REGULATORY T CELLS (TREGS)

& ACTIVATION IN ACUTE LUNG INJURY

RESEARCHING TREG ACTIVATION ROLES IN ACUTE LUNG INJURIES

Tregs support recovery from acute lung injury (ALI) induced by LPS, S.pneumoniae, and influenza

Tregs support ALI recovery through controlling pro-inflammatory immune cells (which cause tissue damage), but also signal to the tissue itself to promote recovery

Following Treg depletion, mice experience greater signs of tissue damage and inflammation

Previous studies from the lab measured gene expression in resolving Tregs (7 days after LPS) vs control Tregs (no LPS)

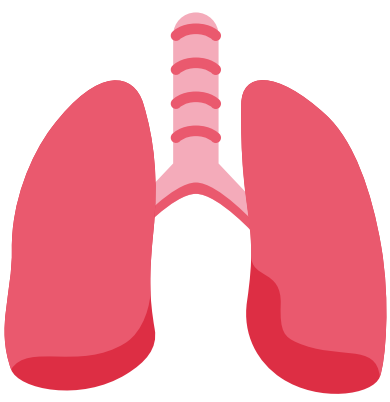
Sik1 identified as a lower-expressed gene in resolving Tregs

TREG CELLS

Tregs are white blood cells that regulate the immune system's response to substances inside and outside the body.

TESTING ON MICE

Sedate & inject the lungs of mice with LPS
Leave them for 7 days and measure each day



SIK-1 CELLS

Believe Sik-1 cells (Salt-inducible kinase 1) suppress the function of T-reg cells
Testing this hypothesis