



CDB SEMINAR

Joaquín de Navascués

Department of Genetics, University of Cambridge

Thursday, February 7, 2013

16:00~17:00 A7F Seminar Room

Insights into intestinal homeostasis from *Drosophila*: stochastic fate allocation and stress-induced exit from quiescence

Summary

The homeostatic maintenance of intestinal epithelium is subject of interest due to its medical relevance and its value as a model for studying stem cell function. For decades, intestinal homeostasis has been thought to rely on stem cells that divide asymmetrically and to proceed by continuous self-renewal. I will present work showing that the adult *Drosophila* intestine, previously thought to behave asymmetrically, is maintained through symmetric divisions resolved stochastically, in parallel with recent findings in the mammalian gut. I will also discuss how this behaviour could be molecularly regulated. Finally, I will present evidence that the *Drosophila* intestine is not in continuous renewal, but rather in a state of quiescence that can be stimulated to division by stress.

Host:

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