

TWO MARIE-CURIE PHD POSITIONS IN COMPUTATIONAL SYSTEMS BIOLOGY AT IIM-CSIC, VIGO (SPAIN)

Two MARIE-CURIE Early Stage Researcher (ESR9 and ESR10) positions at IIM-CSIC, Vigo (Spain) in the field of *Computational Systems Biology*

Fellow **ESR9** will focus on mathematical model selection and optimal experimental design in systems biology. The main objective will be to use optimal experimental design methods to devise the necessary dynamic experiments for *E. coli* homeostasis modelling. Candidates should have a strong background in mathematical modelling, statistics and nonlinear analysis.

Fellow **ESR10** will focus on advanced model identification and parameter estimation in systems biology. The main objective will be to devise new model calibration methods and to apply them to compute the parameters of *E. coli* homeostasis dynamic models from experimental (input-output) data. Candidates should have a strong background in mathematical modelling, statistics and, ideally, software development and high performance scientific computing.

CONDITIONS

Early Stage Researcher means less than 4 years of experience, e.g. PhD student.

These ESRs will be hired for **36 months** each and will be expected to pursue a **PhD**. Candidates must be in possession of a relevant Masters degree (or very close to obtaining it) at the time of appointment. The position requires a good knowledge of **English** language (Spanish is not mandatory) and the interest to work in the interdisciplinary field of systems biology.

Salary will be excellent, according to EU regulations (Marie Curie ITN Early Stage Researcher). The network will provide an excellent opportunity for scientific and personal development, with regular training events and meetings across Europe.

REQUIREMENTS

Geographic **mobility and eligibility requirements** for Early Stage Researchers apply. The candidates:

- 1.- should not have a PhD
- 2.- should have less than 4 years of research experience
- 2.- must not have resided or carried out their main activity in the country of the host institution (Spain) for more than 12 months in the 3 years immediately prior to their recruitment

HOW TO APPLY

Applicants should submit by email to julio@iim.csic.es a: (i) detailed cover letter outlining their research agenda, (ii) curriculum vitae, (iii) scanned copies of degree certificates, and (iv) the names and email addresses of two confidential references. Deadline: apply as soon as possible, and not later than 1 March 2012.

Primary supervisor: Julio R. Banga, IIM-CSIC, Vigo (Spain)

For further information on the position, contact Julio R. Banga (julio@iim.csic.es).

For the scientific background of the group, please visit http://www.iim.csic.es/~julio/SB_research

FURTHER INFORMATION

LOCATION

These positions will be hosted by the **BioProcess Engineering Group at IIM-CSIC, Vigo** (Spain)

More info:

- about the group at <http://www.iim.csic.es/~gingproc/>
- about Vigo and surroundings: <http://www.vigo.org/ingindexorg.php?lang=ing>

CSIC is the Spanish National Research Council, which is the largest public institution dedicated to research in Spain and the third largest in Europe (<http://www.csic.es>)

MARIE CURIE ITN

These positions are part of an **FP7 MARIE-CURIE ITN TRAINING NETWORK**

PROJECT TITLE: **NETWORK FOR INTEGRATED CELLULAR HOMEOSTASIS ("NICHE")**

This network is composed of nine groups from the Netherlands, United Kingdom, Germany and Spain. The project team is multidisciplinary, incorporating microbial physiology, chemistry, molecular biology and protein biophysics, advanced spectroscopy and microscopy, deep-sequencing technologies and *ab initio* modeling. The aim of the program is to advance our understanding of the homeostatic mechanisms of bacteria *via* predictive modeling and state-of-the-art experimental approaches. The focus of NICHE is on ion homeostasis in *Escherichia coli*, which includes cell physiology, membrane biology and ultrastructural analyses of the cells under ionic and osmotic stress conditions.