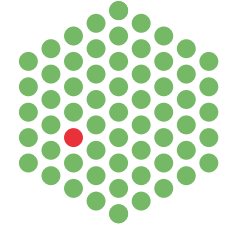


EMBL
Australia



Partner Laboratory Group Leader Applicant

Jochen Rink – 9:20am

University Of Utah, School of Medicine, Salt Lake City

Body building - Planarian Regeneration as Model System for Body Plan Morphogenesis

Planarian flatworms can regenerate complete and perfectly proportioned animals from arbitrarily shaped tissue fragments. Regeneration on such scale necessitates a uniquely regulative axial patterning system to orchestrate body plan reconstruction. We have started to investigate such network in the model species *Schmidtea mediterranea* by systematic loss of function screening of conserved axial patterning pathways. Our research identified a key regulatory circuit in planarian A/P- specification, whereby Hedgehog signaling controls the expression of Wnt-ligands, which in turn mediate the up- or down-regulation of b-Catenin activity necessary and sufficient for specifying tail or head regeneration, respectively. In conjunction with the unique experimental accessibility of the model system, these results provide an entry point into addressing the elusive interplay between patterning pathway activity and final tissue dimensions.

Wednesday
4 August
9:20am
Meeting Room G19
Ground Floor
STRIP (Building 75)
Monash University
Clayton