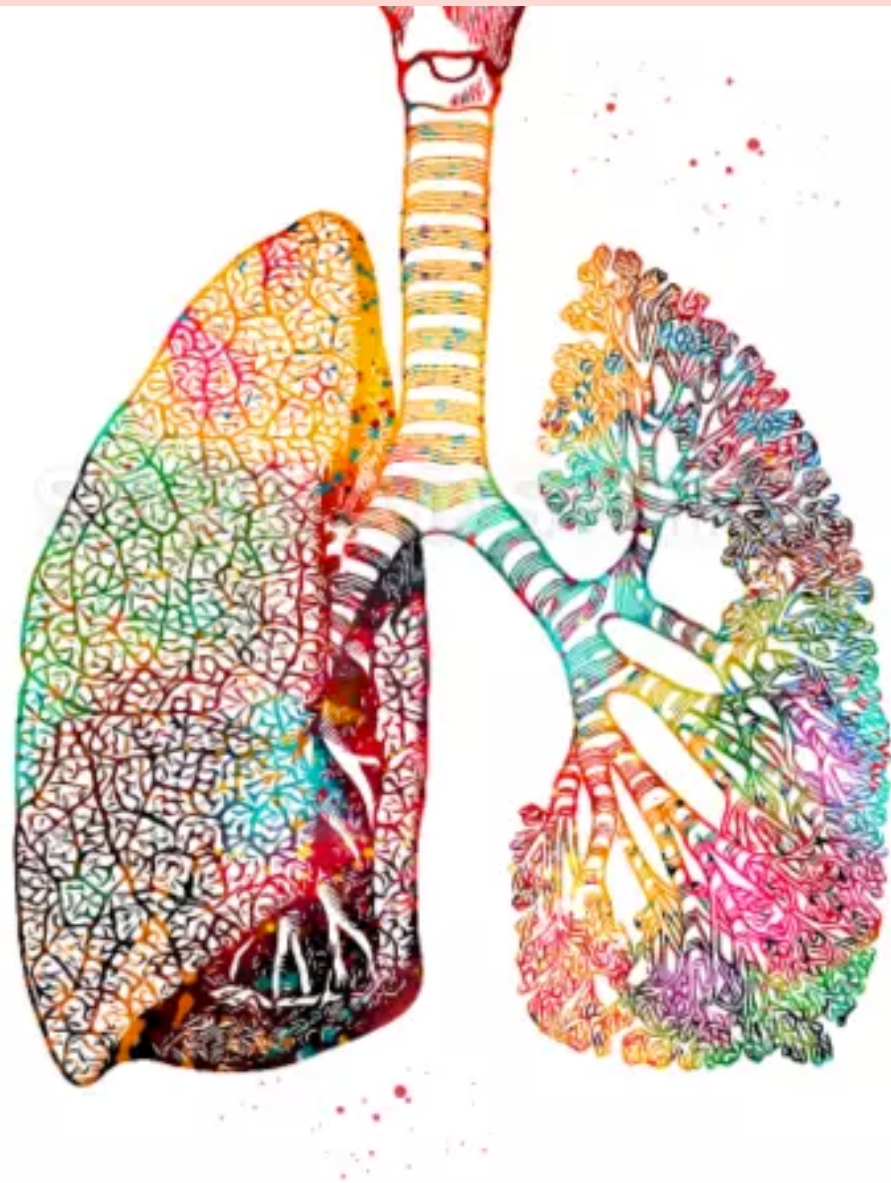


The Role of Genes in Proton Radiation-Induced Lung Injury

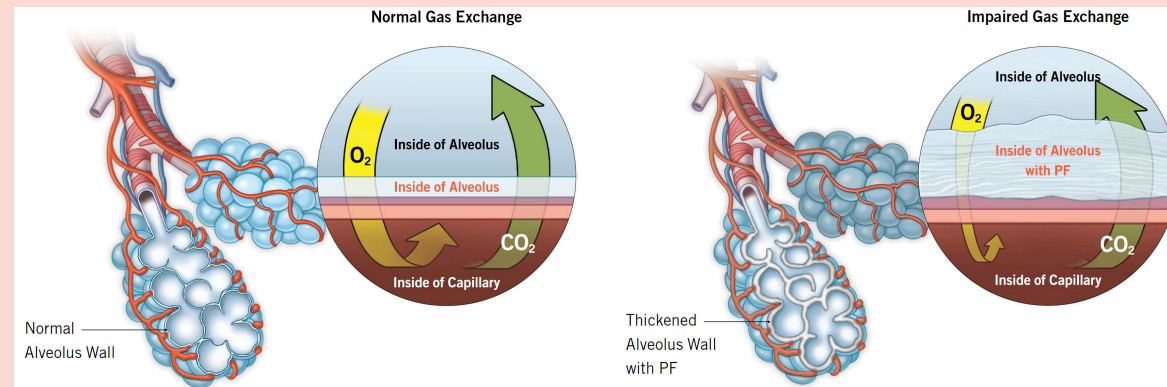
Lin Abigail Tan

Mentor: Dr. Samriddhi Shukla



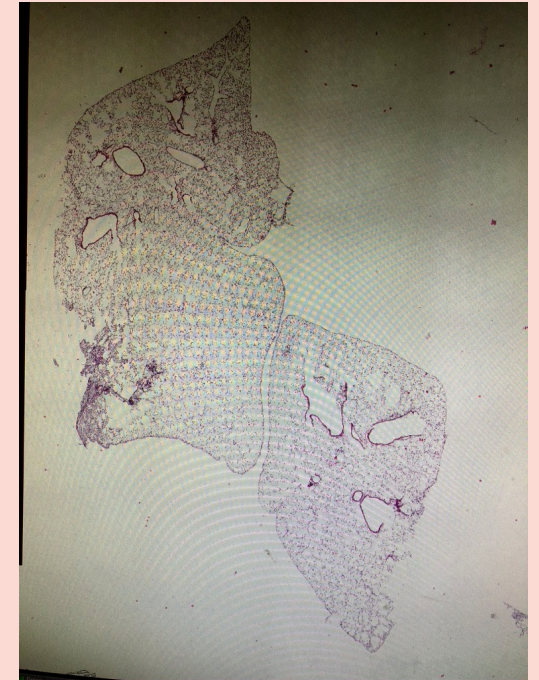
Background

- Lung cancer is the second most common cancer in American men and women
- One treatment is radiation therapy
 - Balance between killing cancer cells and damaging normal lung tissue
- Kalin Lab at Cincinnati Children's
 - Studying role of FOXM1 in proton radiation-induced pneumonitis and fibrosis



My Role in the Lab

- Learning a variety of laboratory techniques
 - Polymerase Chain Reaction (PCR)
 - Gel Electrophoresis
 - H&E Staining
 - Widefield Microscopy (some confocal, too!)
 - Cell Culture
 - Paraffin Sectioning
 - Animal Training



My first-ever widefield microscopy picture!



So What?



- Learning to work in a basic science laboratory
 - Workflow of research
 - Interactions between lab members
 - Learning to think like a scientist
- RaMP in conjunction with Biomedical Laboratory Techniques (BLT)



Now What?

- Continuing in the Kalin Lab, either through SURF this summer or a RaMP continuation in the fall
 - Project studying pulmonary capillary hemangiomatosis
 - Finishing up animal training
- Many, many thanks to Dr. Shukla, Dr. Kalin, Tien Le, and everyone else at the lab!



Pictures Cited

- <https://www.spreadshirt.com/shop/design/lungs+art+travel+mug-D5b9925ec1cbf3a600b7340f7?sellable=Y5EepZwZMJTxJGNkzdMG-773-39>
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