

2 (experimental / theoretical) PhD student positions in Systems Biology

Topic: Single-cell metabolic changes during yeast cell cycle oscillations

Two PhD student positions at the Groningen Biomolecular Sciences and Biotechnology Institute, University of Groningen. The PhD students will work within the Marie Curie project ISOLATE - Developing single cell technologies for systems biology - with the research project "Single-cell metabolic changes during yeast cell cycle oscillations".

Description of work: The goal of this research project is to identify whether metabolic oscillations are the driver of the (yeast) cell cycle. Towards this goal, we aim at unraveling the metabolic changes in single yeast cells during the cell cycle. Therefore, we will use state-of-the art fluorescence time-lapse microscopy in combination with exciting single cell technologies developed by project partners (e.g. microfluidic devices, metabolite nano-sensors, technology for single molecule proteomics, etc.) (experimental PhD student). These data will be integrated in mathematical models developed by the theoretical PhD student.

Requested background (advantageous but not required): yeast biology, knowledge about metabolism, microscopy, image analysis, development of mathematical models, 'systems' thinking

The Marie Curie project ISOLATE is a collaborative research and training network between eight partners, incl. the University of Oxford and ETH Zurich, in different European countries. The PhD students and postdocs in the project will perform top-notch research and will additionally benefit from an excellent training network offered by the project partners. Research stays during the PhD projects in other partners' labs are strongly encouraged. Primarily recruitment of researchers from EC Member States and associated countries, but also open to researchers from third countries. Researchers are normally required to move from one country to another when taking up the appointment.

The PhD positions will be embedded in the Molecular Systems Biology group (<http://www.rug.nl/fmns-research/molecularsystemsbiology/index>) of the University of Groningen. Founded in 1614, the University of Groningen enjoys an international reputation as one of the oldest and leading research universities in Europe. Degree program are offered at Bachelor's, Master's and PhD levels in virtually every field, many of them completely taught in English. Located in the north of the Netherlands, Groningen is an ideal, safe student city with a flourishing student life (<http://www.rug.nl/prospectiveStudents/aboutGroningen/heart-groningen>).

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