SEVENTH FRAMEWORK PROGRAMME - THE PEOPLE PROGRAMME - Initial Training Networks (ITN)

ISOLATE - Developing single cell technologies for systems biology

Open positions PhD students

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 starting date will be around Jan 1, 2012.

PhD student at Gothenburg University, Sweden
Project Title: Experimental investigation of the yeast Hxk2/Snf1/Mig1 network
Research Objectives: To understand the dynamic control of the Hxk2/Snf1/Mig1 glucose signalling pathway employing single cell technology developed in this network
Requested Background: Yeast biology, yeast genetics, glucose signalling, use of microfluidic devices, microscopy, image analysis, application of nano-sensor technology, 'systems' thinking
Contact: Prof. Stefan Hohmann - stefan.hohmann@gu.se

PhD student at Gothenburg University, Sweden
Project Title: Theoretical investigation of the yeast Hxk2/Snf1/Mig1 network
Research Objectives: To understand the dynamic control of the Hxk2/Snf1/Mig1 glucose signalling pathway employing single cell technology developed in this network.
Requested Background: Yeast biology, yeast genetics, glucose signaling, microscopy, image analysis, development of mathematical models, 'systems' thinking
Contact: Prof. Stefan Hohmann - stefan.hohmann@gu.se

PhD student at Gothenburg University, Sweden
Project Title: Development of (microfluidic) system for improved single cell analysis.
Research Objectives: To generate an advanced experimental system with holographic optical tweezers based cell positioning and with improved imaging.
Requested Background: Development of microfluidic devices, control of microscopy hardware, high-end image analysis, yeast biology, usage of confocal microscope
Contact: Dr. Mattias Goksör - mattias.goksor@physics.gu.se

PhD student at Rijksuniversiteit Groningen , Netherlands
Project Title: Investigation of fast metabolic system behaviour.
Research Objectives: To understand fast complex metabolic behaviour in single yeast cells using the technology developed in this network.
Requested Background: Usage of microfluidic devices, microscopy, yeast biology, glucose metabolism, development of mathematical models
Contact: Prof. Matthias Heinemann - m.heinemann@rug.nl

PhD student at Rijksuniversiteit Groningen , Netherlands
Project Title: Investigation of slow metabolic system behaviour
Research Objectives: To understand complex metabolic behaviour in single yeast cells using the technology developed in this network.
Requested Background: Usage of microfluidic devices, yeast biology, glucose metabolism and signalling, application of nano-sensors, image analysis, development of mathematical models
Contact: Prof. Matthias Heinemann - m.heinemann@rug.nl

PhD student at ETH Zürich, Switzerland
Project Title: Development of an array-based microfluidic system
Research Objectives: To develop a microfluidic device, in which cells can be cultivated in an array-based format and from which single cells can be released in an addressable manner.
Requested Background: Microfabrication and clean room work, development of microfluidic system, microelectronics, basics of yeast biology and mass-spectrometry
Contact: Prof. Andreas Hierlemann - andreas.hierlemann@bsse.ethz.ch

PhD student at ETH Zürich, Switzerland
Project Title: Development of mass-spectrometry based single cell metabolomics.
Research Objectives: To develop a technology for simultaneous detection of numerous cellular metabolites from single cells using mass spectrometry (MS) with high-throughput capability
Requested Background: Mass-spectrometry, metabolomics, application of metabolite nano-sensors, usage of microfluidic devices, insight into material sciences
Contact: Prof. Renato Zenobi - zenobi@org.chem.ethz.ch

PhD student at University of Oxford, United Kingdom
Project Title: Development of novel imaging techniques
Research Objectives: To develop an ultrasensitive single molecule fluorescence microscope capable of millisecond time scale imaging of proteins in single cells, and designing advanced bespoke imaging analysis software catered for in vivo single-molecule single-cell microscopy.
Requested Background: Microscopy, imaging hard- and software, yeast biology, modeling, application of nano-sensors
Contact: Dr. Mark Leake - m.leake1@physics.ox.ac.uk

PhD student at Syddansk Universitet, Denmark
Project Title: Development of aptamer-based nano-sensors for single cell metabolite analysis
Research Objectives: To develop aptamer-based nano-sensors to visualize metabolites and dynamically on the single cell level
Requested Background: Biochemistry, development of aptamer-based nano-sensors, imaging, basics of mass spectrometry and microfluidic devices
Contact: Dr. Lars Folke Olsen - lfo@bmb.sdu.dk