

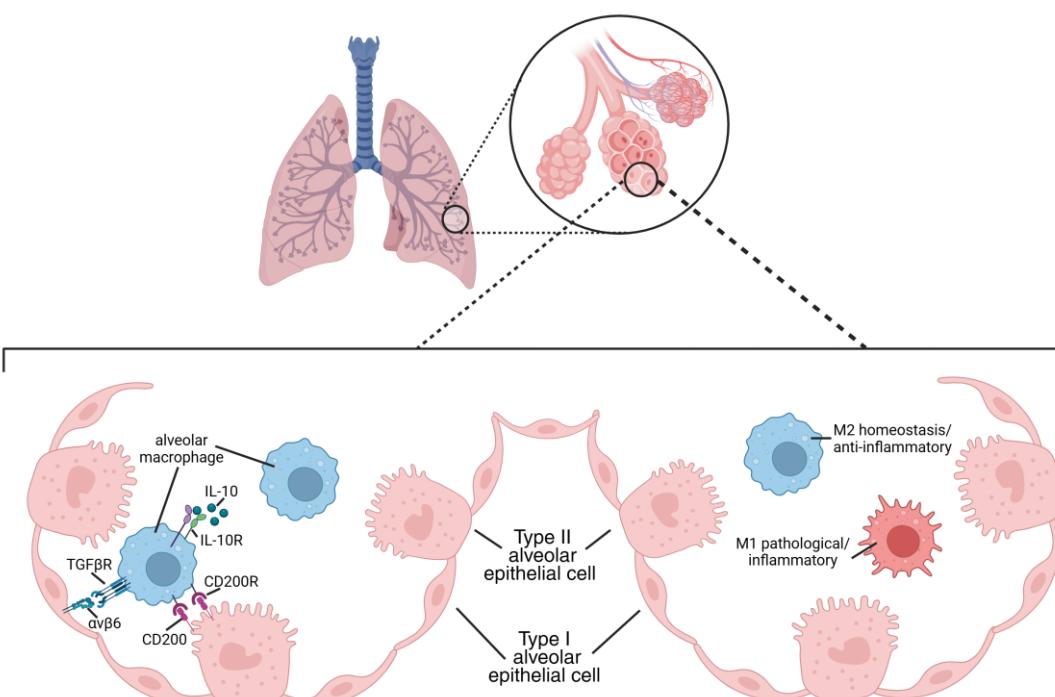
- Interactions Between Macrophages and Lung Epithelia -

Mechanical Properties of Cellular Contacts and Implications for Collective Dynamics

Research Question

What role do mechanical forces play in the communication between macrophages and lung epithelial cells and how do they affect cell adhesion, membrane fluctuations, and barrier function?

Cellular organization in alveoli

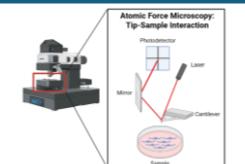


METHODS

AFM

Atomic Force Microscopy

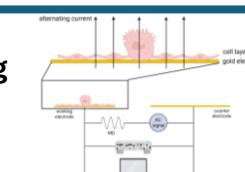
to measure mechanical forces between lung epithelia and macrophages



ECIS

Electric Cell-substrate Impedance Sensing

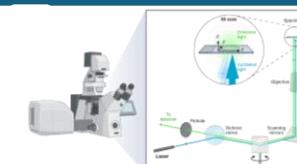
to measure transepithelial resistance and cellular micromotions



CLSM

Confocal Laser Scanning Microscopy

to depict characteristics of the cells using fluorescence imaging



MIET

Metal Induced Energy Transfer

to resolve structural changes in nanometer-precision measurements

