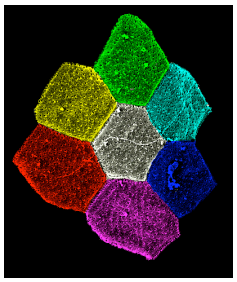
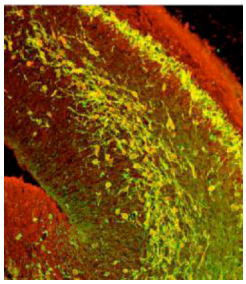


POST-DOCTORAL POSITIONS AVAILABLE

Marie Curie Programme *"CELLIMAGE"*
Advanced Cell Imaging Approaches in Developmental Biology

Institute of Molecular Biology and Biotechnology (IMBB)
Foundation for Research and Technology Hellas (FORTH)
711 10 Heraklio Crete, Greece



Four post-doctoral positions are available, funded by the Marie Curie Transfer of Knowledge Programme "CELLIMAGE". The aim of the programme is to develop competence and new tools in advanced cell imaging approaches that will be used to address questions in the following areas:

(a) **Axis elongation and segmentation**. Segments are generated sequentially from posterior populations of cells with stem cell properties in arthropods, annelids and vertebrates. Previous studies have described collective properties of these cell populations, but the behaviour of individual cells in this zone (their "identity", stem-cell properties, cell fate decisions and lineage restrictions) has not been determined. We will use transgenesis and live embryo imaging to trace the behaviour of individual cells in the growth zone of the short-germ beetle *Tribolium castaneum*.

Project leader: *Michalis Averof (averof@imbb.forth.gr)* *Deadline: TBA (mid 2008)*
Additional info: *http://www.imbb.forth.gr/people/averof/*

(b) **Neurogenesis**. Notch is deployed repeatedly during neurogenesis, first to inhibit neural stem cell commitment and then to define the fates of the progeny of neural precursors. As these events take place in rapid succession, it is important that Notch signalling be dynamically modulated in space and time, raising the issue of how this modulation is achieved. To study Notch signalling in real time we will generate a fluorescent reporter of Notch activity. Live monitoring of Notch signalling will allow us to detect subtle changes during the various phases of neurogenesis and to assess the role of crucial regulators involved in ligand/receptor modification.

Project leader: *Christos Delidakis (delidaki@imbb.forth.gr)* *Deadline: 31 March 2007*
Additional info: *http://www.imbb.forth.gr/people/delidakis/*

(c) **Neuronal migration**. After neurogenesis is complete, neurons acquire their particular identity and need to migrate into appropriate positions in order to make precise connections. We have been analyzing cues involved in the migration of cortical interneurons and of precerebellar neurons. We are interested in pursuing the exact mechanism of these migrations by visualizing the migrating cells in cortical slices or hindbrain explants *ex vivo* in normal and tissue deficient in some of these cues. In parallel, we will investigate the role of the TAG-1 orthologue in *C. elegans*, whose function in migration we have been studying in mammals.

Project leader: *Domna Karagogeos (karagoge@imbb.forth.gr)* *Deadline: 1 January 2007*
Additional info: *http://www.imbb.forth.gr/people/karagogeos/*

(d) **Learning and Memory**. The nervous system receives and processes information about the environment to produce relatively permanent changes in future behaviour, which are manifestations of learning and memory. The nematode *Caenorhabditis elegans* with its minimal, fully charted, nervous system offers unique advantages for the detailed study of the relevant mechanisms. To approach these mechanisms we will seek and analyze mutants with altered capacity for associative learning, we will investigate synaptic plasticity and will study anatomical or molecular changes that follow training experience in *C. elegans*.

Project leader: *Nektarios Tavernarakis (tavernarakis@imbb.forth.gr)* *Deadline: TBA (end 2007)*
Additional info: *http://www.imbb.forth.gr/worms/*

Applicants should have a PhD or at least 4 years of graduate research experience. Experience in developmental or cell biology, live imaging techniques and/or image processing will be an advantage. Training in a range of molecular developmental approaches will be provided in the host labs. Candidates may have to undertake short periods of training in foreign centres of excellence (e.g. EMBL Advanced Light Microscopy Facility).

Each position is available for a period of 24 months. The salary will be approximately 25,000 Euro per year (net), plus contributions for social security and income tax. Researchers will also be eligible for an annual travel allowance and a one-off career exploration allowance of 2,000 Euro.

Marie Curie eligibility criteria:
- Candidates must have at least 4 and no more than 10 years (full time equivalent) of research experience after graduation.
- At the start of their fellowship, researchers may not have resided or carried out their main activity (work, studies, etc) in Greece for more than 12 months in the 3 years immediately prior to the appointment.
- Greek nationals may apply only if they can provide evidence that they have resided and carried out their main activity (work, studies, etc) in a third (non-EU) country for at least 4 of the last 5 years immediately prior to the deadline.

Applicants should send their CV and publication list to the relevant project leader (see above), preferably by email, prior to the specified deadline. They should also ask two referees to send letters of recommendation to the same electronic address.