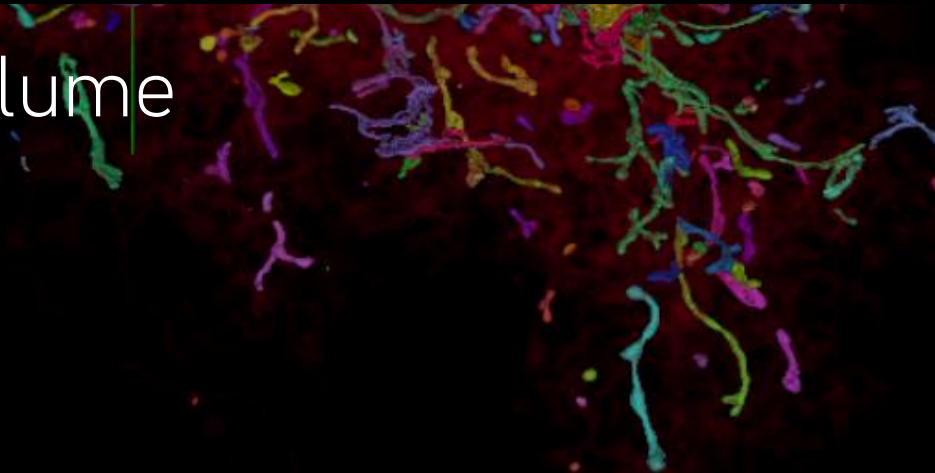


MITOCHONDRIA

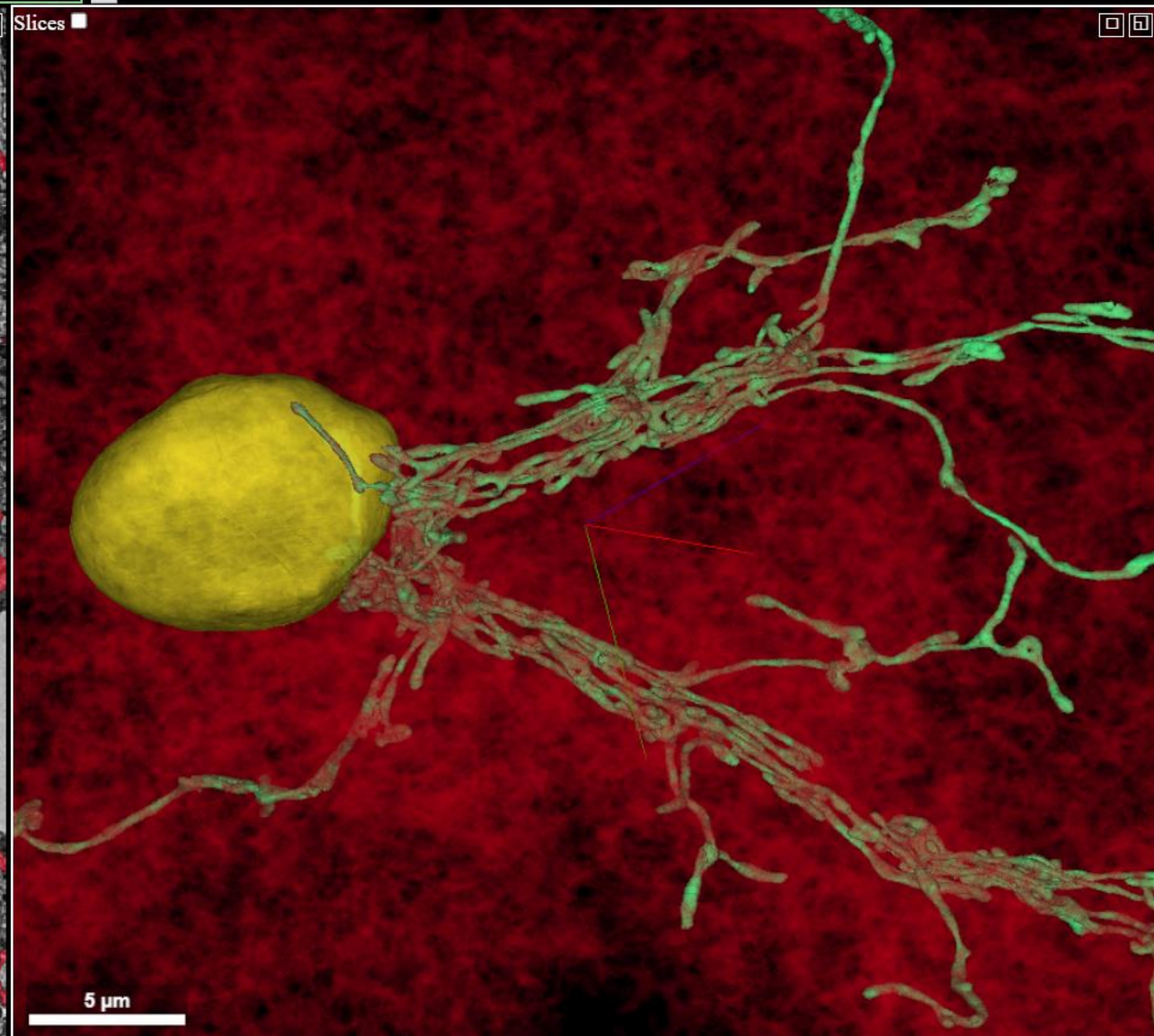
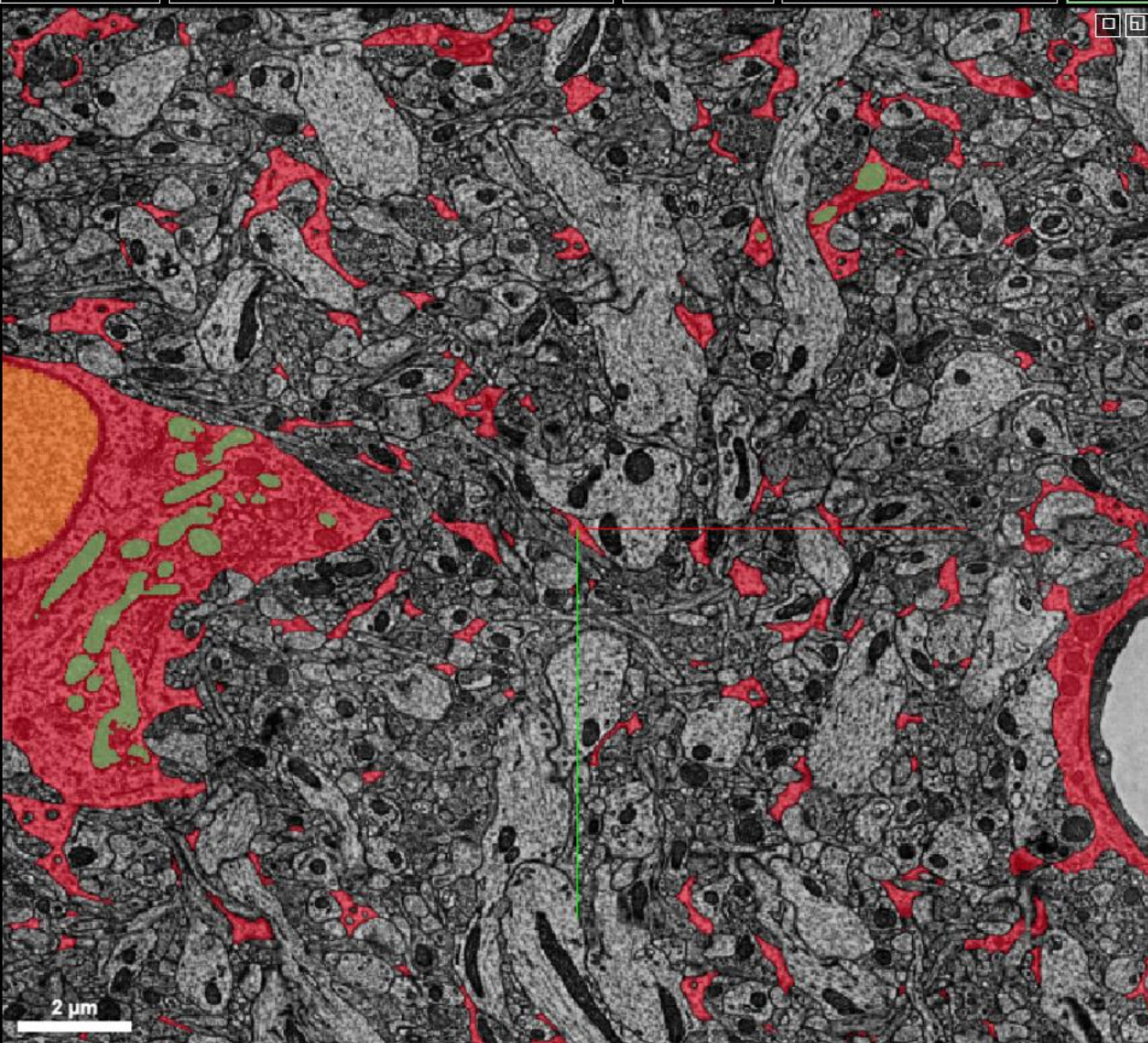
Layer 2/3 Serial EM Volume



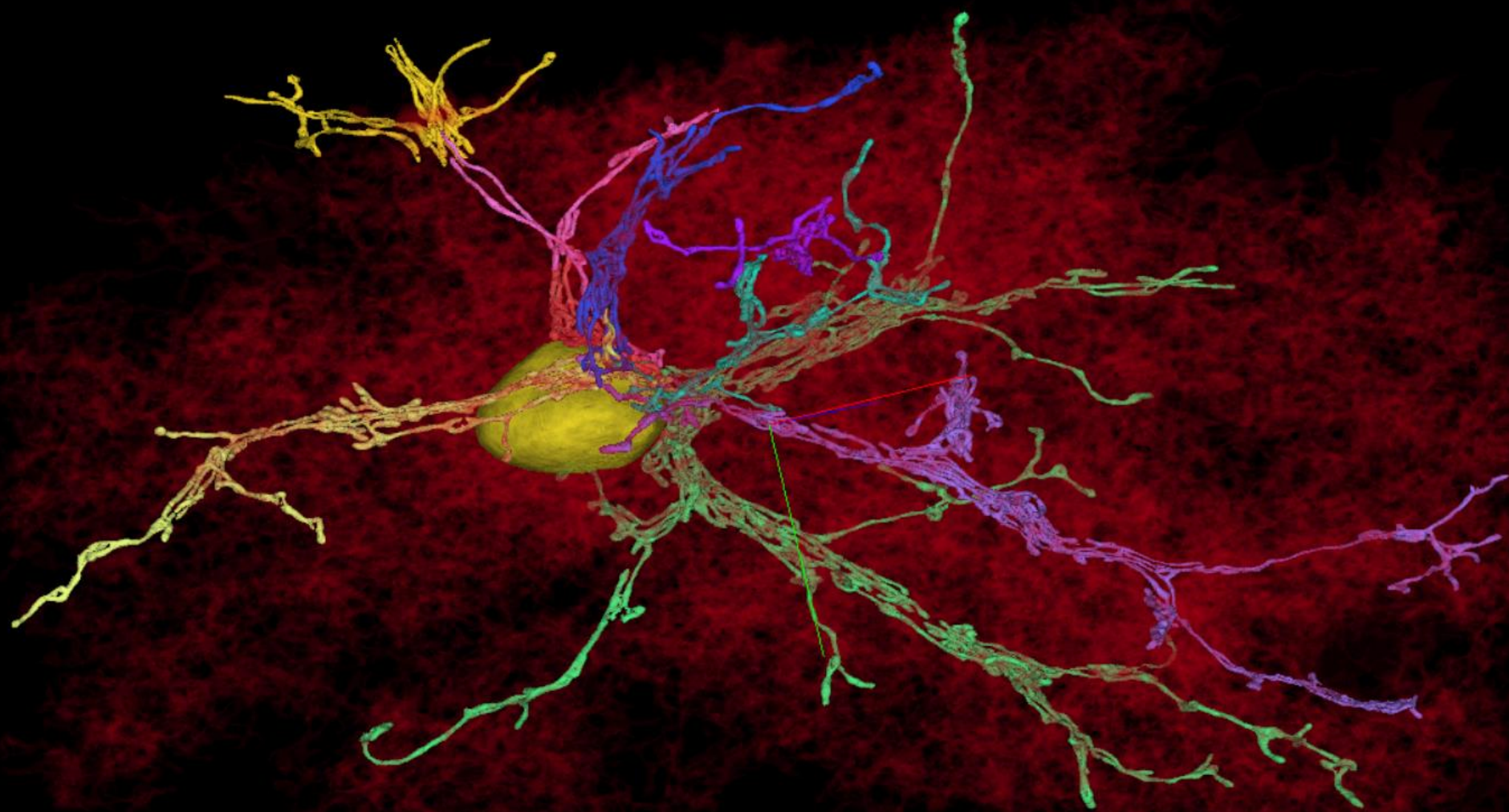
4x4x40 nm³ x 64613, y 40665, z 1446

Share \$ 0 ? !

1EM x 2cell_segmentation_v185 x 3synapses x 4mitochondria x 5nuclei +

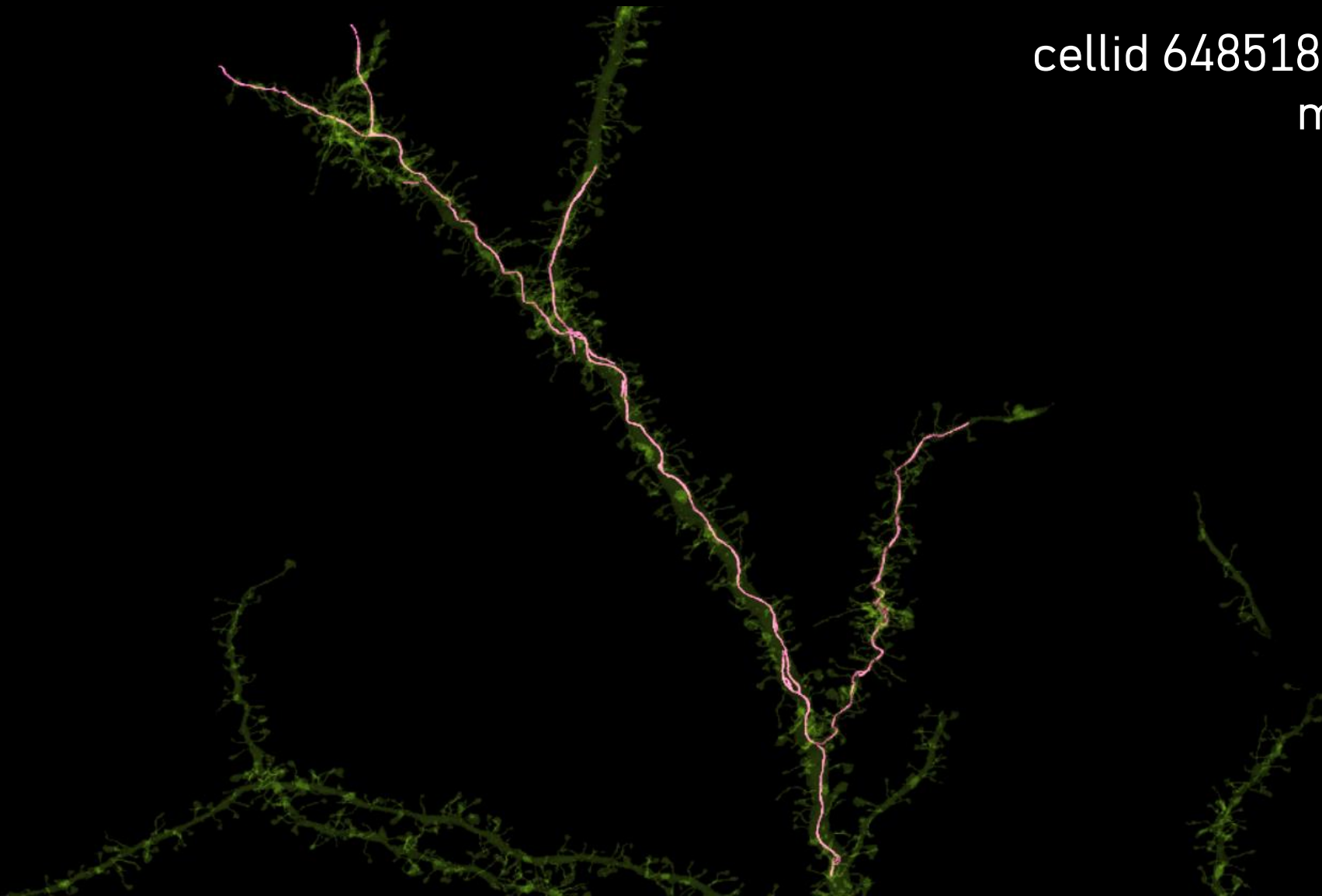


largest contiguous mitochondrion in the entire volume (astrocyte 648518346349527319)



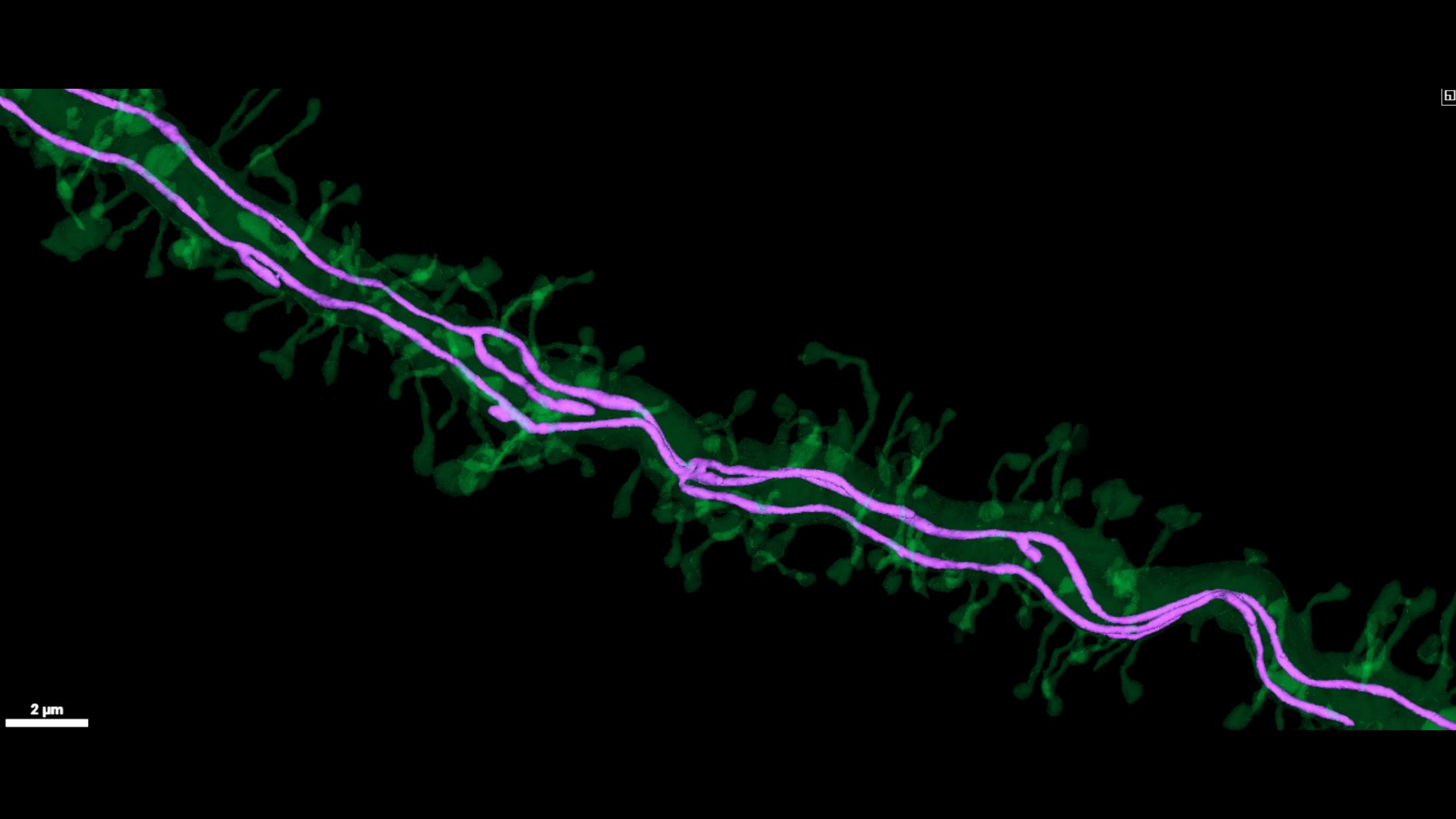
7.5 μm

cellid 648518346349537741
mitoid 2130887

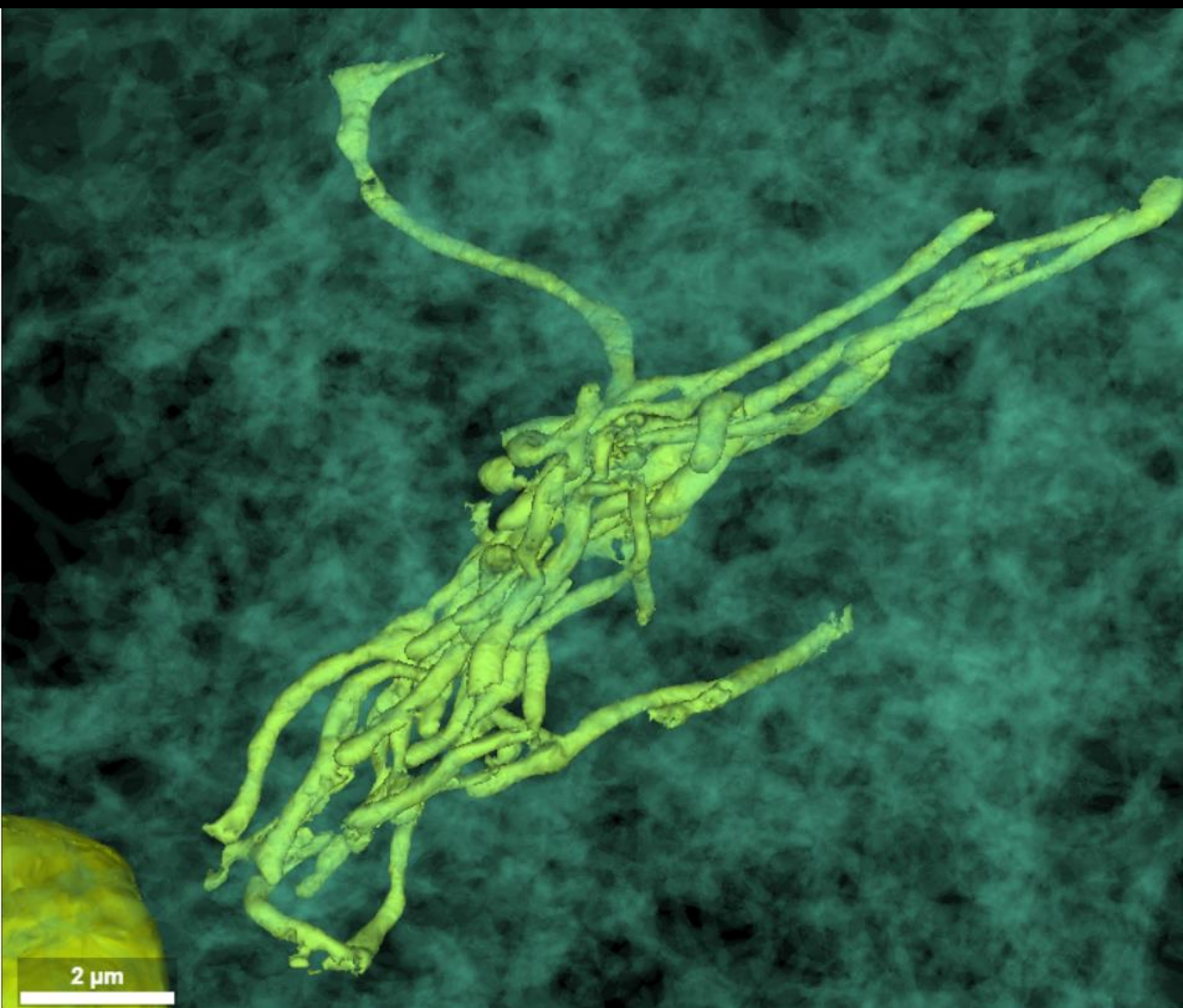
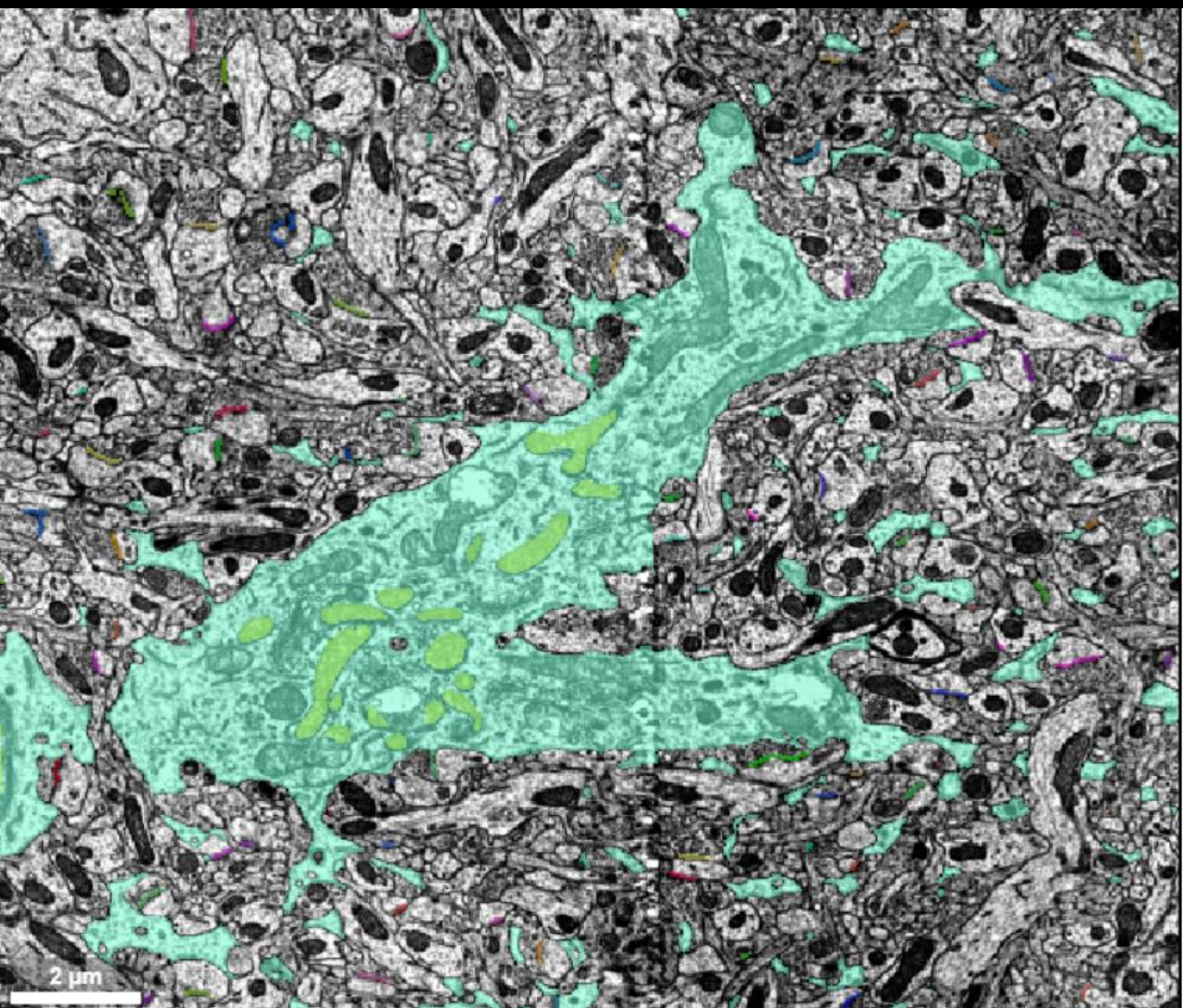


10 μm

largest contiguous mitochondrion in a neuron



2 μm



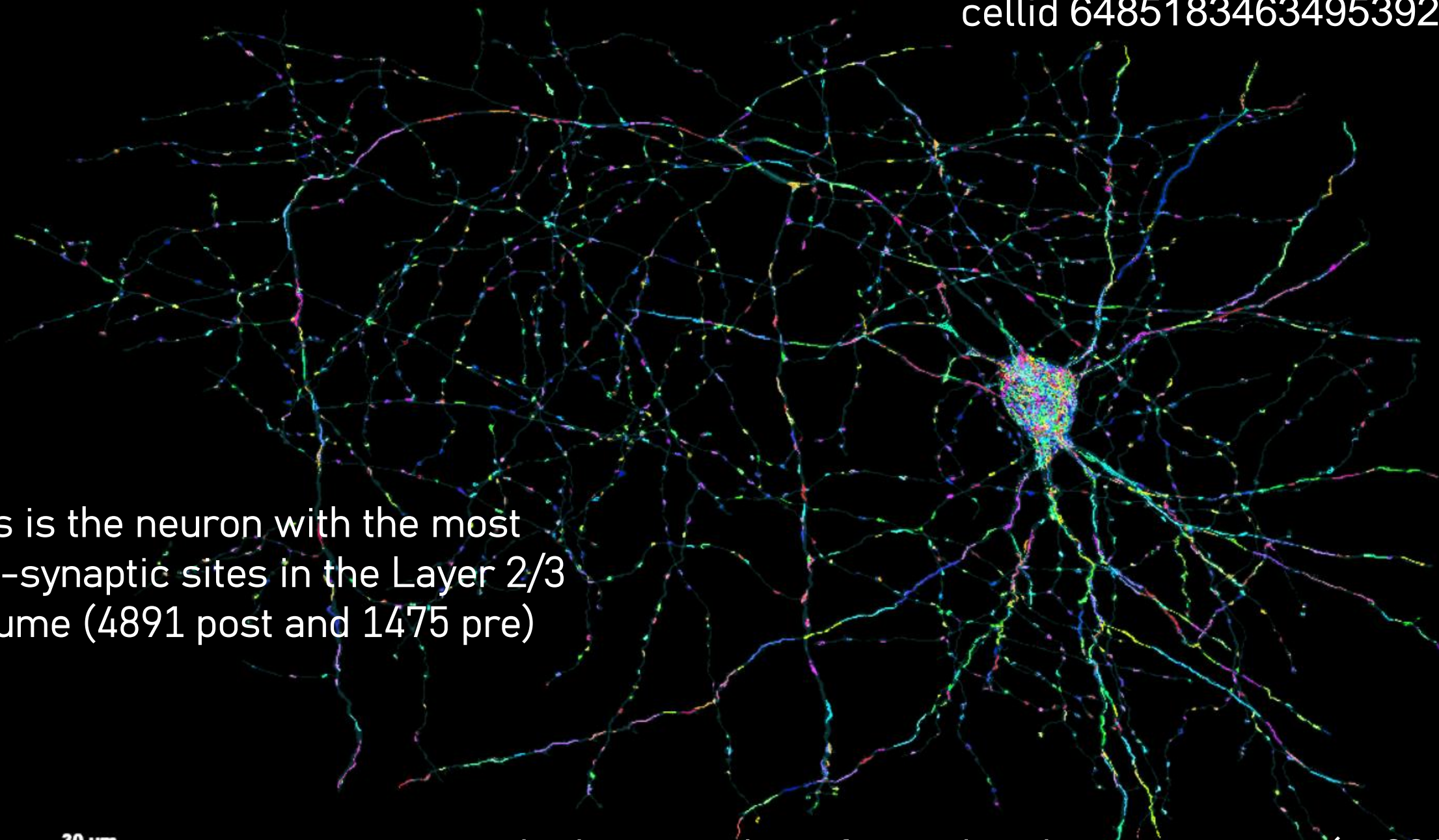
largest mitochondrion by voxels in an OPC glial cell (648518346349525545)

cellid 648518346349539215

This is the neuron with the most
pre-synaptic sites in the Layer 2/3
volume (4891 post and 1475 pre)

30 μm

highest number of mitochondria in a neuron (n=3213)



longer mito length in dendrites

cellid 648518346349539215

smaller mito size in axons

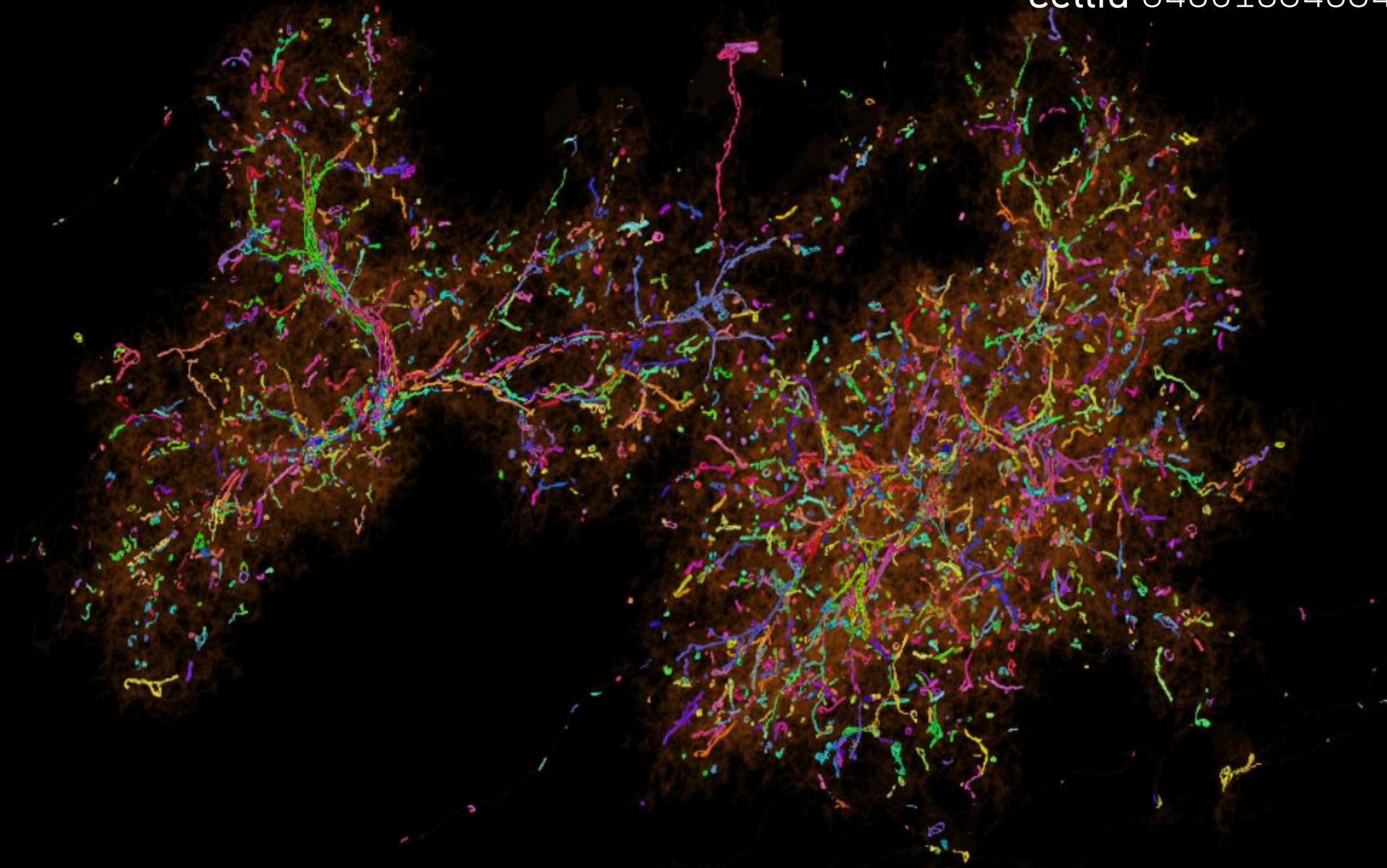
7.5 μm

A fluorescence microscopy image of a neuron. The cell body (soma) is a large, dense, multi-colored mass in the center-right. Numerous long, thin processes (dendrites and axons) extend from the soma across the field of view. These processes are filled with small, brightly colored puncta representing mitochondria. The colors used for the mitochondria include red, green, blue, yellow, and magenta. The background is black. A white scale bar in the bottom-left corner indicates a length of 7.5 μm. Text annotations are present: 'longer mito length in dendrites' at the top left, 'cellid 648518346349539215' at the top right, and 'smaller mito size in axons' in the middle left.

cellid 648518346349536888

15 μm

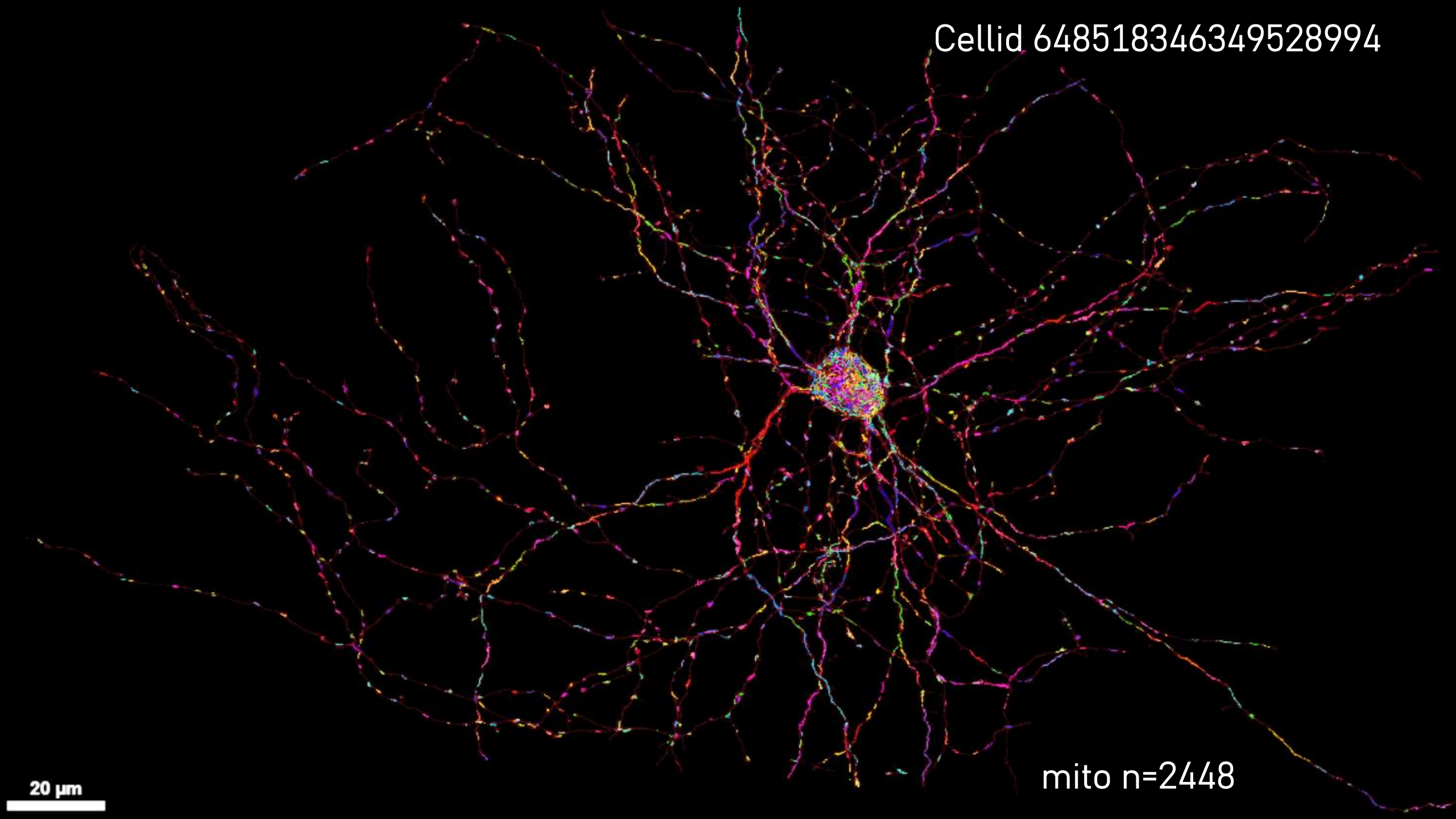
highest number of mitochondria in an astrocyte (n=3173)

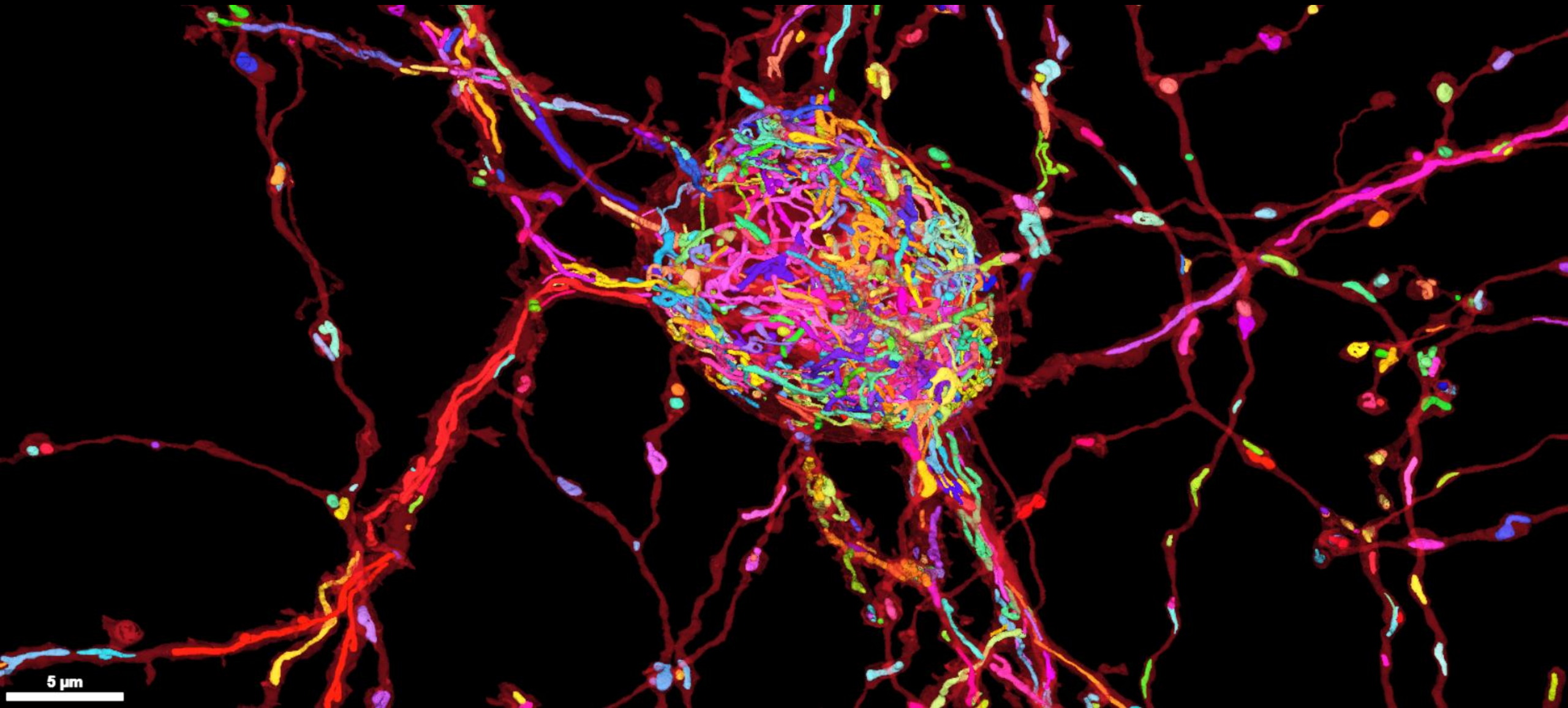


Cellid 648518346349528994

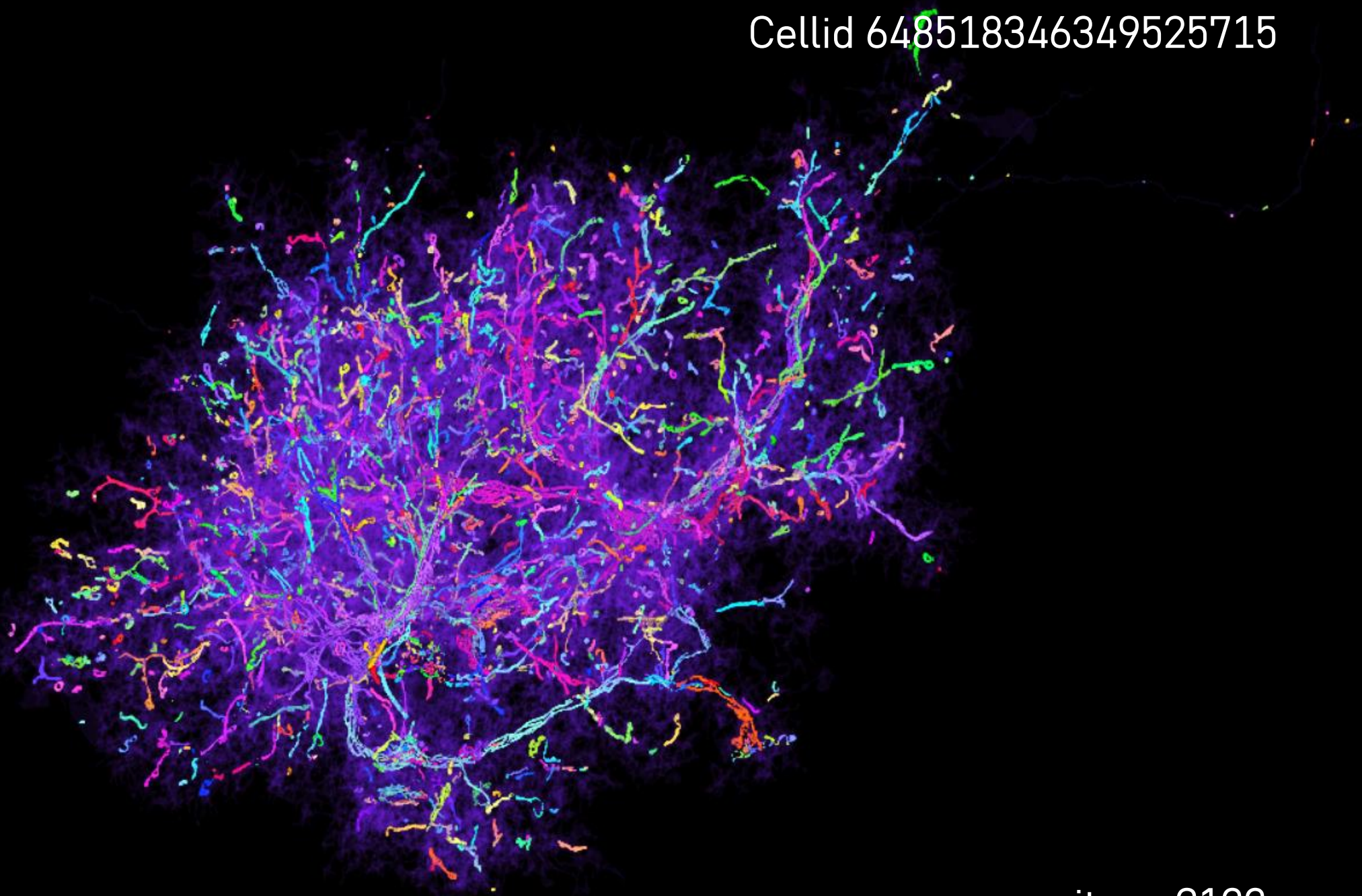
20 μm

mito n=2448





Cellid 648518346349525715



15 μm

mito n=2133

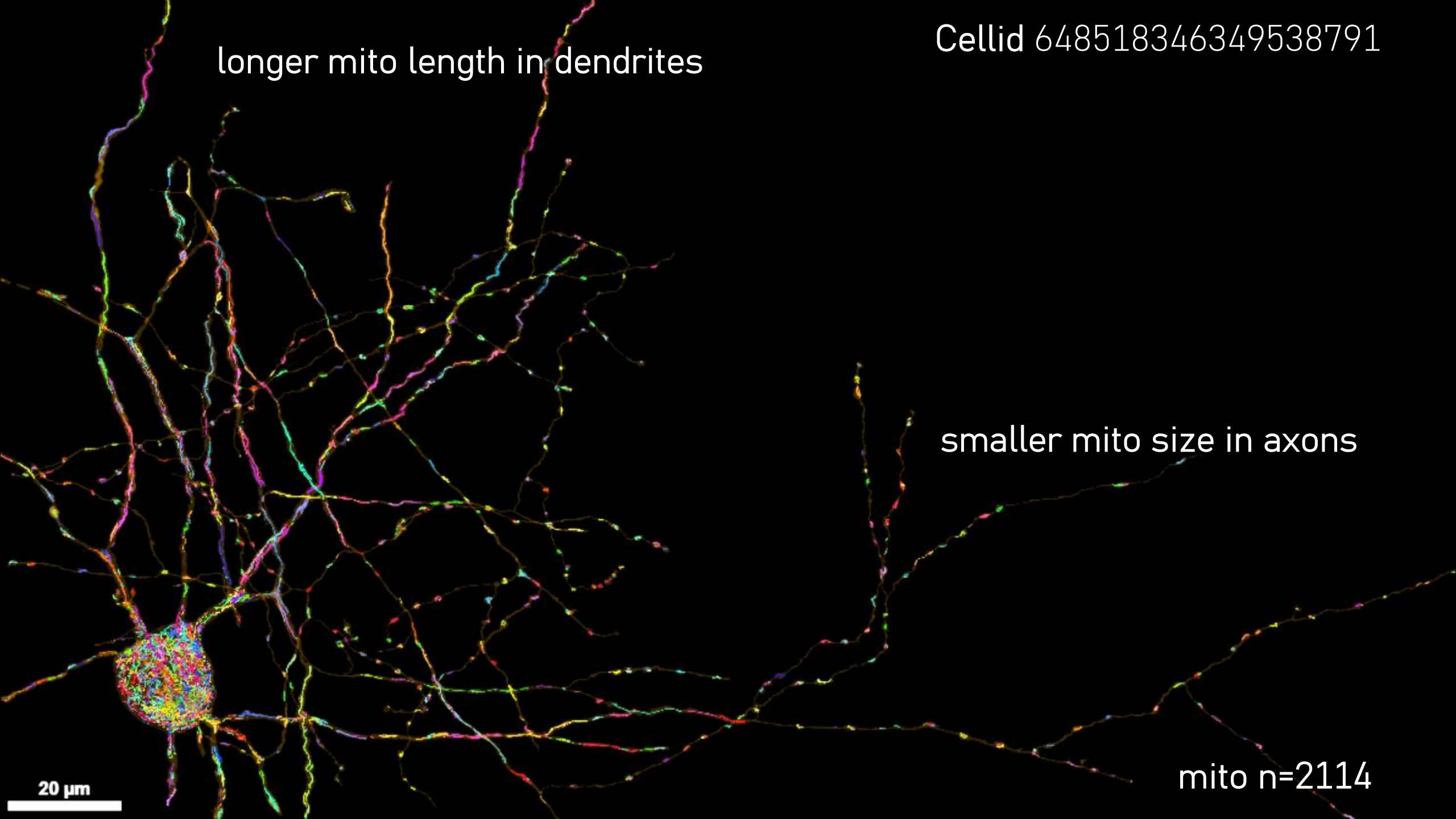
Cellid 648518346349538791

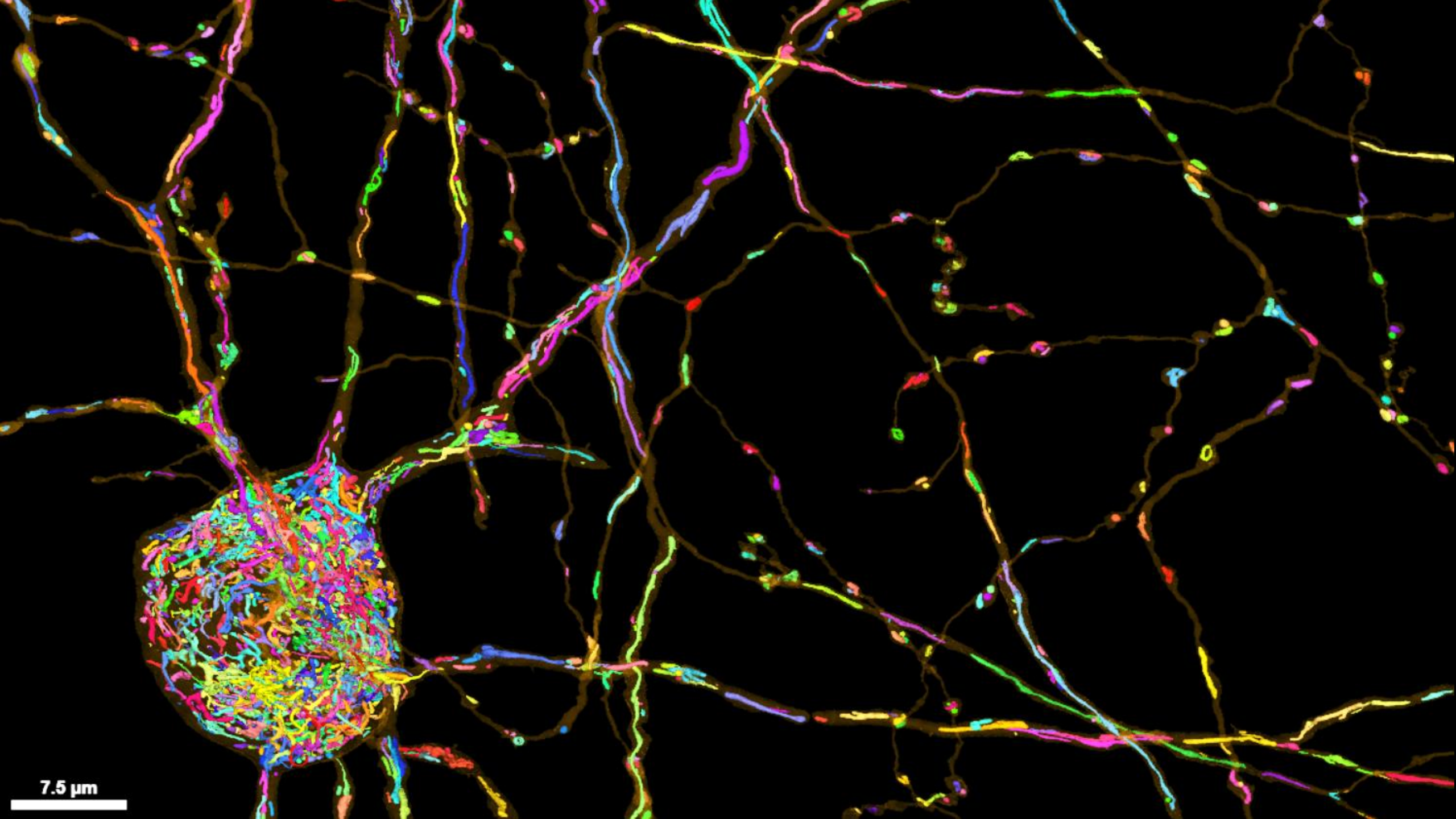
longer mito length in dendrites

smaller mito size in axons

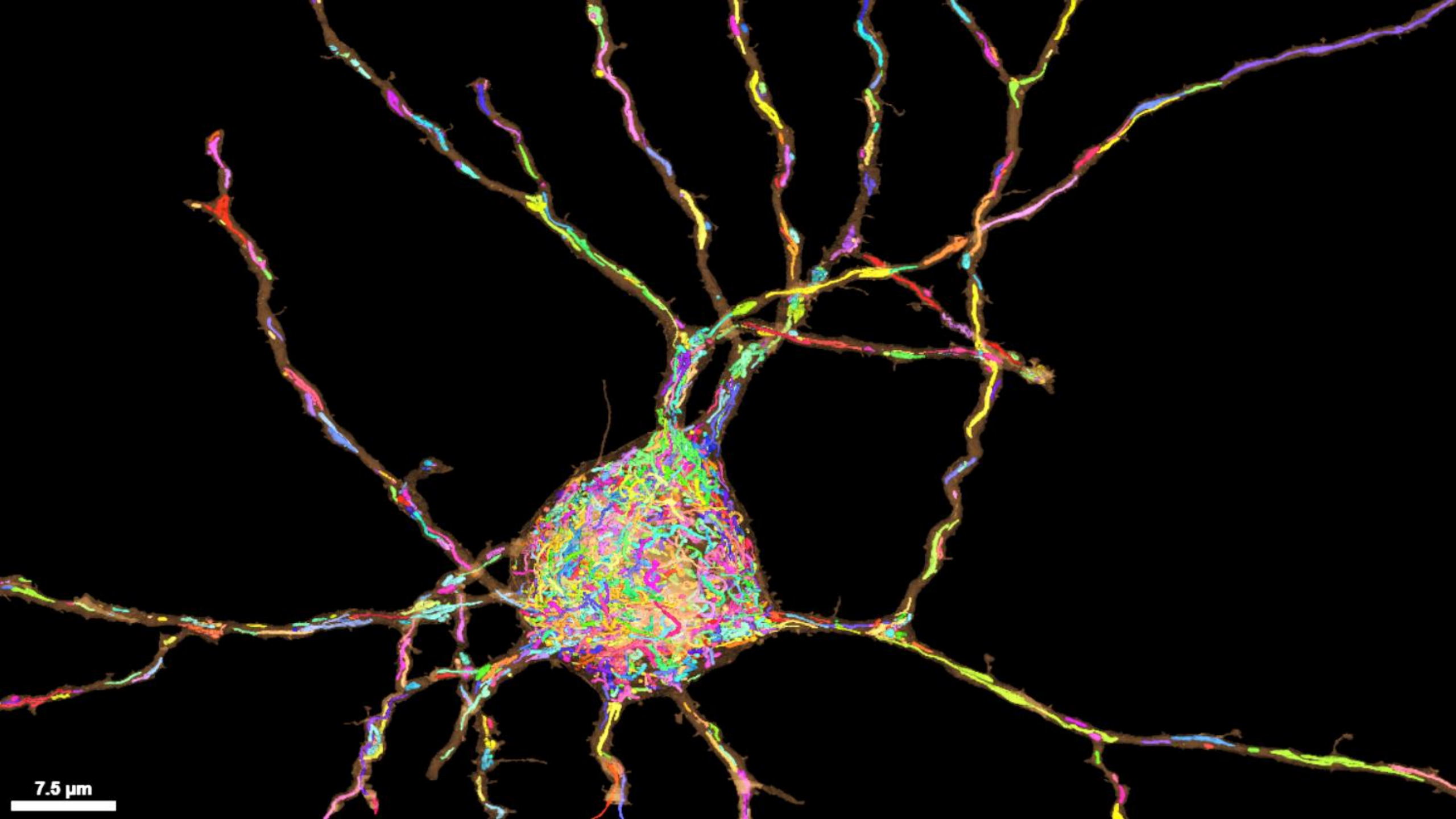
20 μm

mito n=2114



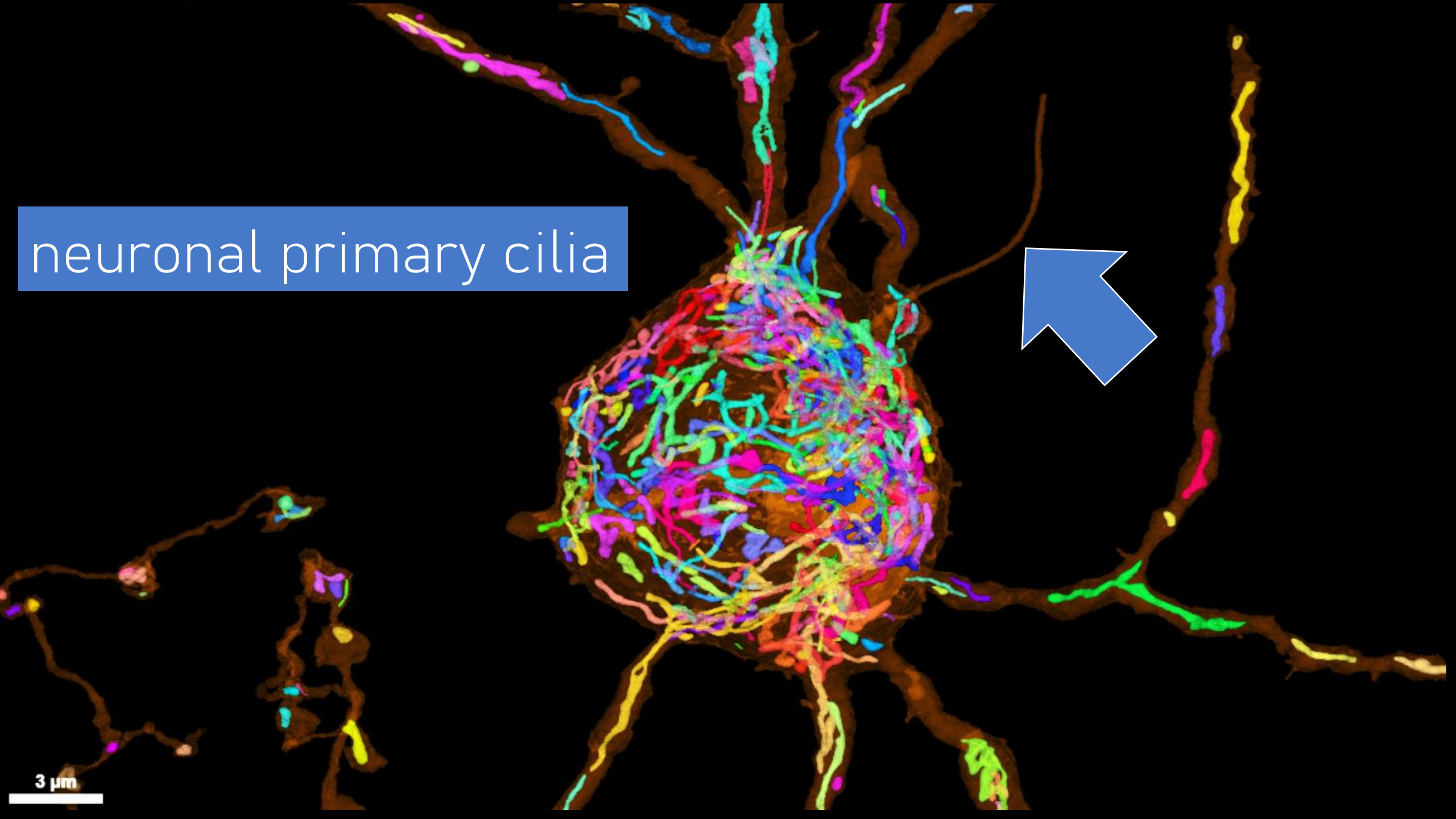


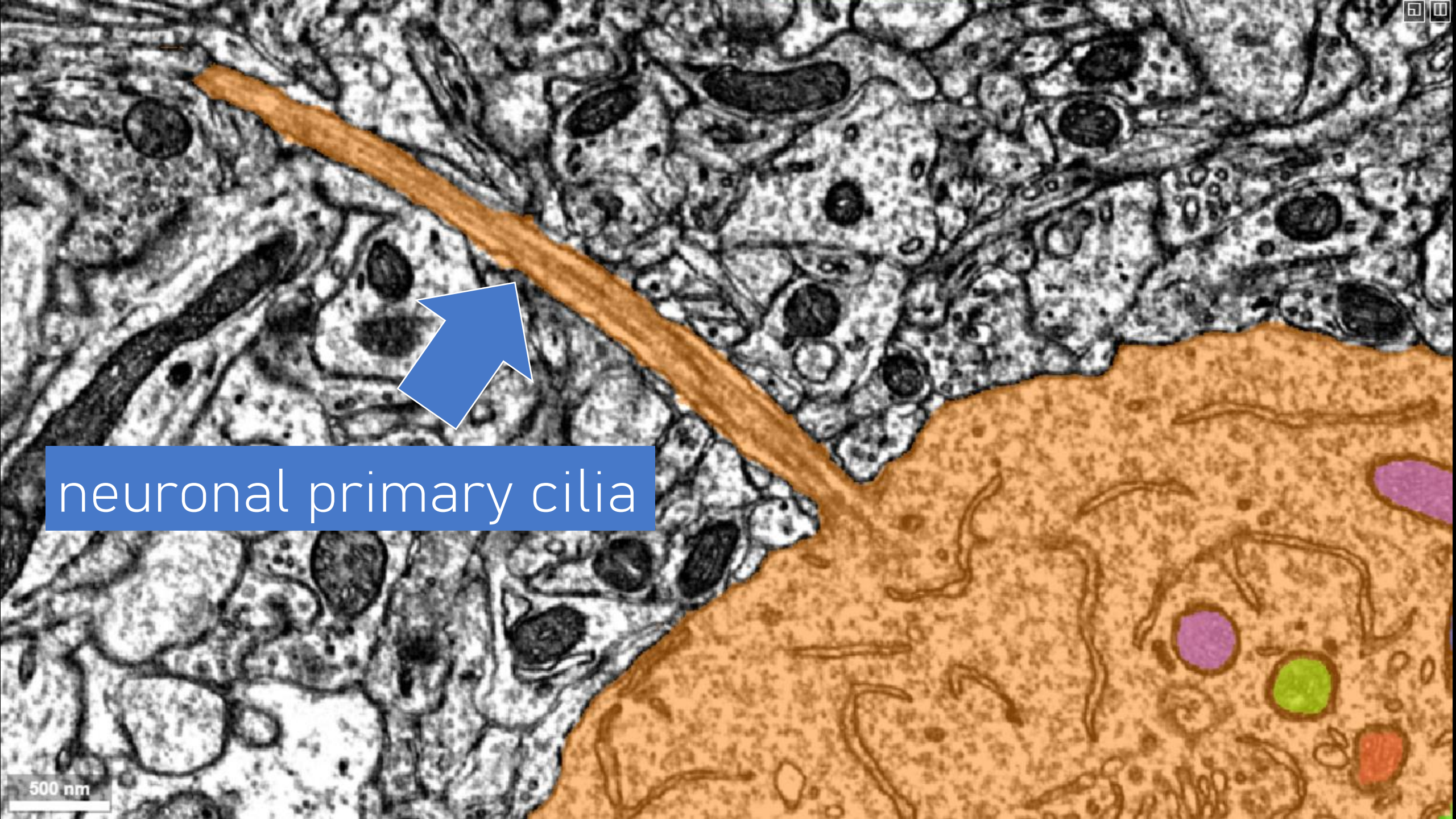
7.5 μm



7.5 μm

neuronal primary cilia



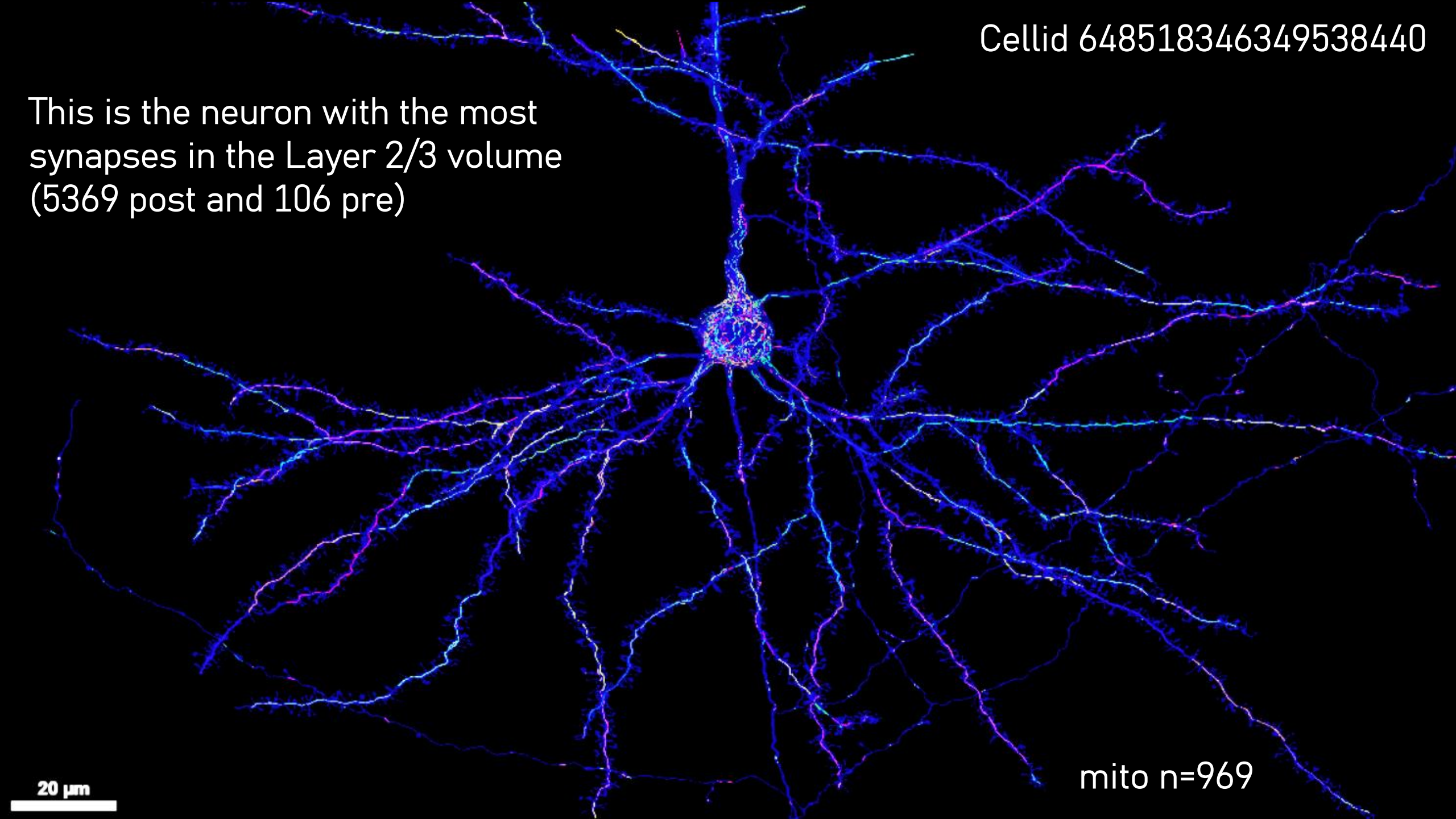


neuronal primary cilia

500 nm

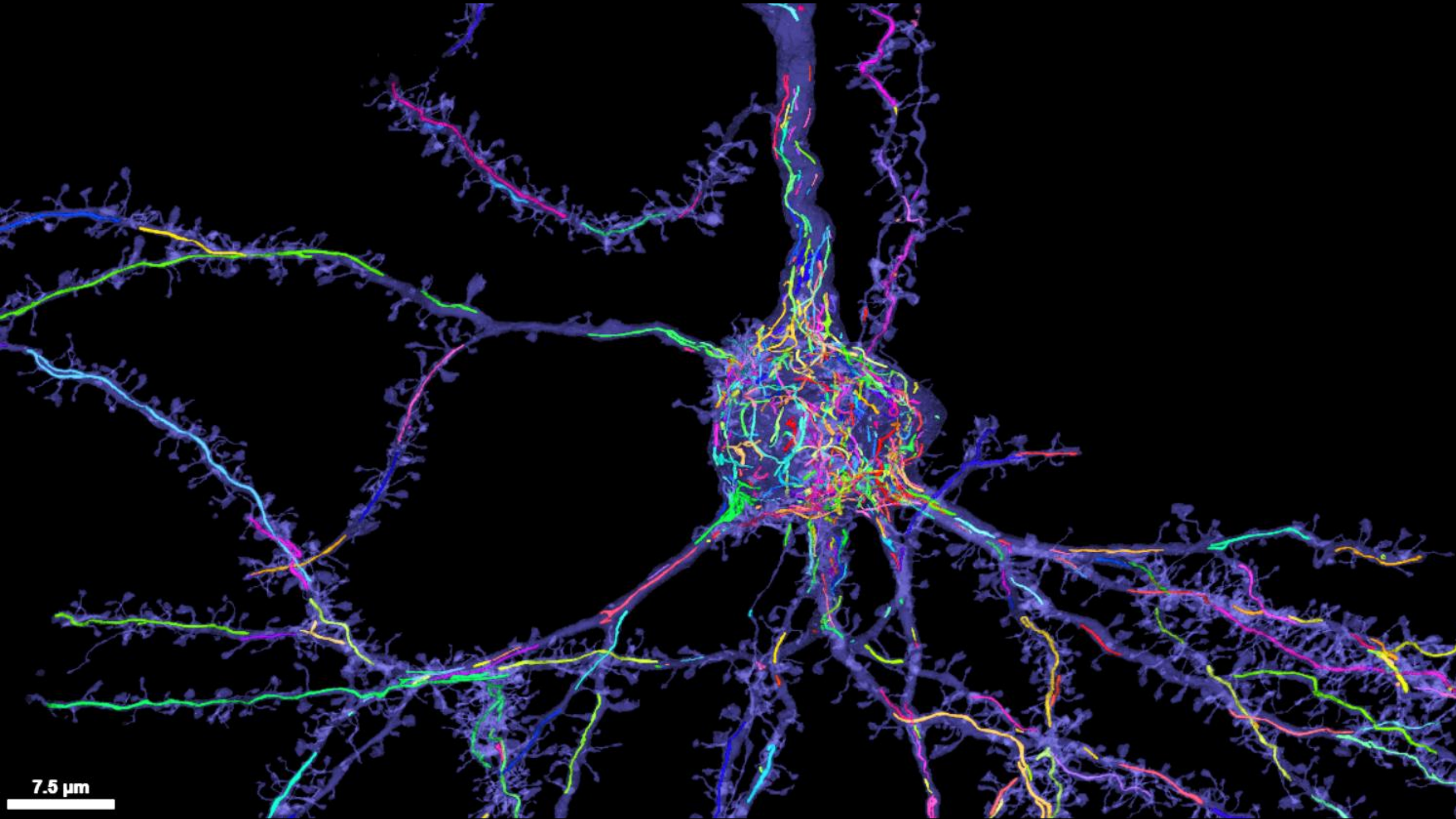
Cellid 648518346349538440

This is the neuron with the most
synapses in the Layer 2/3 volume
(5369 post and 106 pre)



20 μm

mito n=969



7.5 μm

ACKNOWLEDGEMENTS

- Read the original research papers on the [Citation](#) page at Allen Institute
- Read the [Terms and Conditions](#) page
- Use under Creative Commons by Attribution 4.0 International



CODE AVAILABILITY

- Visit my [GitHub repository](#) to view how the images and data in this presentation were generated