Mary Marshall and Arthur Walton Professorship of the Physiology of Reproduction

DEPARTMENT OF PHYSIOLOGY, DEVELOPMENT AND NEUROSCIENCE

1 The Professorship

Background

Upon the retirement of Professor Graham Burton, applications are invited for the Mary Marshall and Arthur Walton Professorship of the Physiology of Reproduction. The appointment will be made from 1 October 2020 or as soon as possible thereafter. We are seeking an applicant who will also have the leadership qualities to become Director of the Centre for Trophoblast Research (CTR), housed within the Department, and to jointly lead an interdisciplinary Strategic Research Initiative in Reproduction.

The University is seeking an outstanding candidate in the field of reproductive biology, with an emphasis on trophoblast and/or placental related research in recognition of the fundamental importance of these fields and of the significant investment in this area by the University through a generous benefaction.

Implantation, placentation and pregnancy pose many unique questions of basic scientific and clinical importance, as they involve interactions between the genomes of three individuals to support and nourish the semi-allogeneic fetus within the uterus. Complications of pregnancy remain a major cause of female and infant mortality and morbidity. There is now irrefutable evidence that intrauterine events and low birth weight predispose an individual to an increased risk of diverse diseases in later life, including cardiovascular disease, stroke, diabetes, osteoporosis and neurological disorders. Hence, there is now a major impetus to understand how the intrauterine environment, and placental function in particular, impinges on normal development.

Selection Criteria

Candidates will be considered for the Professorship on the basis of the following selection criteria, which they should address in their application.

- An outstanding research record of international stature in reproductive biology, with an emphasis on trophoblast and/or placental related studies.
- The vision, leadership experience and enthusiasm to build on current strengths in maintaining and developing a leading research presence, and an established record in attracting research grant support to further this development.
• The ability to further the academic planning and strategic development of the Department and of the academic disciplines important to the Department, within the University and, where appropriate, to facilitate their development within the UK.

• The ability to manage and interact effectively with staff and students at all levels.

• An enthusiastic commitment to the recruitment, training and mentoring of the next generation of researchers, including undergraduates, research students, and postdoctoral research fellows.

Candidates will hold a PhD or equivalent postgraduate qualification.

2 The Department of Physiology, Development and Neuroscience (https://www.pdn.cam.ac.uk/)

The Cambridge University Department of Physiology, Development and Neuroscience has an outstanding record of achievements in both research and teaching. In the 2014 Research Assessment Exercise the Department was submitted with Biochemistry, Genetics, the Gurdon Institute, Pharmacology, Plant Sciences, the Sainsbury Laboratory, the Stem Cell Institute and Zoology with over 97% of eligible staff included. Of the work submitted across the nine departments and institutes, 87% was judged to be world-leading or internationally excellent. Anatomy and Physiology in Cambridge was ranked first in the QS World University Rankings in 2019.

The joint Heads of Department are Professors Sarah Bray and Bill Colledge. The Department includes: 46 academic officers, 10 independent researchers, 70 postdoctoral researchers, 77 support staff and 2 academic-related staff.

The Department is principally located in the centre of Cambridge on the University Downing Site, primarily occupying two substantial buildings that are close to other major biological departments including Psychology, Genetics, Biochemistry and Pathology. Much of the fabric has been refurbished in the past decade. The excellent support facilities available include the Cambridge Advanced Imaging Centre and the Anatomy Visual Media Group. There are strong collaborative links with the Clinical School, the Veterinary School, the Gurdon Institute, the Stem Cell Institute, the MRC Centre for Brain Repair and the MRC Laboratory of Molecular Biology.

The Centre for Trophoblast Research (https://www.trophoblast.cam.ac.uk/)

Since its foundation in 2007 and drawing on an initial donation of £5m, the Centre for Trophoblast Research (CTR) has rapidly established itself as the world-leading centre for placental research and maternal-fetal interactions. Occupying dedicated core space in the Department of Physiology, Development and Neuroscience, it integrates over twenty Principal Investigators in various departments of the University, the Babraham Institute and the Sanger Institute who are researching aspects of trophoblast biology, a cell type unique to the placenta. Their interests range from genetics and epigenetics, through immunology, developmental biology, metabolism and physiology to clinical epidemiology. Under the energetic leadership of Professor Graham Burton, the inaugural Director, the CTR has had an international impact (e.g. https://www.cam.ac.uk/research/news/mini-placentas-could-
provide-a-model-for-early-pregnancy). It appoints Next Generation Fellows and graduate students each year. In addition, it supports academic visitors, hosts a highly popular annual international scientific meeting, and has a thriving programme of seminars and journal clubs. The CTR houses unique collections of placenta-in-situ histological material, and is developing further resources for placental research.

**Research Activities** ([http://www.pdn.cam.ac.uk/research/](http://www.pdn.cam.ac.uk/research/)).

Physiology, Development and Neuroscience (PDN) is one of the largest departments in the School of Biological Sciences. The Department sets itself the goal of sustaining a research enterprise of the highest international standard. Research in PDN is primarily in four major areas: Cellular and Systems Physiology, Developmental Biology and Reproduction, Form and Function and Neuroscience. Taking multidisciplinary approaches, our central aim is to understand the relationship between Biological Structure and Function. The Department has a breadth of expertise, specialised research facilities and management systems to conduct this research at all levels of biological organisation, ranging from gene expression through cell and tissue biology, ultimately to the analysis of the whole organism and its physiology and behaviour.

**Reproduction SRI** ([https://www.repro.cam.ac.uk/](https://www.repro.cam.ac.uk/))

Through a new Strategic Research Initiative the University recognises reproduction as one of its research priorities. The aim is facilitate close engagement between the arts, humanities and social sciences, biology and medicine in order to explore and address the urgent challenges posed by reproduction today. By approaching reproduction collectively and across disciplines, we offer fresh perspectives on broad issues, ranging from global policies to those that affect individuals, families and populations.

3 **Standard Duties**

**Teaching and research**

The Professor will be required to deliver lectures and give instruction in the physiology of reproduction, and in particular to perform the following duties:

(i) to lecture, or hold classes, and to give at least 55h per annum of lectures or classes in total.

(ii) to undertake original work and the general supervision of research and advanced work in his/her subject and Department, and to assist students in their studies by supervision or informal instruction.

**Examining**

The Professor will be required to undertake such University examining as may be required by the relevant Faculty Board or comparable body.
Supervision

The Professor will be expected to act as supervisor of graduate students when required.

Administration

Administrative duties are shared equitably among the teaching members of the Faculty. The Professors are expected to play significant roles from time to time on the Faculty Board and Faculty Committees dealing with such matters as academic and other appointments, admission of graduate students, research and teaching assessments, the libraries and computing arrangements. They are also encouraged to accept appointment to University Committees.

The new Professor will be expected to act as Director of the CTR and promote it as an international centre of excellence for placental research and maternal-fetal interactions.

4 The Colleges

The University, the Faculties and Departments, and the Colleges are linked in a complicated historical relationship that is mutually beneficial but not simple. Students (both graduate and undergraduate) are admitted by one of the 31 Colleges, although for graduate students the Faculties and Departments determine admissions before the Colleges are involved. Almost all undergraduates, and many graduate students, live in a College. The teaching of undergraduate students is shared between the Colleges and the Faculties and Departments, with the Colleges arranging small group teaching (“supervision”) and the Departments providing lecturing, laboratory classes, and advanced supervisions.

Most academic staff will also be invited to join a College as a teaching or Professorial Fellow. College teaching is remunerated separately from the University teaching, and appointment to a College is a separate matter from a University appointment. Membership of a College adds an important social and intellectual dimension for many of the academic staff. The Chair of the Faculty/Head of Department or senior colleagues can give more advice.

The Scheme for newly-appointed University Officers seeking a College Fellowship is set out at: https://www.ois.cam.ac.uk/uto-scheme/guidance-for-applicants/view

5 Procedure for Appointment

The appointment will be made by a Board of Electors, chaired by the Vice-Chancellor or his Deputy, with a membership which includes members of the Department, members of other Departments and external experts.

All applications will be acknowledged. The Board of Electors will decide how they wish to proceed towards making an election, which may include interviews and/or presentations. Prior to that, short-listed candidates will be invited to visit the Department to give a seminar on their work and meet prospective colleagues in the course of the process.
Candidates will be informed of the progress of their applications as agreed by the Electors.

It is anticipated that the successful candidate will take up the appointment on 1 October 2020 or as soon as possible thereafter.

6 Enquiries and Applications

Informal enquiries about this Professorship may be directed to Professor Sarah Bray, telephone +44 (0)1223 765222 or Professor William Colledge, telephone +44 (0)1223 333881, or email the Heads of Department on pdnhod@hermes.cam.ac.uk

Further information on the University is available at the following address: www.cam.ac.uk

Applications, consisting of a letter of application together with a statement of current and future research plans, a curriculum vitae and a publications list, along with details of three referees should be made online no later than 18 November 2019.

If you are unable to apply online, please contact the Human Resources Division, University Offices, The Old Schools, Cambridge, CB2 1TT (email professorships@admin.cam.ac.uk ).
GENERAL INFORMATION
All appointments to University Offices are subject to the Statutes and Ordinances of the University.

A Salary

Salary on appointment will be determined by the Vice-Chancellor at the appropriate point on the University's salary spine for grade 12, taking account of the criteria for the respective contribution band. Professorial salaries are reviewed periodically, on the basis of research, teaching and general contribution, by the Vice-Chancellor with the assistance of a small Advisory Committee.

There is a normal sabbatical entitlement of one term in seven on full pay, subject to the University regulations.

B Headship of the Department

Should a Professor be appointed to the Headship of a Department, a pensionable payment in addition to salary is made.

C Recruitment Incentive

The University has a scheme whereby a single recruitment incentive payment may be made on appointment at the Vice-Chancellor’s discretion.

D Removal Expenses

If the person appointed is not resident in Cambridge, a contribution from University funds towards expenditure incurred in removal to Cambridge to take up a University office will be made.

E Consultancy Work

The University’s policy on consultancy work is that consultancy arrangements must be entered into privately between the employee and the organisation concerned. The consultancy work must not interfere with the duties required of the officer under the officer’s contract of employment with the University. Consultancy work is not covered by the University’s insurances, even when the University has knowledge that such work is being done. The University must not be regarded as being directly or indirectly involved in any consultancy arrangement through the use of University letterheads, advice given or work done in the individual’s capacity as an employee of the University. Individuals undertaking private or consultancy work are advised to take out personal insurance.

Alternatively, professional indemnity cover may be obtained by channelling private work through the University company Cambridge Enterprise Ltd. Anyone wishing to do so should, in the first instance, contact Cambridge Enterprise at www.enterprise.cam.ac.uk.

F Professorial Fellowships

The great majority of Professors at Cambridge hold a Professorial Fellowship of a College. Although election to a fellowship is a matter for an individual College, the University takes active steps to draw to the attention of Heads of House the names of those Professors eligible for election. In seeking the views of referees, their permission will be sought for the release of their comments on the successful candidate if it were to be requested by the professorial fellowship electors of a College.
G Health screening on appointment to University Office and in the case of University Officers undertaking a change of duties

Offers of appointment made to prospective University officers whose work will fall within certain categories are conditional on the completion of a medical questionnaire and, if necessary, on a satisfactory health check by the Occupational Health Service.

Only the person elected will be asked to complete the questionnaire at the time of election.

H Family friendly policies and benefits

The University has a range of family friendly policies to aid employee’s work-life balance including maternity, paternity and parental leave, flexible working and career break schemes. In addition, childcare vouchers, access to two nurseries and a holiday play scheme are available through the Childcare Office to help support University employees with childcare responsibilities. Further information can be found at: http://www.admin.cam.ac.uk/offices/hr/staff/benefits/family.html

I Eligibility to work and reside in the UK

UK immigration procedures stipulate that an employer may not consider the appointment of any person unless they have seen evidence of their immigration status. Accordingly, shortlisted candidates, whatever their nationality, will be asked to provide such evidence at an appropriate stage in the recruitment procedure.

J Equal Opportunities Information

The University of Cambridge appoints solely on merit. No applicant for an appointment in the University, or member of staff once appointed, will be treated less favourably than another on the grounds of sex (including gender reassignment), marital or parental status, race, ethnic or national origin, colour, disability (including HIV status), sexual orientation, religion, age or socio-economic factors.

K Information if you have a Disability

The University welcomes applications from individuals with disabilities. Our recruitment and selection procedures follow best practice and comply with disability legislation.

The University is committed to ensuring that applicants with disabilities receive fair treatment throughout the recruitment process. Adjustments will be made, wherever reasonable to do so, to enable applicants to compete to the best of their ability and, if successful, to assist them during their employment. We encourage applicants to declare their disabilities in order that any special arrangements, particularly for the selection process, can be accommodated. Applicants or employees can declare a disability at any time.

Applicants wishing to discuss with or inform the University of any special arrangements connected with their disability can, at any point in the recruitment process, contact Dr Gosia Wloszycka, who is responsible for the administration of the recruitment process for this position, by email on mw425@admin.cam.ac.uk.