



Institute colloquium

How big is big enough? Unravelling the developmental control of tissue growth in the fly abdomen

Nicolas Tapon & Guillaume Salbreux

Francis Crick Institute, University of Geneva

Host: Anna Kicheva

How do cells in a developing organism stop growing and dividing when the correct body size has been reached? During development, multicellular organisms undergo stereotypical patterns of tissue growth in space and time, but how this is orchestrated remains unclear. Understanding these fundamental biological processes has clear implications for cancer, where cells lose the ability to respond to tissue size boundaries, and for regenerative medicine, where the proliferative potential of quiescent cells must be unleashed in a controlled manner. We are a collaborative team of developmental biologists (Tapon) and theoretical physicists (Salbreux) who combine quantitative biology and theoretical approaches to study developmental growth control in the *Drosophila* abdominal epidermis. This tissue is highly suited to long-term live-imaging and therefore allows us to directly observe the kinetics of tissue growth in the living animal, as well as interfere with this process using genetics and laser ablations. We will present our latest findings on how cells coordinate their cell cycles during abdomen development and how we use perturbations to unravel the signals that promote the timely termination developmental growth.

Monday, February 5, 2024 11:30am - 12:30pm

Raiffeisen Lecture Hall



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.

Please find a schedule of the ISTA Shuttle on our webpage:

<https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.