

IGM Seminar

Date : Aug 21, 2015 16:00 Start
Place : 5th Floor IGM Seminar Room

Professor Alpha Yap

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Title: Active tension and tissue homeostasis in epithelial health and cancer.

Abstract:

The decision of whether, or not, to integrate cells within epithelia is a key event during morphogenesis which is aberrantly regulated in cancer. Cell-cell interactions mediated by cadherin adhesion receptors play central roles in this decision-making process. But we have come to realize that cadherin adhesion is not simply a matter of “passive” glue. Instead, cadherins interact with the contractile cytoskeleton to transmit mechanical force between cells. Indeed, cadherin adhesion can promote contractility itself. Active generation of contractility results in tension at junctions, which can propagate within tissues to control whether or not cells are integrated into epithelia or expelled from the epithelia. The impact of cadherins in this process reflects their influence on cell signaling and the cytoskeleton. In this talk I will discuss my lab’s ongoing efforts to understand how cadherins regulate junctional tension and its potential impact on morphogenesis, in health and disease.

Host : Yasuyuki FUJITA (Molecular Oncology) 5530