



WEATHERALL INSTITUTE OF MOLECULAR MEDICINE

OXFORD, ENGLAND

Joyce Lee

Class of 2017

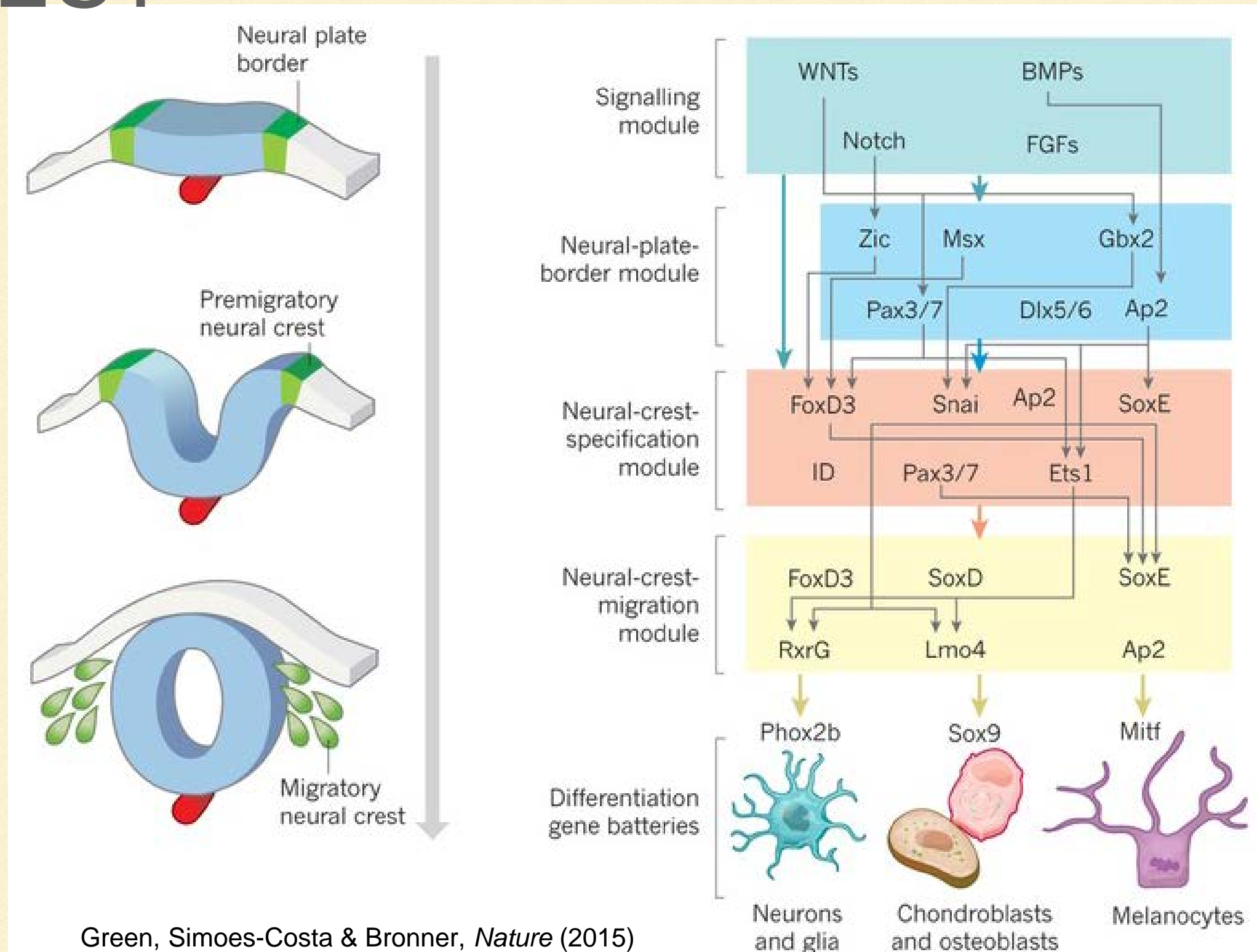
WORK RESPONSIBILITIES



Weatherall Institute of Molecular Medicine

- At the Weatherall Institute of Molecular Medicine (WIMM), I worked in the Sauka-Spengler (TSS) Lab.
- My project was called *Identifying Gene Regulatory Elements in Neural Crest*. Work responsibilities included:
 - Cloning putative enhancers of neural crest genes for electroporations in chicken embryos
 - Imaging chicken embryos under the fluorescent microscope to check for positive enhancers

GENE REGULATION IN NEURAL CREST



CLONING ENHANCERS: WORKFLOW

1
Polymerase Chain
Reaction

4
Plasmid Safe
Reaction

7
Endotoxin-free
Minipreps

2
Gel Purification

5
Transformation

8
Sequencing

3
BSMBI
(Golden Gate Assembly)

6
Colony Screening

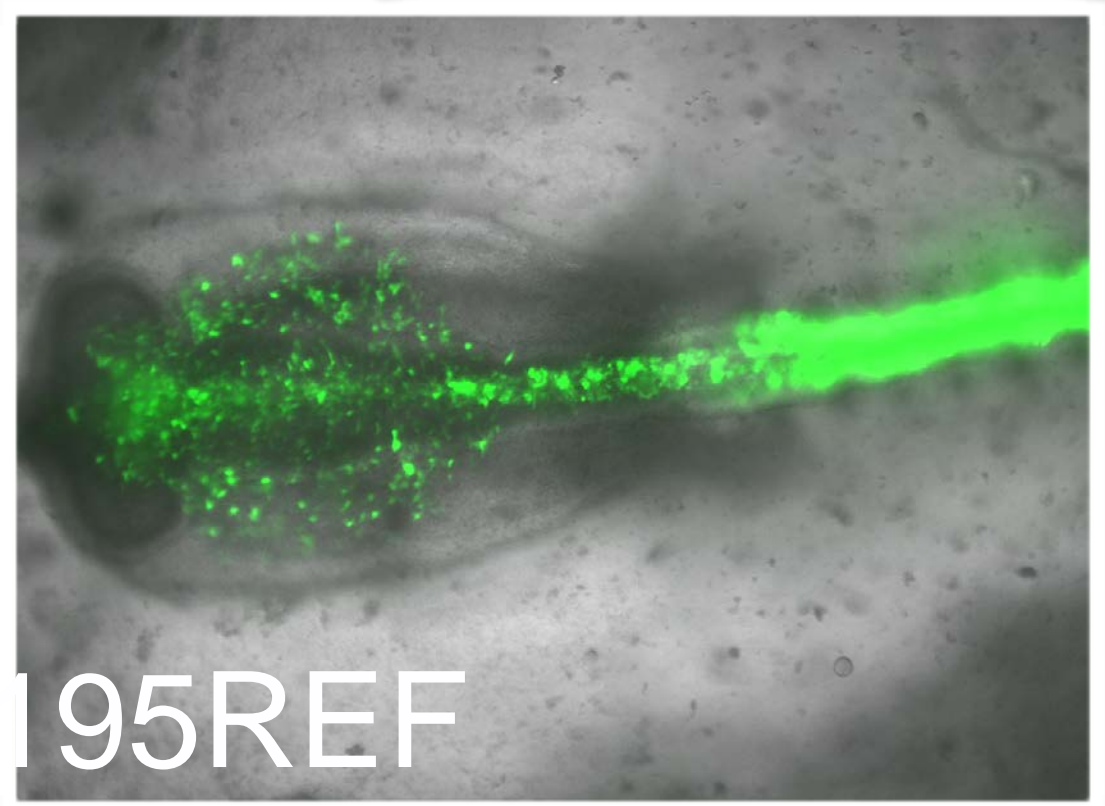
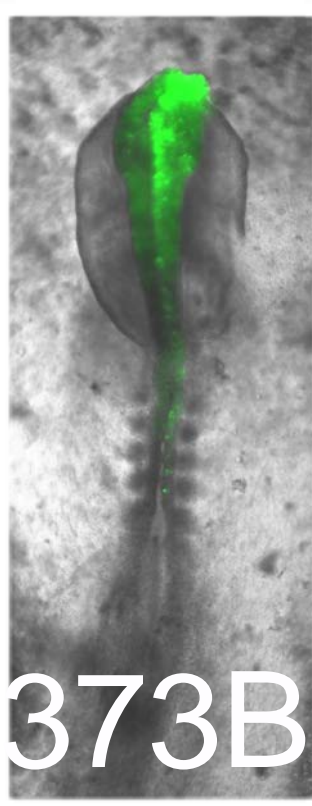
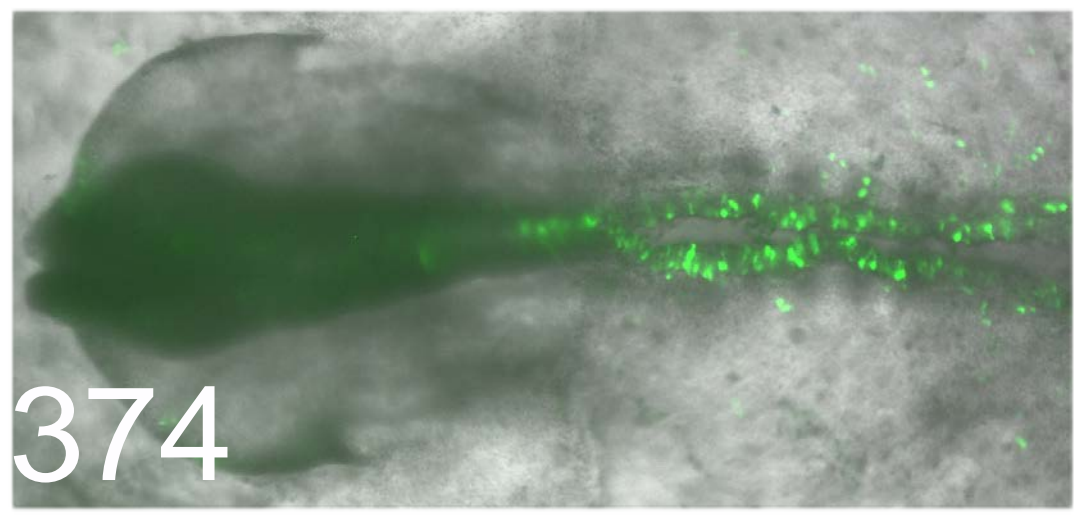
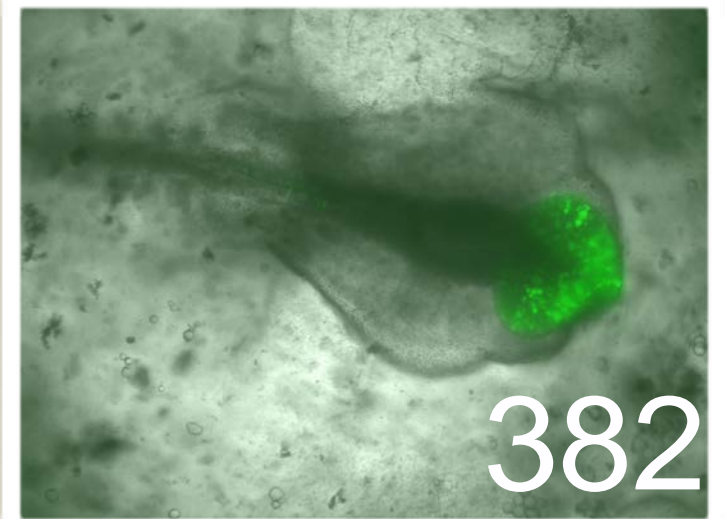
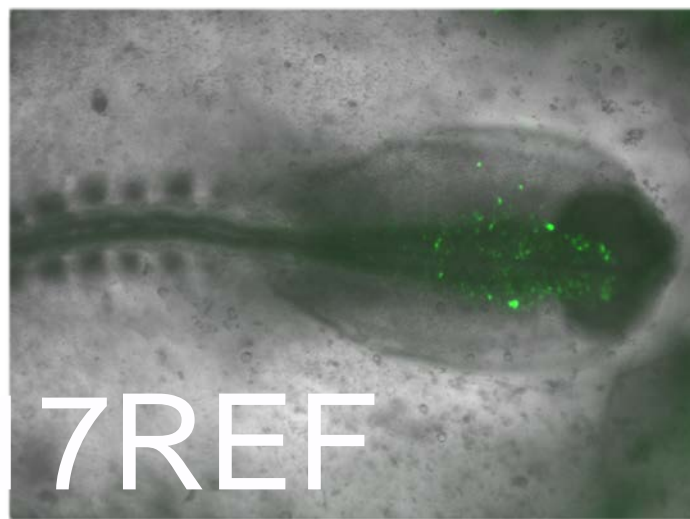
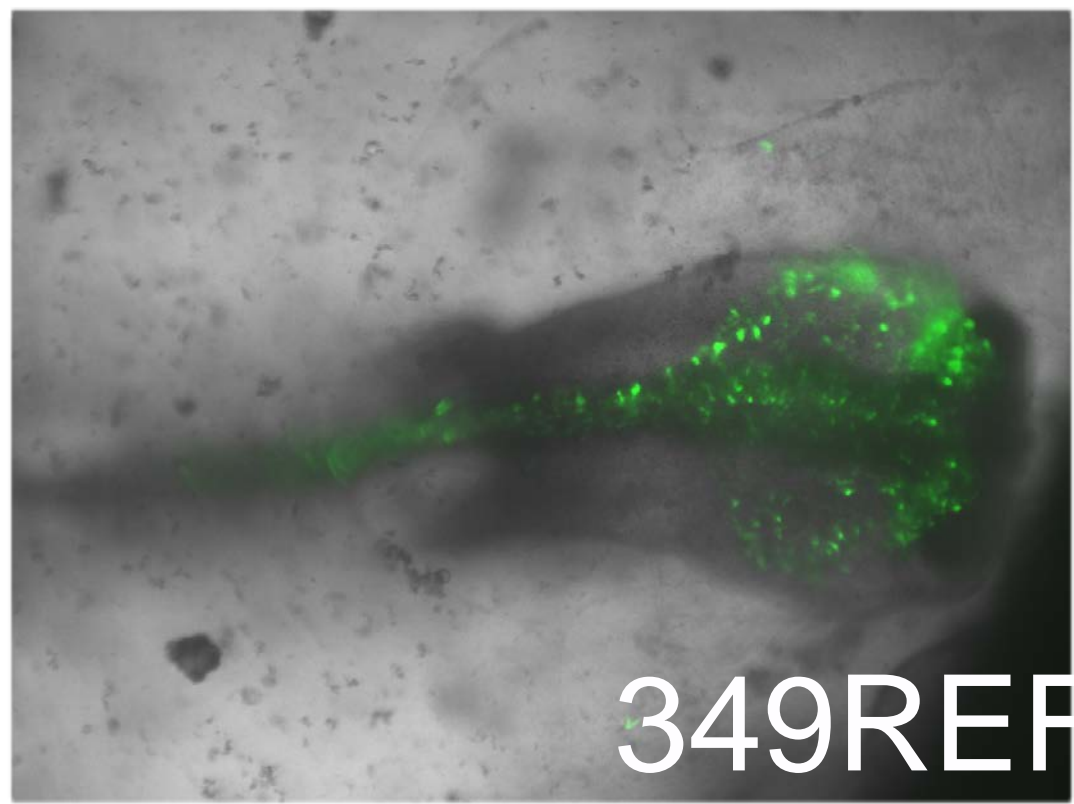
9
Electroporation



My lab bench feat. my lab notebook, pens, and lab coat!

- # HIGHLIGHTS
- The most rewarding aspect of my time at the WIMM was definitely seeing some of the experimental results of my work.
 - By the end of my 10 weeks, I had cloned 60 enhancers for chicken neural crest genes in total, and 12 of them were positive under the fluorescent microscope!
 - Getting to talk with the other researchers in my lab and hearing about their experiences in graduate school/medical school was also fun! (There was usually cake involved :)

A FEW POSITIVE ENHANCERS I CLONED THAT FLUORESCED



IMPACT

IN THE LAB

My work was part of an ongoing project, and it will hopefully be continued by my mentor, other members and future student researchers of TSS Lab.

In particular, the positive enhancers I cloned can be examined, trimmed down, analyzed, or even targeted in future experiments.

ON ME

The positive experience I had in TSS Lab made me realize that though I enjoy working in a lab, it might not be what I want to do as a career. As for now, I'm still trying to decide between medical school and graduate school, but this experience will definitely help me make a more educated decision.

REFLECTIONS



One of the (very old) colleges in Oxford.

- I'd like to think I grew to be a more independent and adventurous individual on this trip. I also gained a whole new set of skills in traveling to a new country alone, going to work like a proper adult (!), and of course, making new international friends :)
- I also got the opportunity to explore many beautiful places in the UK during much of my downtime: e.g. visiting Winston Churchill's birthplace in Blenheim Palace, seeing an original copy of the 1215 Magna Carta in Salisbury, and witnessing the world's largest arts festival in Edinburgh.
- All in all, thank you IIP (Princeton) and WIMM (Oxford), and in particular Tatjana, Ruth & the rest of TSS Lab for an amazing, memorable summer!

Lunch with the student researchers in my lab in Oxford.



Tower Bridge on a cloudy day in London.



The beautiful Roman Baths in Bath.



THANK YOU IIP &
OXFORD!

