About the Gurdon Institute

The Gurdon Institute is a world-leading centre for research into the biology of development and how normal growth and maintenance can go wrong in diseases such as cancer. Many of our scientists have made pioneering contributions to the fields of basic cell biology, cellular reprogramming, epigenetics, and DNA repair.

Dates of Placement

16 July – 20 July

Placement Description

Area of the Gurdon

Laboratory Research

General topic area

Mitochondrial DNA (mtDNA) transmission, Mitochondrial diseases

About the team

In addition to the 46 chromosomes in the nucleus, our cells contain DNA material inside a subcellular structure known as mitochondrion. The mitochondrion converts energy from food into a form that the cell can use. We investigate how mitochondrial DNA is transmitted from mothers to daughters and how mitochondrial mutations lead to diseases, which affect 1 in 5,000 people in the UK.

Current lab members: One PhD student, one postdoc fellow and one research assistant

Main model(s) used

*Drosophila* (fruit flies) and tissue culture insect cells
What will you do?

Spend 3 hours in the lab each day, learning about fly genetics, mitochondrial genetics and molecular cell biology. You will also practice fly husbandry, basic molecular cell techniques such as DNA isolation, gel electrophoresis and PCR.

You will attend four, 2-hour interactive workshops on topics such as confocal microscopy. These workshops will be led by scientists and specialists in the field.

Additionally, you will read and analyse a research paper and you will present it and your experiences to other students.

You will also have the opportunity to network with PhD students and scientists, talk to them about their jobs and lives and find out how research is done in the lab.

About the successful student

We expect all students to be punctual, responsible, reliable, curious, and willing to listen to advice and act on feedback.

You must also be available for all of the days during the placement week.

Ideally interested in: Biology

Key skills include: Attention to detail, proactive, inquisitive

What you will need

You will need to bring

- Closed-toed shoes
- A positive attitude

We will provide

- Lab coat
- Protective eyewear
- Gloves
- Computer access
- Free lunch at the Institute (up to £10 per day)
- Transportation reimbursement (receipts required, up to £50 per week)

Questions?

If you have any questions about this job description, the work experience programme or the application process, please reach out to Naomi at workexperience@gurdon.cam.ac.uk