

Tom Wishart, PhD, Division of Neurobiology at the Roslin Institute, University of Edinburgh

The Roslin is probably most famous for Dolly the Sheep but can you tell us more about the Institute?

Most people know us for Dolly, but the Roslin is a very interesting place to work, with many research interests, including Neuroscience. I was recruited to diversify the work going on in that field in early 2012. The Roslin is a part of the College of Medicine and Veterinary Medicine within the University of Edinburgh.

When did your interest in the NCLs start?

The Roslin has international expertise in genetic engineering and this has led to us working on new models for lysosomal storage diseases, including Batten disease. We are developing a sheep model for PPT1, CLN1 Batten disease, and are currently waiting to see if this will be a good model for studying the disease.

What do you see as different in your approach to NCL research?

My PhD student, Maica, is working on CLN1 and CLN3 funded by the Darwin Trust. She is looking at overlaps at the molecular level between these diseases, the idea being that we look for common factors that are affected. In neurodegenerative disease, one feature is the effect on synapses, which are very important for communication between neurons. So we look at these in NCL models to see the processes taking place. Targeting the changes correctly can benefit the whole neuron. Hopefully this approach will find something to benefit all forms of Batten disease.

As a relative newcomer to the NCL research community how are you finding this?

Luckily I have some funds to spend on this research. Government investment in dementia research has mainly

focused on those of advancing age, but we are promoting the cause of childhood dementia.

We have been supported by researchers in the field, such as Prof Jon Cooper, who provided tissue samples from models he was already working on. We used these to do something novel. Attendance at meetings is a good way to make contacts – until you put a name to a face you cannot really know if you can form a collaboration. Recently Prof Sara Mole has helped us with our projects.



You attended our family conference in Stratford-upon-Avon last October.

Yes, I really enjoyed meeting families at the conference. It is important for students to see those affected, to ground them again as to why we are doing this research. To see what families deal with on a daily basis reminds them that their work is not just scientific drive and that there is an end goal.

What do you like doing outside of work?

We have a house that is a real “fixer upper” and needs a lot of work so DIY most weekends! Time with the family – taking my kids to mini rugby and swimming.

What are your plans for the future?

We are waiting to see how CLN1 sheep model the disease but this could take a while. We hope that this will be a good preclinical tool. The Roslin is ideally placed as we are on the Vet School campus so can move seamlessly from species to species. This has its challenges, and the willingness of people in the group to work hard and acquire the different expertise needed is what has led to our current success and will allow us to take this forward in the future.

Photo Laura Graham (PhD student), Tom Wishart PhD, Maica Llavero (PhD Student)