**A PhD student project in Structural Bioinformatics and Molecular Modeling team, University of Montpellier, FRANCE**

We are seeking a highly motivated student who will be funded by the CSC program to work on a PhD thesis related to the development and application of bioinformatics tools for annotation of proteomes. The project starts in autumn 2022.

PROJECT: Our team uses bioinformatics and computational biology methods to understand the principles of protein structure and biomolecular interactions. Bioinformatics plays an increasingly important role in biological research. The dramatic growth of genomic data presents new challenges for scientists. The mass of genome sequencing data significantly exceeds the development of our data analysis capacity. Making sense of millions of protein sequences requires information about their 3D structure as well as their evolutionary and functional relationships. In line with this tendency, we focus on developing bioinformatics tools for the large-scale, structural and functional annotation of proteomes (for more information see (<http://www.crbm.cnrs.fr/en/team/structural-biocomputing-and-molecular-modelling/> and <https://bioinfo.crbm.cnrs.fr/index.php?route=home>).

The main objectives of this PhD thesis will be: (i) to use our software and processing pipelines for systematic and high-quality structural annotation of representative proteomes, (ii) to continue improving our computational methods by using new algorithms (e.g. artificial intelligence approaches) and exponential increase of structural data, clinical data on disease-related mutations. (iii) to intensify efforts on the development of computational tools for personalized (precision) medicine.

LOCATION AND SCIENTIFIC ENVIRONMENT: The PhD student will benefit from an exceptional environment thanks to the presence of numerous leading international researchers from different scientific areas. Our team is integrated into internationally known Centre de Recherches en Biologie cellulaire de Montpellier (<http://www.crbm.cnrs.fr/en/>) and University of Montpellier. We are also a part of several European networks on structural bioinformatics. Montpellier is a high-tech centre with numerous specialisations such as agriculture, biology, health, and information technology. It is exceptionally well located in the South of France, 20 min from the Mediterranean sea and near Cévennes mountains.More info about live at Montpellier: <http://www.agropolis.org/english/guide/index.html>

CANDIDATE’S PROFILE: We are seeking a highly motivated student with knowledge of biology, statistics and solid programming skills (C++, Java, Python) and experience of work with databases (Mysql). Expertise on development of web-page interfaces would be a plus. The candidate should have a high level of English, good communication abilities, and a taste for multidisciplinary research.

CONTACTS:

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<http://www.crbm.cnrs.fr/team/bioinformatique-structurale-modelisation-moleculaire/>

<http://bioinfo.montp.cnrs.fr/>

<http://www.ibc-montpellier.fr>