Postdoctoral position in Systems Biology of cell fate decisions (SysFate)

Postdoctoral scholar positions are available in the newly launched ***SysFate*** **team**, driven by Dr. Marco A. Mendoza. SysFate is part of the ISSB laboratory (formerly the Institute of Systems and Synthetic Biology) in the unit "metabolic genomics" UMR-8030, which is part of the Genoscope, the French National Sequencing Centre.

Project background

Temporally and spatially organized cell fate transitions are at the basis of the genesis of multicellular organisms, and alterations from this body plan can generate pathologies. One such process is ***neurogenesis, a highly complex process implicating a variety of regulatory signals, which in a multicellular organization context*** (about 100 billion neurons interconnected by several trillion of interconnections) ***gives rise to one of the most complex organs retrieved in higher organisms: the brain***. Importantly, while major processes underlying mammalian brain development were previously characterized in rodent model systems, their conservation in humans as well as the characterization of further specific processes, explaining human brain complexity, remains still elusive. This last aspect becomes even more relevant for the development of therapeutic solutions dedicated to mental-related illnesses, like Alzheimer's disease (AD). The recent advances in induced-pluripotent stem (iPS) cell technology and in 3-dimensional human cerebral organoid culture- able to reconstitute brain structures in vitro - provide promising new avenues for studying neurodegenerative diseases.

In this context, ***our laboratory aims at combining brain organoid 3D-culture strategies with the acquisition of modern functional genomic readouts for extracting molecular characteristics defining basic principles that govern human brain development, but also scrutinize their deregulation under aberrant settings associated for instance to neurodegenerative diseases like AD.***

Candidate profile:

The successful candidate must hold a Ph.D. degree in Molecular biology, Neurobiology or related. Experience in molecular biology, cell culture, and/or neurobiology is required. Specifically, experience in culturing mouse/human embryonic stem cells (ESCs) / induced pluripotent stem cells (iPSCs) and/or next-generation sequencing and related functional genomics strategies (transcriptomics, ChIP-sequencing, etc) is a strong asset.

Interested applicants should directly contact Marco Antonio Mendoza (marco@igbmc.fr) and provide a CV and any other necessary documents for review (list of relevant publications, letters of support).

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Fellowship conditions:

The postdoctoral fellowship is open to ***candidates educated in France*** [1]**, currently performing a postdoctoral training abroad** and who whish to return to France.

Interested applicants should directly contact Marco Antonio Mendoza (marco@igbmc.fr) and provide a CV and any other necessary documents for review (list of relevant publications, letters of support).

Selection process:

Once the candidate is identified (by the team leader) the overall proposal including the project and the candidate file will be submitted to a competitive call (Genopole Postdoctoral research fellowships: deadline 30 June 2018, selection committee planned in October 2018). Start date of the post-doc anticipated in the 1st semester 2019.

[1] having obtained their PhD in France or having at least 3 years in higher education in France.

Bioinformatics position in Systems Biology of cell fate decisions (SysFate)

The newly launched ***SysFate*** **team**, driven by Dr. Marco A. Mendoza has an open position in bioinformatics in the field of functional genomics / systems biology. SysFate is part of the ISSB laboratory (formerly the Institute of Systems and Synthetic Biology) in the unit "metabolic genomics" UMR-8030, which is part of the Genoscope, the French National Sequencing Centre.

Job Description:
The position awardee will be responsible for developing computational solutions focused on the analysis of functional genomic readouts, single-cell transcriptomics; gene regulatory networks reconstruction and related (please visit our website http://ngs-qc.org/qcgenomics).

Qualifications:
The successful candidate will have a recent Ph.D./ MS in bioinformatics, computer science, or related. Essential qualifications include excellent programming skills in languages as Java, Python, Perl and/or R. Experience in next-generation sequencing and related functional genomic data analysis (transcriptomics, ChIP-sequencing, etc) is a strong asset.

Interested applicants should directly contact Marco Antonio Mendoza (marco@igbmc.fr) and provide a CV and any other necessary documents for review (list of relevant publications, letters of support).