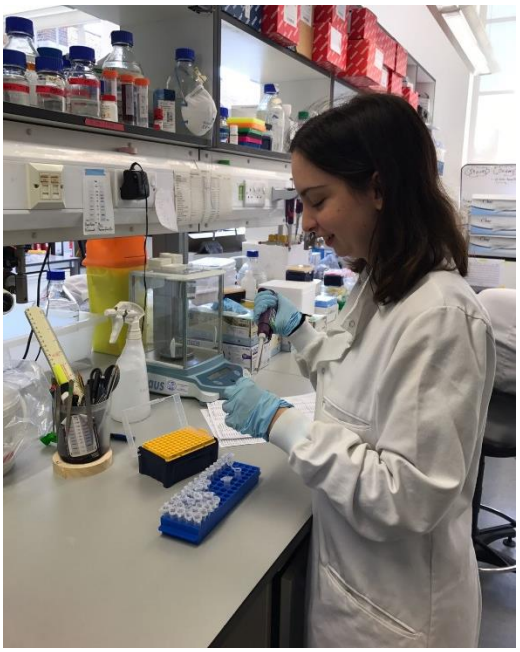
THE ROYAL SOCIETY

UNIVERSITY OF CAMBRIDGE

Department of Physiology, Development and Neuroscience



Royal Society PhD Studentship

Applications are invited for a four year PhD studentship funded by The Royal Society to conduct research under the supervision of Dr Amanda Sferruzzi-Perri at the Department of Physiology, Development and Neuroscience.

Title: Role of placental endocrine malfunction in the programming of disease in offspring

During pregnancy, nutrients must be supplied to the fetus for growth but also to the mother to maintain the pregnancy. This nutrient balance depends on the placenta, an organ that develops during pregnancy to transfer nutrients to the fetus and that secretes hormones into the mother with metabolic effects. Impaired placental function disrupts the materno-fetal nutrient balance and results in major pregnancy complications, including abnormal birthweight with both immediate and long-lasting effects on offspring health. However, our understanding of the importance of placental endocrine function in the control of fetal growth and in the long-term health of the offspring is unknown.

The aims of this PhD are i) to determine whether placental endocrine malfunction is associated with an increased susceptibility of the offspring to develop metabolic dysfunction in later life and ii) identify the mechanisms by which offspring are programmed by placental endocrine malfunction *in utero.* The project will use a newly-developed mouse model where placental endocrine function is selectively modified. This is achieved through cell-specific manipulation of the imprinted growth gene, Igf2 in the endocrine cells of the mouse placenta (Igf2 controls placental endocrine cell formation and function). It will use a range of techniques to characterize the metabolic phenotype of offspring into adult life and employ molecular methods to examine the epigenetic mechanisms involved in programming offspring outcomes.

Eligibility and Funding:

Candidates should have or be about to achieve a first or upper second class degree in a relevant biological subject and meet the University of Cambridge entrance requirements - see: https://www.graduate.study.cam.ac.uk/entry-requirements

This is a four year studentship with effect from 1st October 2018 and will cover the Home/EU University Composition Fee (£8,094 pa) and will offer an annual maintenance stipend (£14,553 pa). All students who are not classified as either Home or EU will be classified as Overseas (for further information see: https://www.graduate.study.cam.ac.uk/finance/fees/what-my-fee-status). Overseas applicants should note they would be liable for the difference in funding between the Home/EU and Overseas rate of the University Composition fee.

Application deadline and process:

Apply using the University of Cambridge application form (Applicant Portal) http://www.graduate.study.cam.ac.uk/applicant-portal (The application made using the Applicant Portal will cost you £50, (if you cannot apply online, you may apply on paper, but the fee is £100).)

Select the appropriate course: PhD in Physiology, Development & Neuroscience
https://www.graduate.study.cam.ac.uk/courses/directory/blpdpdpdn

List the name of your prospective supervisor Dr Amanda Sferruzzi-Perri and the project title in the Research section of the form. You will also be required to submit a research proposal (1-2 pages of A4).

Please quote reference PM15559 on your application and in any correspondence about this vacancy.

The deadline for online applications together with all supporting documentation is **Sunday 17 June 2018.** Interview dates to be confirmed.

Questions in relation to this studentship may be addressed by e-mail directly to Dr Amanda Sferruzzi-Perri (ans48@cam.ac.uk).

The University values diversity and is committed to equality of opportunity.