Post Description: Bioinformatician, PhD candidate, Postdoc positions.

Bioinformatician, PhD candidates and postdoctoral positions are available in the group of Dr. **Toni Gabaldón** in the Bioinformatics and Genomics Department of the Centre for Genomic Regulation (CRG, http://gabaldonlab.crg.es).

About the group
The major focus of the research in the group is the analysis of the evolution of protein-coding and non-coding genes at genome-wide cales. For this we combine state-of the art computational and sequencing techniques. One of the main research questions of our group is to understand the complex relationships between genome sequences and phenotypes and how these two features evolve within and across species. We generally use large-scale phylogenetics approaches that allow looking at the evolution of genomes from the perspective of all of their genes, and we apply these analyses to a variety of biological questions related the evolution and function of organelles, pathways, and gene families. We have a special interest in understanding processes related to human pathogenesis (emergence of infectious disease, and organelle-related genetic diseases). Through collaborations with experimental groups we apply comparative genomics to discover new mechanisms and genes involved in relevant processes and phenotypes. Given that we work in an emerging field and we are exposed to new types and scales of data, we often have the need to develop novel bioinformatics tools to fill in existing gaps. More information about the group can be found here: http://gabaldonlab.crg.es

Bioinformatician, Research assistant
The individual in this position will be responsible for computational biology and bioinformatics support of several genome-scale projects using next generation sequencing technology, help in development and maintenance of group databases and tools. Primary responsabilities will include the bioinformatics analysis of high-throughput sequencing data (assembly, mapping, etc), and assistance in the development and maintenance of databases and tools developed within the group.   Strong background in bioinformatics and experience in the management of Biological Databases (MySQL etc), high-throughput data analysis, programming languages (Python, R, etc), and biostatistical methods will be valued. The candidate must be motivated to work in an academic environment and will have a transversal role within the group, being involved in several of our current research projects. He/She will be given the opportunity to contribute to research at all levels.

Early Stage Researcher (PhD candidate or Research Assistant)
The individual in this position will join a project aiming to understand the genomic changes underlying the emergence of virulence in fungi. She/he will be part of a Marie-Curie funded International Training Network (ImResFun), a network of leading groups that study fungal infectious disease related to the most common fungal pathogens, the opportunistic *Candida* species. The ideal candidate should have a background in biology or computer science and, preferably, a Master degree in a bioinformatics related discipline. He/She should have a strong interest in bioinformatics and

comparative genomics and be highly motivated to work in this specific project. Programming skills in python or similar languages as well as previous research experience in comparative genomics will be valued.

Postdoctoral candidate

The individual in this position will join an ERC-funded project (NONCODEVOL) aiming to understand the evolution of non-coding RNA families in eukaryotes. The work will involve the use of structural and sequence information obtained in our lab from various species to understand what evolutionary forces have shaped them. The project involves using DNA and RNA sequencing data to understand how functional non-coding RNAs have evolved through evolution. The ideal candidate must hold a recent PhD in bioinformatics, phylogenomics or a related field, a strong interest in comparative genomics and be highly motivated to work in this specific project. Programming skills in python or similar languages is desired. Experience in either RNA structural bioinformatics, phylogenetics or evolution of non-coding sequences will be valued.

Conditions

Salary will be conmensurate with experience. All positions are for 3 years with the possibility of extending. Start dates range from autum 2013 to early 2014. The persons will be fully integrated in an international and inter-disciplinary team, enjoy the vibrant scientific environment at CRG and Barcelona, and will have access to high-level training.

How to apply

Interested individuals should send a cover letter stating the specific motivation to join my lab and the project, CV, and the names of 2 references to Toni Gabaldón at tgabaldon@crg.es with the subject [APPLICATION]. Applicants intending to apply for external grants in my lab are also welcomed if fitting within one of the group directions.