

セミナーのお知らせ

開催日・時間変更になりました

The Life of breath: Epithelial stem cells of the adult lung

Brigid Hogan, Ph.D., FRS
Duke University, U.S.A.

Oct. 12th 2017 (Thu) 17 : 00 ~ 18 : 00
2F Seminar room, Biosystems Building
生命機能研究科 生命システム棟 2階セミナー室

Lung diseases, such as asthma, cystic fibrosis, chronic obstructive pulmonary disease (COPD), emphysema, and idiopathic pulmonary fibrosis, and damage caused by environmental factors and virus infections, affect the health of many millions of people worldwide. Consequently, considerable effort is being made to identify the different epithelial stem cells of the adult lung, the niches in which they reside, and the mechanisms by which they function to maintain the organ over the long term and to repair it after damage. Our lab has contributed by using a variety of approaches, including the in vitro 3D organoid culture of primary human and mouse lung stem/progenitor cells, and in vivo models of mouse lung injury and repair. Our studies have revealed a remarkable capacity of differentiated epithelial cells to reenter the cell cycle and/or change their fate in response to the need for repair. After a general review the talk will focus on the Type 2 epithelial stem cells of the distal alveolar region of the lung, their interactions with stromal cells, including Pdgfra+ lipofibroblasts, and the signaling pathways regulating their proliferation and differentiation.