



CDB SEMINAR

Sa Kan Yoo

Miller Institute, UC-Berkeley, USA

Thursday, November 13, 2014

14:00~15:00 A7F Seminar Room

~~16:00~17:00~~

Wounds: to heal or not to heal, that is the question

Summary

The acquisition of multicellularity in eukaryotes has been accompanied by the appearance of epithelia; organisms in different kingdoms such as plants, social amoebae and metazoans generate epithelial structures. In these organisms, homeostasis is contingent upon maintaining epithelial integrity. When unanticipated insults breach epithelial barriers, dormant programs of tissue repair are immediately activated. However, these mechanisms that repair damaged epithelia are still poorly characterized. In order to discover mechanisms that regulate wound repair in epithelia, I have been combining genetics of the fruit fly, *Drosophila melanogaster*, with cell biology in zebrafish, *Danio rerio*. I will discuss my recent finding of an unexpected, ancestral role for Plexin A (PlexA), a protein normally associated with axonal pathfinding, in the healing of epithelia. During wound repair, PlexA functions to promote extrusion of cells in damaged tissues. In addition, I will also discuss systemic effects of tumors, which are often described as “unhealed wounds”, at the whole-organism level.

Host:

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