



Department of Chemistry and the Centro de Química de Évora (CQE)
University of Évora, PORTUGAL.

**Research Scholarship in Synthetic Organic Chemistry-Solid Phase Organic
Synthesis- Biological Screening**

20 November 2013

A research scholarship is available for a highly motivated individual with a proven track record in synthetic organic chemistry/metal based catalysis/biological screening to work as a key team member of the project: INMOLFARM - Molecular Innovation and Drug Discovery (ALENT-57-2011-20). This project is co-financed by FEDER through the "Sistema de Apoio a Entidades do Sistema Científico e Tecnológico Nacional (SAESCTN)". This project will be undertaken in the Department of Chemistry and the Centro de Química de Évora at the University of Évora.

The selected candidate will have the opportunity to work with an interdisciplinary multinational team, from Universities and Institutes in Portugal and Germany, including chemical and biotech companies. This project will look at High-Through-Put (HTP) synthesis and biological screening to access key potential API molecules.

Scientific Area: Synthetic Organic Chemistry/Solid Phase Organic Synthesis/ /Metal based Catalysis/Biological screening studies

Academic Requirements: A first degree (*licenciatura*) - which is recognized both in Portugal and internationally - in chemistry, medicinal chemistry, biochemistry, or biotechnology. Ideally having achieved a top final grade. The candidates academic background should include subjects (including research projects) of relevance to the theme of this project, and ideally should have obtained very good grades in these subjects.

Specific Entry Requirements: The candidate should have significant (documented) experience in asymmetric organic synthesis, and catalysis with metals. He/she should have good knowledge of solid phase organic synthesis, high-through-put synthesis or combinatorial organic synthesis. The candidate should have demonstrated experience with cell cultures, ideally having had contact with anti-microbial approaches. Experience/knowledge of medicinal chemistry is essential. The candidate should be a highly motivated, organized individual, with the ability to be able to work autonomously in the laboratory, but at the same time being a good team-player and

with a track-record in accomplishing deadlines. The candidate should be very proficient with the English language and be willing to travel abroad if required.

Work Plan: The aim of this project is to develop a cutting edge innovative catalytic process into a state of the art process for the discovery and eventual production of key pharmaceuticals. INMOLFARM will involve the development of this catalytic process, from proof of concept to application: discovery and production of innovative pharmaceuticals. During this project, the student will develop a HTS platform using solid phase synthesis that will enable the rapid and efficient synthesis of libraries of key target compounds using the catalytic arylation reaction as the key step. This will be carried out under the guidance of Prof. Anthony Burke (CQE). The objective will be the establishment of a robust catalytic asymmetric method. Various techniques will be used, including parallel synthesis techniques, and analytical and analytical and separation techniques such as NMR and mass spectrometry and HPLC. The compounds will then be screened using certain types of microbial cultures (for example, fungal, bacterial etc) to determine their biological activity. Tests to determine their antioxidant properties (important in Alzheimer's and Parkinson's treatments) will also be realized. He/she will act as a key liaison between the team of chemists and microbiologists/biochemists involved in this project.

He/she may be required to make some short stays abroad during the term of this scholarship.

The selected candidate ideally should be in the final year of his/her masters course with strong intentions of enrolling in the PhD Program in Chemistry at the University of Évora.

Legislation and applicable regulations: This scholarship will be carried on the basis of a signed contract between the University of Évora and the scholarship recipient, under the terms of the Research Scholarship Regulations of the University of Évora, (*Regulamento de Bolsas de Investigação da Universidade de Évora*) (*Ordem de Serviço* nº1/2011), the Scientific Research Grant Holder Statute (*Estatuto do Bolseiro de Investigação Científica*) (Law nº40/2004 of the 18 of August and Decree-Law nº 202/12 of the 27 of August t) and according to the Regulations and legislation for advanced training and qualifications for human resources of the *Fundação para a Ciência e a Tecnologia* (FCT).

Work location: This project will be carried out in the organic synthesis laboratory at the *Centro de Química de Évora* at the University of Évora, under the supervision of Prof. Anthony Burke and in the biotechnology laboratory under the guidance of Prof. Ana Teresa Caldeira and Prof. Rosário Martins.

Grant Duration: 12 months with the expected starting date of January 2014.

Stipend value: 745€ per month (tax free). according to the Regulation of advanced training and qualification of human resources of the Portuguese Foundation for Science and Technology (<http://www.fct.pt/apoios/bolsas/regulamento.phtml>). This stipend will be paid monthly by check or bank transfer.

Selection Method: The evaluation criteria are: i) Academic/Scientific record (a. CV , 50%; b. Previous experience in the context of this PhD project, 35%; c, letter of

motivation, 15% and ii) a possible interview. Only shortlisted candidates - those with the highest classifications, and who are deemed to have the most suitable profiles that match the requirements for this position - will be called for interview.

Selection Committee

Prof. Anthony Burke (President of the Jury), Prof. Ana Teresa Caldeira (1^o Member), Prof. Rosário Martins (2^o Member) and Prof. Paulo Mendes (reserve member) all from Dept. of Chemistry, University of Évora.

Advertisement/Notification of the results: The final result of the assessment will be made public through a ranking list which will be exhibited in a visible public place in the Chemistry Department/CQE of the University of Évora, the candidates being notified by email.

Call opening and closing dates: The call will be opened from the 22th November 2013 to the 05th of December 2013 and the results are expected to be published on the 19th December 2013.

Applications will be formalized, mandatorily, by sending a letter of motivation, which will be accompanied by the following relevant documents: a very detailed *Curriculum Vitae* (which includes, candidates address, telephone number and email address and the same contacts for the named referees), a motivation letter, two letters of recommendation (most recent possible), photocopy or scanned copy of identity card/passport and degree certificates/transcripts (grade cards) and any other documents that are considered relevant for the selection process.

These documents must be sent or emailed (before the closing date) to:

Prof. Anthony Burke,
Chemistry Department and Centro de Química de Évora,
Universidade de Évora,
Rua Romão Ramalho, 59
7000 Évora,
PORTUGAL.

e-mail: ajb@uevora.pt

For any queries please contact Prof. Anthony Burke (telephone: +351 266 745310;; e-mail: ajb@uevora.pt)

