PhD Studentship

Dr Marcio V B Dias.

Ph.D. project: Using Fragment-based Drug Discovery (FBDD) to identify selective inhibitors against folate pathway enzymes from pathogenic microorganisms.

Supervisor: Marcio V B Dias

Deadline: 20 April 2019

Project description: Using the integration of several biophysical techniques, including crystallography, isothermal titration calorimetry (ITC), differential scanning fluorimetry (DSF) and nuclear magnetic resonance (NMR) in combination with computational techniques and organic chemistry, we expect to evolve series of compounds with high affinity and selectivity based on previously identified and characterized molecules (fragments) that target the enzyme Dihydrofolate Reductase from Mycobacterium tuberculosis and other pathogenic microorganisms including Staphylococcus aureus and Candida Albicans. We also expect that these molecules have a poor effect on the human enzymes involved in folate metabolism. This project involves an intensive collaboration with Prof. Chris Abell group from the University of Cambridge which gives strong support on organic chemistry synthesis strategies. The selected student will have the opportunity to participate in a multidisciplinary team using a multi-approach strategy for drug discovery, which includes techniques of molecular biology, biochemistry, physical techniques and organic chemistry. This will put the selected student in contact with the advanced techniques used in both industry and academia involved in the development of new drugs.

Requirements: This funded studentship is open to UK/EU nationals*, covers all tuition fees and provides an annual tax-free stipend of ca. £14,800 for 3.5 years. Applicants should have an honours degree (at least II.1 or equivalent) in chemistry, or other relevant disciplines. It is highly desirable that the applicants have at least experience in one of the following discipline: protein production and analysis, structural biology and biophysics, protein-ligand docking or organic chemistry. *For full eligibility criteria for this post please see: https://epsrc.ukri.org/skills/students/help/eligibility/

How to apply: Please direct informal enquiries and requests for further information to Dr Marcio V B Dias (mvbdias@usp.br) Details on the formal application procedure can be found at http://www.go.warwick.ac.uk/pgapply
References:

