



SCIENCE RESEARCH INTERNSHIP 2017

Stephanie Jiang

MY LAB

National Institute for Neurological Disorders and Stroke (NINDS)

PI: Dr. Kevin Briggman, PhD

Mentor: Kara Fulton, PhD fellow at Brown University

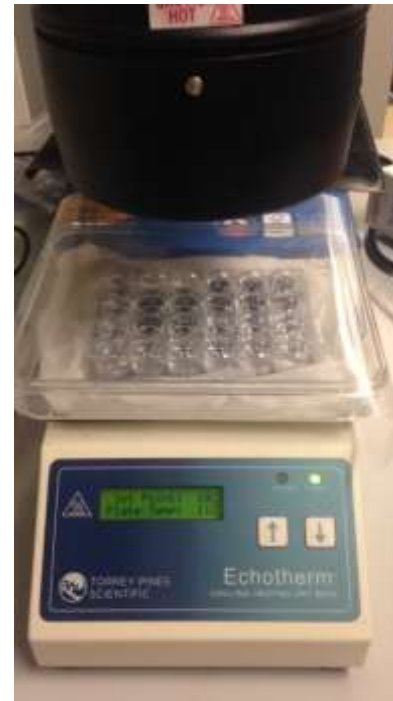
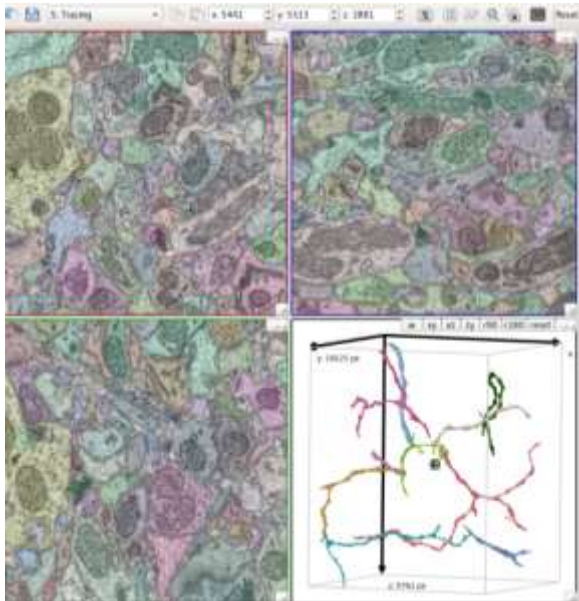
Two Undergrad Interns

Couple other postdoc fellows



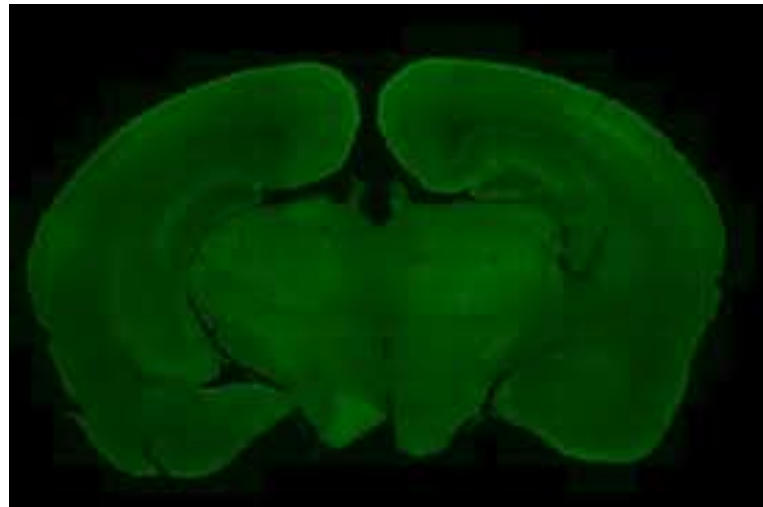
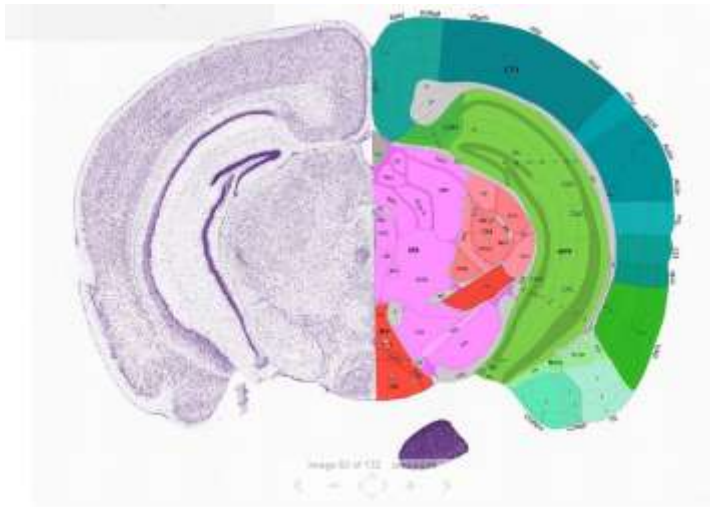
WHAT I WAS WORKING ON

Optimizing the immunohistochemistry protocol and analysis for correlative serial block-face electron microscopy



IMMUNOHISTOCHEMISTRY

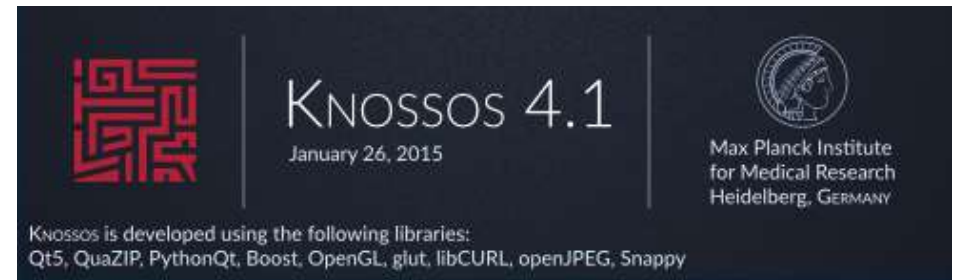
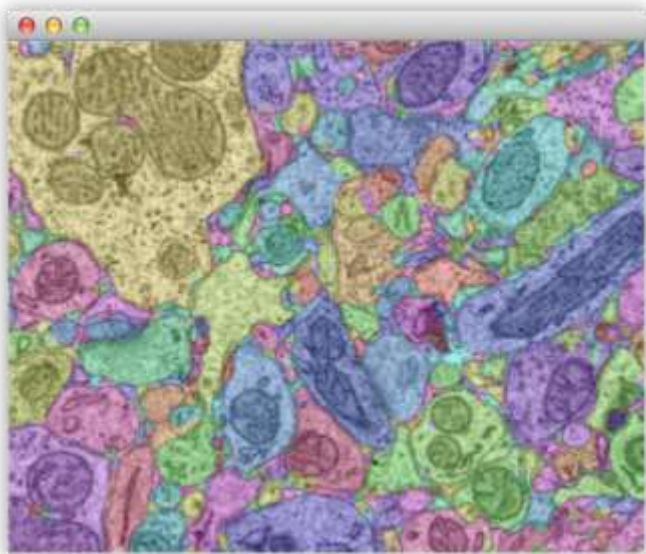
Wanted to see the effect of ultraviolet light on autofluorescence in mice brain tissue



ANALYSIS OF SCANS/ TRACING

Used itk-SNAP and Knossos to trace cells

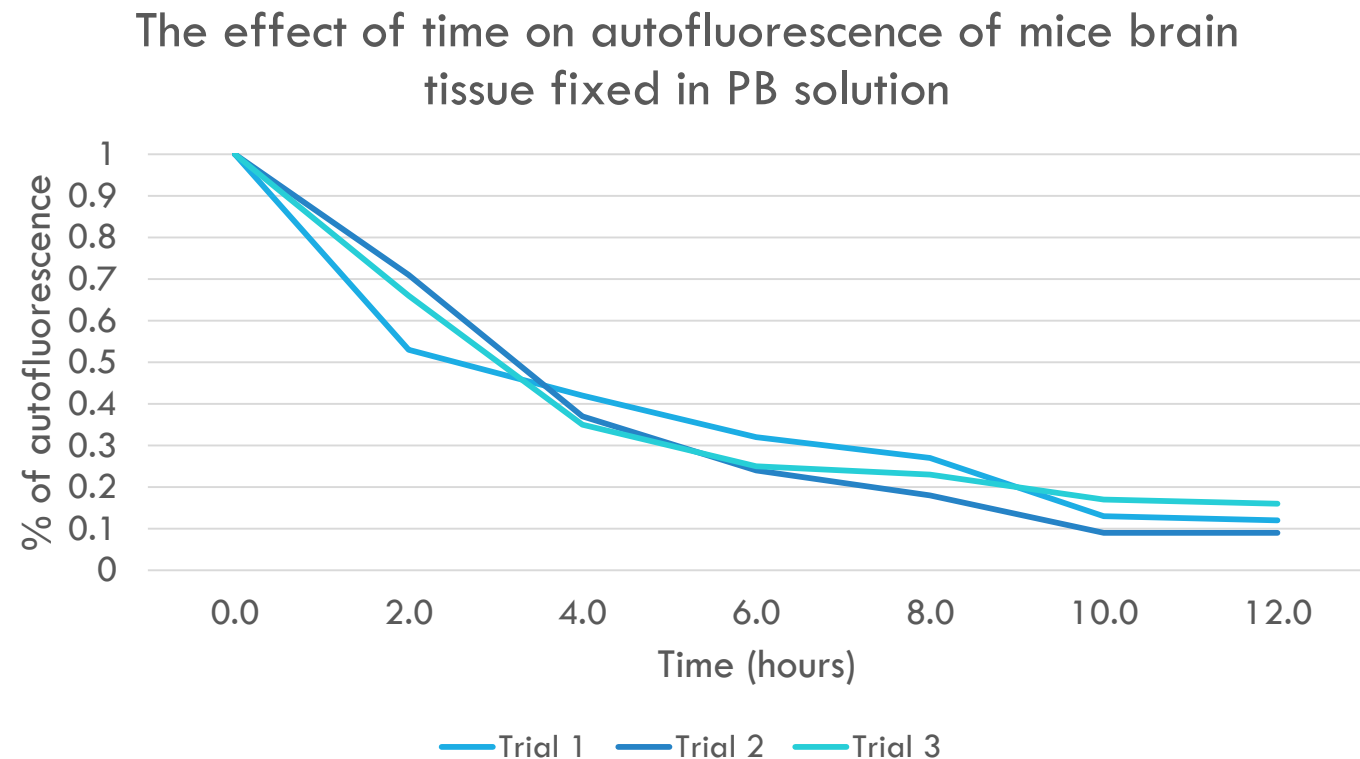
Wanted to create a computer program to make tracing automatic



RESULTS

The autofluorescence decrease drastically for the first 4 hours, then slowed down and eventually plateaued

Time (hours)	Trial 1	Trial 2	Trial 3
0	1	1	1
2	0.53	0.71	0.66
4	0.42	0.37	0.35
6	0.32	0.24	0.25
8	0.27	0.18	0.23
10	0.13	0.09	0.17
12	0.12	0.09	0.16



WHAT I LEARNED

I love working in a lab

The lab is super chill; don't be afraid to have fun

Have confidence in yourself and your knowledge

Go to lab activities (lab lunches, lab outings, etc.)

Cells are not perfectly circular like in textbooks

Don't be afraid of asking questions

MISTAKES AND FUN

Pingu the Penguin

Butchered a mouse brain slice when I was cutting out the frontal cortex

Being exposed to a high concentration of UV light

Forgetting to prepare the ACSF before the rat brain dissection

Breaking a lot of lab safety rules





ACKNOWLEDGEMENTS

Dr. Kevin Briggman, PhD

Kara Fulton

NIH/ NINDS