



# CDB SEMINAR

## Jason Rock

Center for Regenerative Medicine, Boston University

Wednesday, April 25, 2018

16:00~17:00 Seminar Room A7F

## Recruited monocytes and type 2 immunity promote adult lung regeneration

### Summary

The laboratory of Jason Rock at the Boston University Center for Regenerative Medicine (CRoM), studies the endogenous capacity of the lung to repair itself following mild to moderate injury. Our underlying hypothesis is that many pathological features of lung disease occur when this capacity is impaired. We use in vivo animal models and in vitro assays to identify putative stem/progenitor cell populations in adult lungs and the microenvironmental cues that modulate their behaviors. We have shown that type 2 alveolar epithelial cells are a major source of new alveolar epithelium in a mouse model of lung growth following pneumonectomy. Furthermore, we demonstrated that recruited monocytes and alternatively activated macrophages are essential niche components that promote this compensatory response. We hope that further characterization of the molecular regulation of lung regeneration will identify new cell and molecular therapies to prevent or reverse debilitating pathology in patients with lung disease.

Cell Stem Cell. 2017 Jul 6;21(1):120-134.

Lechner AJ, Driver IH, Lee J, Conroy CM, Nagle A, Locksley RM, Rock JR.

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