



EXETER PHD STUDENT ON LEADING GENOMICS RESEARCH



Isabel with peers at the Alzheimer's Association International Conference 2017

Mouse models, brain cells, international conferences: how PhD student Isabel Castanho has furthered her academic career with the University of Exeter Medical School.

Throughout her academic career, Isabel Castanho has seized a number of national and international research opportunities, alongside her own lab-based dementia research.

"I'm using mouse models of Alzheimer's to explore changes in brain cells to better understand the disease's progression. That's what my research focuses on," Isabel said. "We can determine better approaches to diagnosis and treatments by looking at animals that show characteristics of Alzheimer's."

In September of 2015, Isabel moved from the University of Minho, Portugal to the United Kingdom to join the University of Exeter Medical School as a PhD student.

Under the supervision of Professor Jonathan Mill and Professor Katie Lunnon in the Complex Disease Epigenetics Group, her research focuses on understanding the association between Alzheimer's disease progression and epigenetics (processes that control the way genes are expressed).

"I had a number of offers but I really didn't want to throw away the opportunities I could have here at Exeter. Choosing where to do my PhD was a very difficult decision," Isabel said.

"The funding for my PhD is from the Alzheimer's Society," Isabel said. Professor Andy Randall of the

University of Exeter Medical School successfully applied for funding to establish a Doctoral Training Centre in Exeter.

These centres aim to create a cluster of PhD students and clinical fellows who work on a themed area of dementia research. Isabel, as the top candidate, was the first to choose a project for her PhD among the applicants. *"Of course, I chose the exciting genomics mouse project with Professor Jon Mill and Professor Katie Lunnon.*

"It's a rising research university which means it's very ambitious – I noticed that on my initial visit. So there's a lot of support here. There's room to grow with it and because of this I feel like the work I do has a bigger impact."

This was among the reasons for choosing to do her PhD at the University of Exeter Medical School: *"When I was first looking at courses I wanted to be an academic, but I was realistic enough to know that I also needed a plan B, a plan C, D, E, F... I knew that Exeter, and my PhD in particular, offered me the chance to pursue so many career directions.*

"For example, as part of my PhD I was offered the opportunity to carry out some of my experiments at the pharmaceutical company Eli Lilly – a positively surprising and fabulous experience in industry.

"I have also been learning more 'hard-core' statistics and I even had the chance to start programming! Bioinformatics was something I barely had heard about a few years ago and

now I can't wait to learn more and more. This has only been possible due to the Complex Disease Epigenetics Group's expertise and support, and by the other opportunities provided at Exeter. I've also participated in the Alzheimer's Association International Conference (AAIC) as a student volunteer twice!"

Students are encouraged to apply to be volunteers at the AAIC. In 2017, Isabel had the privilege of joining the organising team in the London conference and present her research at the conference.

Selected from candidates across the globe, Isabel acted as lead student volunteer in the 2018 conference – this time held in Chicago. Although students are able to volunteer only once, the lead volunteer is selected from the previous year's team and is required to moderate sessions and workshops.

"It's hard work, for sure," Isabel said of the five-day conference, "but both years

have been up there as some of the best moments of my PhD."

Isabel is also regularly involved in public engagement initiatives, talking to the public about her own research and/or encouraging other researchers to do so. She was a speaker at Soapbox Science – public events designed to showcase the work of women in science – and is now one of the organisers of Soapbox Science Exeter.

"I would like to establish myself as an independent researcher and have my own team in the future, working in the foreground of science. However, I am not afraid of following other paths. Wherever life takes me, I will certainly never lose my passion for science."

More information about current funded PhD studentships at the University of Exeter is available at

www.exeter.ac.uk/studying/funding/phd/



Isabel presents at Soapbox Science in Exeter city centre in 2016