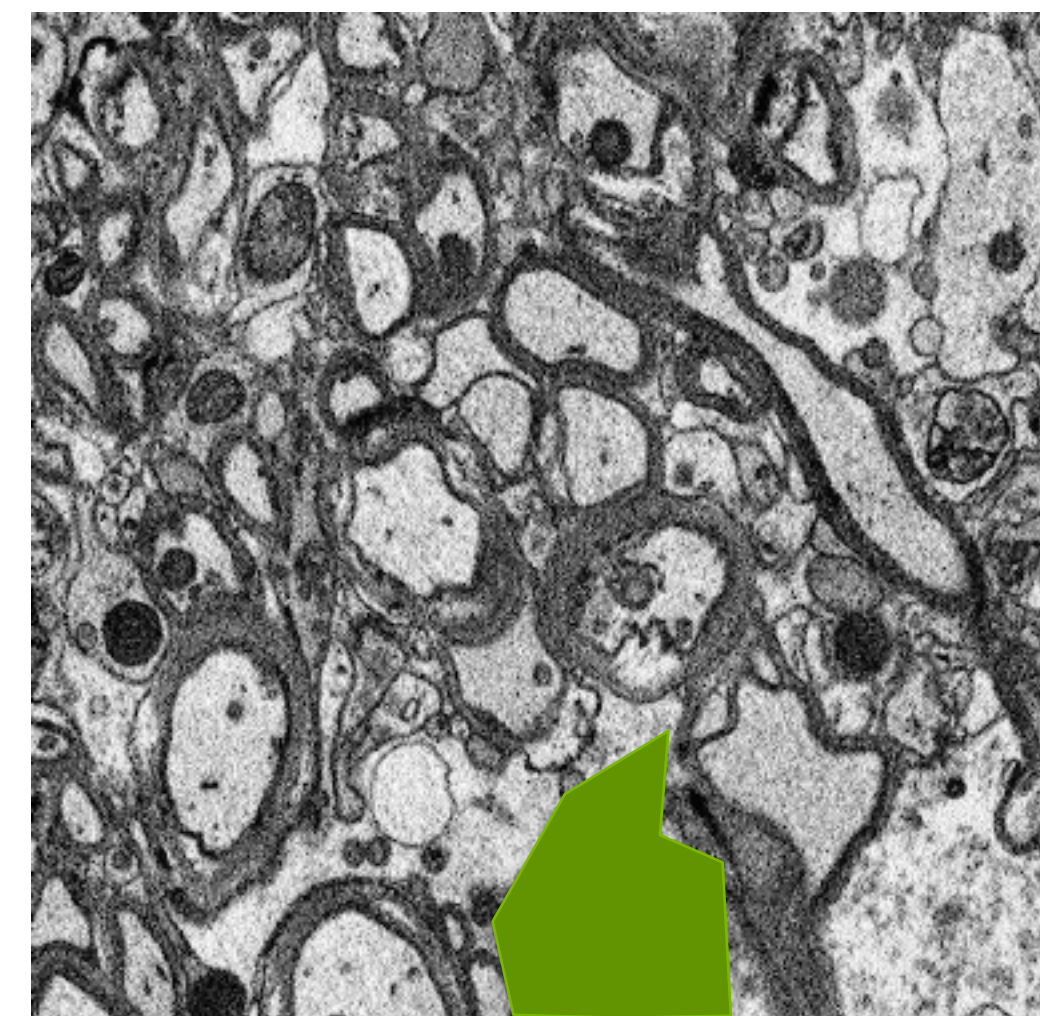
Data from Gregg Wildenberg, Kasthuri Lab, UChicago



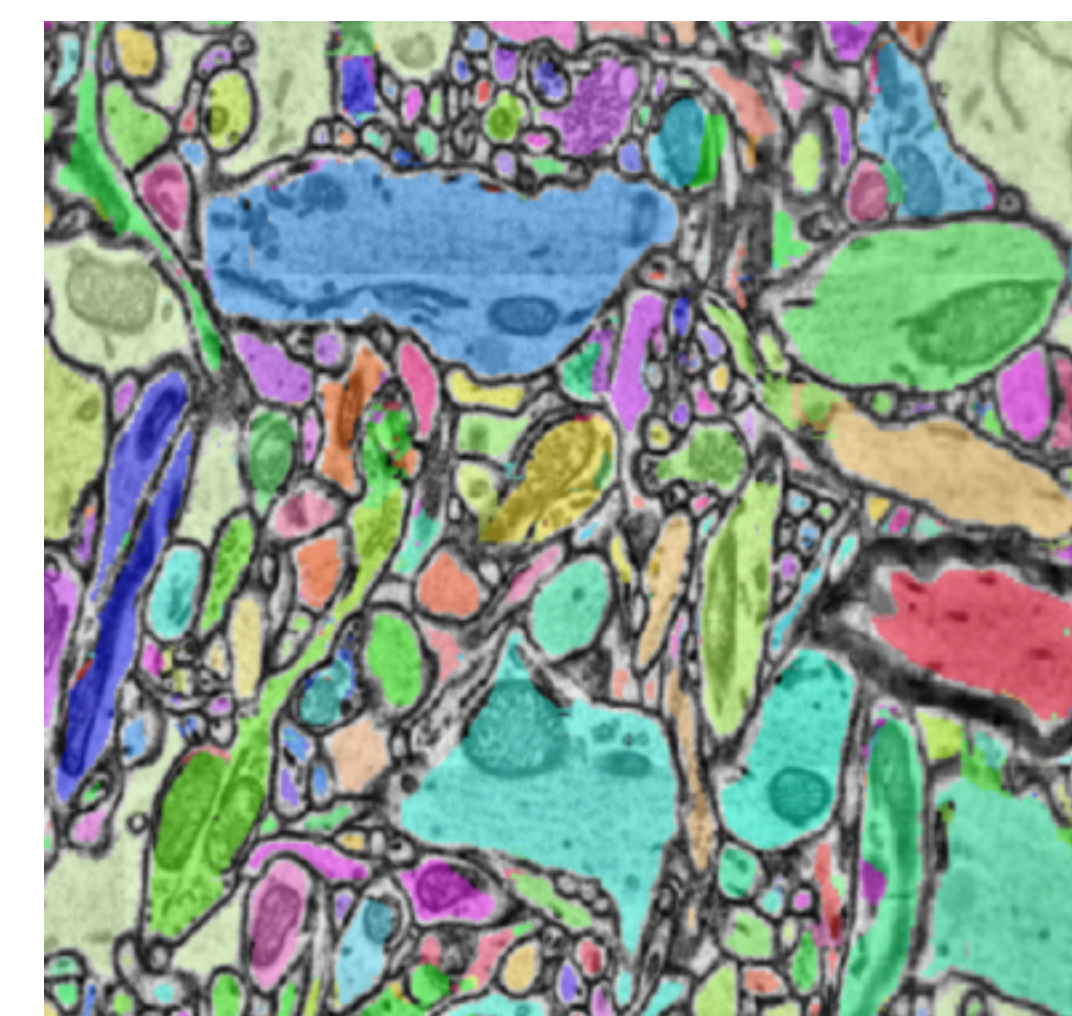
Sections stitched together



Align sections



Mask out non-target objects



Segment target objects