



Centro de Química de Évora (CQE) and the Laboratory for Chemio-Physio Development and Characterization (*O Laboratório de Desenvolvimento e Caracterização Físico-Química-LADECA*),
University of Évora, PORTUGAL.

PhD Scholarship in Synthetic Organic Chemistry

5 December 2012

A PhD scholarship is available for a highly motivated individual with a proven track record in synthetic organic chemistry to work as a key team member of the project: INMOLFARM - Molecular Innovation and Drug Discovery) (ALENT-57-2011-20), with a duration of thirty (30) months. The selected candidate will have the opportunity to work with an interdisciplinary multinational team, in both Portugal and Germany, that will look at a innovative synthetic route to key potential pharmaceutical compounds. 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 at both at the *Centro de Química de Évora* and the *Laboratory for Chemio-Physio Development and Characterization* (LADECA, part of the Alentejo Science and Technology Park - PCTA) at the University of Évora and at the *Max Planck Institute of Colloids and Interfaces* (MPICI), in Potsdam, Germany.

Scientific Area: Synthetic Organic Chemistry/Organometallic chemistry/ Catalysis

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

Specific Entry Requirements: The candidate should have significant (documented) experience in organic synthesis, preferentially of chiral molecules, and ideally have experience in metal catalyzed organic reactions. Ideally (but not mandatory) the candidate should have some experience in asymmetric catalysis/synthesis and flow chemistry. 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.

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. This student will develop the proof-of-concept for a highly innovative intra-molecular catalytic asymmetric arylation process. This will be carried out under the guidance of Prof. Anthony Burke (LADECA - Portugal). The objective will be the establishment of a robust catalytic asymmetric method. Various techniques will be used, including use of schlenk and parallel synthesis techniques, including NMR and mass spectrometry (analysis). This methodology will then be assessed using flow chemistry techniques. Flow chemistry enables the rapid development of chemical methods and has much potential for optimizing chemical routes to APIs. These studies will be conducted under the guidance of Prof. Tyler McQuade, (MPICI) (from Prof. Peter Seeberger's group), Potsdam, Germany. Solid-phase synthesis will also be investigated with this technique.

The selected candidate will be expected to enroll in the PhD Program in Chemistry at the University of Evora.

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*) (Decree-Law nº40/2004 of the 18 of August) 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 at the *Centro de Química de Évora* and the *Laboratory for Chemio-Physio Development and Characterization* (LADECA) at the University of Évora, Portugal, under the supervision of Prof. Anthony Burke and at the *Max Planck Institute of Colloids and Interfaces* (MPICI), in Potsdam, Germany, under the supervision of Prof. Tyler McQuaid.

Grant Duration: Until the end of the project, with the expected starting date of February 2013.

Stipend value: 980€ per month (tax free), renewable every 12 months till the end of the project. This stipend will be paid monthly by cheque 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. Paulo Mendes (Member) and Prof. João Paulo Ramalho (member), all from Dept of Chemistry/CQE, University of Evora.

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 7th to the 21st of December 2012 and the results will be published as soon as possible thereafter.

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, university grade cards/transcripts 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)

