Title of the Position: Postdoctoral scholar

Institution: University of Sao Paulo, Sao Paulo, Brazil

Academic Department: School of Pharmaceutical Sciences - University of São Paulo

Disciplinary Specialties of Research
- Computational Structural Biology
- Molecular Modeling

Description of the Position
The Hirata lab (https://www.lbmadusp.com.br/) at School of Pharmaceutical Sciences is looking for a postdoctoral scholar interested in pursuing a career at the interface between computational and experimental sciences. This scholar will lead a project on computational structural modeling and molecular design for new drugs to treatment of heart diseases.

The PCSK9 gene encodes proteins that participate in the cholesterol endocytosis process, controlling LDL receptor recycling, and accounts for up to 2% of HF cases due to a gain-of-function variant, which causes greater destruction of the LDL receptor and consequently increase in plasma LDL. This protein plays a fundamental role in cholesterol metabolism, so large-scale molecular modeling studies can evaluate compounds that can block the activity of these proteins and could bring innovative perspectives for new treatments.

The scholar will master and apply *in silico* approaches such as homology modeling, protein docking, virtual ligand screening, cheminformatics and molecular dynamics. This work involves a tight collaboration with experimentalists working in the field of PCSK9 structural biology. In addition to performing computational experiments, the postdoctoral scholar is expected to make regular presentations at internal and extended group meetings, and to write papers under the guidance of the mentor. They will work with the mentor to secure fellowships, and eventually apply for career awards on the way to gaining scientific independence.

Required Qualifications
- PhD in Biological Sciences or related, and an interest in learning and applying computational approaches to biomedical problems. Alternatively, PhD in Computer/Data Science or a related field, and an interest in kinetic assays and pharmacology.
- Commitment to quality, rigor, transparency, and reproducibility in scientific research.
- Basic familiarity with the process of computer scripting and a scripting language such as Shell and Python.
- First author publications from prior training period.

- Commitment to equity, diversity, and inclusion.
- Good writing and presentation skills.
- Ability to effectively communicate in person, over videoconferencing platforms, and over email.

Preferred Qualification
- Familiarity with a command line computer interface
- Familiarity with a molecular modeling package (e.g. Schrodinger, MOE, Sybyl X, etc.)
- Familiarity with molecular dynamics software (e.g. GROMACS, Desmond, etc.)
- Knowledge of an image processing software such as Inkscape
- Familiarity with pharmacological concentration response curves and the non-linear regression software such as GraphPad Prism
- Familiarity with basic lab techniques and instrumentation
- Experience with pharmacological assays

JOB LOCATION
São Paulo, SP.

The School of Pharmaceutical Sciences of the University of São Paulo (USP) is located in the city of São Paulo - SP. FCF-USP emerged from the dismemberment of the former Faculty of Pharmacy and Dentistry of the University of São Paulo into two distinct units. According to the SCImago Institutions Rankings 2021 World Report (SIR World Report), USP is ranked 26th (twenty-sixth) in the world among the ranked international teaching and research institutions.

In 2018, according to the University Ranking by Academic Performance (URAP), USP continues to be the best Iberoamerican university and ranks thirty-sixth in the world. In 2015, USP was named the first university in Latin America. THE ranked the institution as the 10th best university in the BRICS and other developing countries in 2015. According to the QS World University Ranking 2021, USP was ranked as the best university in the Portuguese-speaking world, ahead of its Portuguese and African counterparts.

REQUIREMENTS
Applications must be submitted directly to Prof. Mario H. Hirata at mhhirata@usp.br.
Deadline: 15.09.2021

Document requirements
- Curriculum Vitae
- Cover Letter

Reference requirements
- Three professional references (contact info only), including the current or previous academic supervisor.