

## **Full-time Research Assistant**

preDiCT-Computational Prediction of Drug Cardiotoxicity

### **University of Oxford Computing Laboratory**

**Grade 7: Salary £26,666 - £32,796**

#### **Further particulars**

PreDiCT “Computational prediction of drug cardiotoxicity” is a recently announced European Union project funded within the Virtual Physiological Human call. It aims to develop the computational tools and models, algorithms and methodologies required for the assessment of drug action in cardiac electromechanical behaviour. It is an international, multi-institutional and cross-disciplinary project involving academic and industrial partners (including major pharmaceutical companies). The project will run from June 2008 to the end of May 2011.

The Research Assistant (RA) will be based at the Computational Biology Group at Oxford University Computing Laboratory and will be part of a research team including academics, postdoctoral researchers and PhD students from the Computational Biology Group at the Computing Laboratory and the Cardiac Electrophysiology Group in the Department of Physiology, Anatomy and Genetics. The post will also involve interaction with academic partners and pharmaceutical companies.

#### **Main duties and responsibilities**

- Develop signal processing algorithms of the electrocardiogram to identify potential biomarkers of drug-induced cardiotoxicity;
- Investigate biomarkers ability to assess drug-induced pro-arrhythmic risk using computer simulations of cardiac electrophysiological activity in combination with clinical and experimental data.

#### **Major Activities**

- Develop and validate signal processing algorithms to identify drug-induced effects on the ECG;
- Develop and validate models to simulate drug action on the ECG;
- Investigate ionic mechanisms underlying drug-induced changes in the ECG using computational models and how these are related to increased arrhythmic risk;
- Identify new biomarkers for drug-induced cardiotoxicity;
- Write research papers, presenting at scientific meetings and writing reports.

## Main skills and experience required ('selection criteria')

### *Essential*

- A higher degree, preferably a doctorate, in a subject relevant to the proposed study (e.g. in Bio-medical Engineering, Mathematical Biology, Applied Mathematics or Computer Science);
- A documented track record of the ability to conduct and complete research projects, as witnessed by published peer-reviewed work (according to age and experience of the candidate);
- Demonstrated ability to develop mathematical algorithms in a modern computing environment (preferably Matlab/C++);
- Experience of working in biomedical signal processing and/or biomedical computational modelling.
- Ability to working in a team, good communication skills in English and reliability.

### *Desirable*

- Research experience in an area related to cardio-vascular studies, and preferably in signal processing of the electrocardiogram and/or cardiac electrophysiology;
- Experience of multidisciplinary research settings including engineers, computer scientists and physiologists;
- Demonstrated ability to make clear, well-illustrated scientific presentations;
- Willingness to contribute to the supervision of graduate and undergraduate student projects;

## Pay and benefits

Salary will be on the University grade 07S scale (currently £26,666 - £32,796 p.a, depending on qualifications and experience).

The post is funded by an EU Grant and will run until the end of May 2011; the earliest starting date is June 2<sup>nd</sup>, 2008. The appointment is subject to satisfactory completion of a 6-month probationary period, during which the notice period will be one month on either side.

## How to apply

To apply, please send a **letter of application** and a detailed **CV**<sup>1</sup>, and arrange for **two letters of reference** (see below) (preferably by email – most formats accepted) to:

[job05@comlab.ox.ac.uk](mailto:job05@comlab.ox.ac.uk)

or via post to: The Administrator, Wolfson Building, Parks Road, Oxford OX1 3QD

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<sup>1</sup> A CV (or *curriculum vitae*) is a list with dates of the main relevant events in your life so far. Include details of your education, any qualifications you have, and your employment experience, together with any other information which helps to show how you meet the selection criteria.

or via Fax: +44 (0)1865 283532

to arrive by **1 May 2008**. Applications received after this date will not be considered. Please quote reference number **Predict-2** at the beginning of your application letter.

The list of duties and the 'selection criteria' for this job describe the sort of skills, experience, knowledge or abilities which we are looking for. We will interview those whose applications best meet these criteria, so it is very important that you should use your application to explain how you can match them. Remember that you will have gained abilities, experience and skills from many aspects of your life; some may come from education or work, and others from home or community life. Tell us about which schools or colleges you went to and any qualifications you have. List employment, voluntary work, hobbies, or family responsibilities which help to show how you meet the selection criteria.

This application is not considered complete unless **accompanied by two letters** of reference from people who have direct experience of your work through working closely with you for a considerable period. Your referees should assess your suitability for the post with reference to the job details above. Please arrange for both referees to send their letters via email to the above address or in a sealed envelope **directly** to the address above.

Interviews will be held in mid May.

Your appointment will be subject to (i) the return of a completed medical questionnaire which is acceptable to the University, (ii) the provision of original documentation which indicates your right to work in the UK, and (iii) the completion of an initial probationary period of 6 months.

The University reserves the right to screen individuals for employment. Any such screening would be discussed with you in advance of it taking place.

**The policy and practice of the University of Oxford require that all staff are offered equal opportunities within employment. Entry into employment with the University and progression within employment will be determined only by personal merit and the application of criteria which are related to the duties of each particular post and the relevant salary structure. In all cases, ability to perform the job will be the primary consideration. Subject to statutory provisions, no applicant or member of staff will be treated less favourably than another because of his or her age, sex, marital or civil partnership status, sexual orientation, religion or belief, racial group or disability.**