University of Birmingham

Dentistry PhD Studentship EPSRC

Level of Study: Doctoral research

Subject area: Dentistry

Nationality:

Type of Award: Research Council

Deadline for applying: 13/01/2014

Award Description

Applications are invited for a 3-year PhD studentship within a multidisciplinary and integrative research team.

The PhD project aims to investigate the cellular and molecular mechanisms and interactions involved in human cleft palate development and its healing following surgery. Complications after cleft palate repair occur in 15-20% of patients and require extensive surgery, however currently it is unpredictable which patients might develop them.

Utilising biopsies of human palatal tissue and blood samples, from the University's unique cleft palate tissue bank, cells isolated from patients with cleft palate in isolation (CP) and combined cleft lip and palate (CLP) will be characterised and correlated with short-term clinical outcomes (fistula formation). The presence of various biomarkers will be established, gene expression analysed and a 3D co-culture model of the human cleft palate will be developed to investigate palatal wound healing, so that predictors of surgical outcome can be translated into future treatment plans and diagnostic assessments. Cellular and tissue architecture analysis will be performed with digital image processing while 2D time-lapse microscopy will be used to assess healing characteristics of the cell types. To date, such an integrated approach has not been performed using tissues isolated from human infants and this project represents a unique research training opportunity for a PhD student to be involved in translational research.

Value of Award

This position is fully funded for university fees and a stipend at standard RCUK rate (for an October 2014 start)

Eligibility Criteria

Applicants should have a strong background in the biomedical/biological sciences, preferably with experience of molecular/cell biology. They should have a commitment to translational biomedical research and hold or realistically expect to obtain at least an Upper Second Class Honours Degree in a relevant subject.

How to Apply

Enquiries or applications including a CV, names and addresses of two referees and a covering letter should be sent to Sarah Knaggs, School of Dentistry, College of Medical and Dental Sciences, University of Birmingham, St Chad's Queensway, Birmingham B4 6NN or email **s.knaggs@bham.ac.uk (mailto:s.knaggs@bham.ac.uk)**

The closing date is **Monday 13th January 2014**

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