

## Q&A with Laura Greaves



*Dr Laura Greaves is a Senior Research Associate at the LLHW Centre for Ageing and Vitality at Newcastle University. Her research interests include the effect of mitochondrial mutations on intestinal stem cells and the molecular contribution of nutrition and exercise to healthy ageing.*

### **Can you tell us more about how your research career started?**

My PhD work explored the role of mitochondrial DNA mutations in ageing, looking specifically at cells in the colon. I later received a fellowship in 2009 to continue this work at Newcastle University. Because I needed a mix of bench biology and mathematical modelling for my research, I recruited a BBSRC PhD student to work with me who provided the mathematical expertise that I was looking for.

### **How has the LLHW Centre for Ageing and Vitality shaped your career?**

With the renewal of the LLHW Centre for Ageing and Vitality in 2014, I've been able to become a more independent researcher and to build a group of my own. At the moment there are four of us and we're hoping to continue to grow in size. I've also had the opportunity to learn about higher university-level activity, which is something that has been very important for my career development.

### **Would you say that your work has become more interdisciplinary as a result?**

I started off my research career looking solely at how genetic mutations affect the ageing of stem cells in the gut. With the renewal of the Centre I have been able to broaden this focus. I'm now looking at the molecular mechanisms that underlie exercise and nutrition, and how these affect mitochondrial and inflammatory ageing processes in humans and animals. This work has brought together researchers from different scientific disciplines – such as exercise physiologists, molecular biologists, and mathematical modellers – and evolved into an interdisciplinary research programme.

### **What impact do you think this work will have?**

It's still early days, but we hope that by shedding some light on the molecular mechanisms that underlie nutrition and exercise, our work will lead to advice and interventions to promote healthy living in older age.

### **Where do you see yourself in ten years' time?**

In ten years' time I hope to be running an independent interdisciplinary research laboratory, focusing on promoting healthy ageing through an understanding of the molecular mechanisms that drive the ageing process.