JOB OPENING AT IRB BARCELONA

POSTDOCTORAL RESEARCHER (ref. PD/20/02)

IRB Barcelona is a world-class research centre devoted to understanding fundamental questions about human health and disease. It was founded in October 2005 by the Government of Catalonia (Generalitat de Catalunya) and the University of Barcelona (UB), and is located at the Barcelona Science Park (Parc Científic de Barcelona).

The Institute’s missions include conducting multidisciplinary research of excellence at the unique interface between biology, chemistry and medicine, providing high-level training in the biomedical sciences to staff, students and visitors, driving innovation through active technology transfer to the benefit of society, and actively participating in an open dialogue with the public through a series of engagement and education activities.

IRB Barcelona seeks a motivated Postdoctoral Researcher for the Molecular Modeling and Bioinformatic Group of the Institute for Research in Biomedicine (IRB Barcelona). The employment contract will be co-financed by the project “Multiresolution Simulation of Nucleic Acids” (MSCOM) with administrative reference RTI2018-096704-B-I00, of the call for grants for R+D+i Projects <<Research Challenges>> 2018 of Spanish Ministry of Science, Innovation and Universities and co-financing by the European Union, European Regional Development Fund (ERDF, EU).

DUTIES

We are looking for a candidate to work on theoretical computational studies of Nucleic Acid structure models, involving programing new algorithms and scientific workflows, use all kinds of classical and quantum mechanics methods (MD, QM, QM/MM), and apply bio-statistics with trajectory data.

EXPERIENCE, KNOWLEDGE, SKILLS & SELECTION CRITERIA

Must Have - Required

- PhD in Chemistry, Physics, BioChemistry, BioTechnology or similar.
- Experience in computational Molecular Dynamics (MD) technique: simulations and analysis (Amber, GROMACS) and visualization (VMD, PyMol).
- Experience in computational Quantum Mechanics (QM) technique: simulations and analysis (Gaussian, GAMESS).
- Experience in High Performance Computing infrastructures: workload managers (Slurm), remote connections (ssh), file transfer (scp, rsync).
- Experience in shell and scripting languages (Bash, CSH, Perl, Python).
- Fluent English and good teamwork skills.
- Excellent Linux OS skills.

Desirable

- Knowledge on computational force fields, especially nucleic acids-specific (parmBSC0, parmBSC1).
- Skills on free energy calculations and biased MD techniques (umbrella sampling, metadynamics).
- Skills on biomolecular workflow development and High Throughput (HT) techniques.
- Good programing skills (C, C++, Fortran).
- Participation on international conferences.
WORKING CONDITIONS & ENTITLEMENTS

- **Working conditions**: Employed in compliance with Spanish legislation and regulations under a full-time contract. Employees receive the benefits of the Spanish Social Security system covering sickness, maternity/paternity leaves and injuries at work. Salary commensurate with experience and qualifications.

- **International Environment**: The opportunity to join a prestigious international research institution and become a member of an established research group Molecular Modeling and Bioinformatic Unit

- The unique opportunity to work closely with a **High Performance Computing (HPC)** centre as the Barcelona Supercomputing Centre (BSC), with one of the most powerful supercomputers in Europe (Marenostrum IV), and recently selected by the EuroHPC to host one of the largest European supercomputers (Marenostrum V).

- The unique opportunity to work in a **multidisciplinary group** which is currently involved in several National and European projects related to computational biology.

- **Continuous training** in a high-quality environment.

HOW TO APPLY & SELECTION PROCESS

Applications for the above opening should include **CV and motivation letter** and should be sent by e-mail to: irbjobs@irbbarcelona.org  Reference: **PD/20/02**

- **Deadline for applications**: **22/02/2020**
  When the applicants do not fit the requirements, the deadline will be able to be extended.

- **Number of positions available**: **1**

- **Selection process**
  - **Pre-selection**: Will be based on CV, motivation letter, experience, management of research and innovation.
  - **Interviews**: Short-listed candidates will be interviewed.
  - **Offered Position**: Job Offer will be sent to the successful candidate after the interview.

For more information please visit our website at: [www.irbbarcelona.org](http://www.irbbarcelona.org)

Note: The strengths and weaknesses of the applications will be provided upon request.

If you, as an applicant, have any suggestion or wish to make a complaint regarding the selection process, please contact us at the following email address: irbrecruitment.suggestions@irbbarcelona.org You will receive a response within a month.