Interleukin-6-dependent epithelial fluidization initiates fibrotic lung remodeling

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Within the lung, distal airspace remodeling in bleomycin injury (model)
- Acute lung injury (ALI) and fibrosis
- Characterized by ability to collectively migrate and distal changes in cell shape
- Distal from wound healing or EMT
- Involves in tissue-level remodeling in development

What are the dynamic and signaling mechanisms regulating this remodeling?

![Image of epithelial cells (IF) lung (N=5) isolated from multiple regions per subject]

- Proximal airways (N=5)
- Distal airways (N=5)
- Honeycomb cysts (N=4)

All cells cultured identically, used at passage 2 at air liquid interface (ALI)
- Base cell surface + media
- Apical cell surface + air
- Robust replication in vivo phenomena by day 14 of ALI

**Summary of Additional Findings**
- Airway epithelia are fluidized in vivo mouse lung injury models
- Bleomycin, influenza (H1N1 PR8)
- Pharmacological inhibition of IL-6/SFK signaling axes prevents epithelia from becoming fluidized
- Mesenchymal cells from fibrotic lungs express higher level of IL-6/syk phosphorylation
- Healthy epithelia co-cultured with fibrotic mesenchymal cells become fluidized
- Can be rescued by blocking IL-6 signaling

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