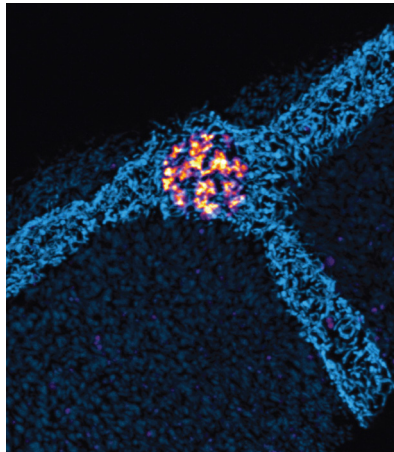
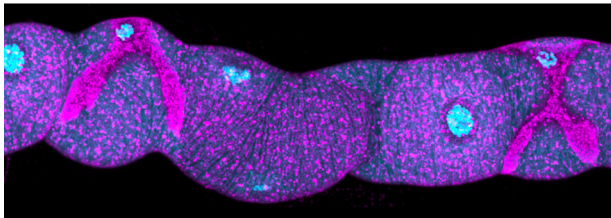


Fully-funded 3.5 year PhD opportunity

The cell biology of renal ageing: Can a *Drosophila*-human pipeline find new therapeutic targets for kidney disease?



Find a PhD link:



Application deadline:

31st May 2024

An exciting **3.5 year PhD studentship** is available in the **Weavers group** (Life Sciences, University of Bristol) to start from Autumn 2024, with the goal of identifying new molecular targets to help treat kidney disease.

Our group studies the **cell biology that supports kidney function**. We take a multi-disciplinary approach, integrating cutting-edge imaging, cell biology, 'omics and genetics in the fruit fly, with biophysical, computational and human genetic epidemiology approaches. With its unrivalled experimental tractability, the fruit fly is helping us dissect fundamental aspects of renal cell biology. Recently, we discovered how specific renal cell types programme their metabolism to support kidney function (Holcombe and Weavers, 2023 *Nat Commun*).

Despite decades of pioneering research, the worldwide incidence of kidney disease is growing, making it the third-fastest-growing cause of death globally (*Nature* 628, 7-8 2024). This is largely because life expectancy is rapidly rising and there are more individuals suffering from health conditions (e.g. diabetes) that increase disease risk. In kidney disease, damage prevents kidneys from filtering the blood, meaning patients require weekly dialysis or transplant surgery. We must find better ways to **identify and treat individuals who are most vulnerable to this disease**, and to **improve kidney transplant success**.

This PhD project brings together a multi-disciplinary team of research scientists and clinicians. It is a unique opportunity to perform **innovative inter-disciplinary research, combining cell biology (in fruit flies and human cells) with clinical samples**, with the potential to transform treatments for people living with kidney disease. We will be guided by insight from clinical samples (linking donor biopsies with transplant outcomes), with our collaborator Dr Maria Kaiser (University of Oxford). Firstly, we will identify the key cellular processes that are disrupted in aged or diabetic kidneys. Secondly, we will use our insect models as **powerful drug screening platforms** for drugs that might restore kidney function. Insight from this research could uncover why some individuals are more susceptible to kidney disease and identify new therapies to restore kidney function.

Informal enquiries are welcome, by email to Dr Helen Weavers (helen.weavers@bristol.ac.uk). Please also see our lab website (<http://www.tissueresilience.com/>). To apply, use the University of Bristol's Postgraduate Application Portal and enter "Biochemistry (PhD)" with a start date of Autumn 2024.

Application deadline: 31st May 2024



University of
BRISTOL