Dr Daniel Erskine

Tell me about your research
My research starts at the beginning, looking at what goes wrong and what causes symptoms. I’m not bound by the established view that brain cells die because proteins build up. This is an overly simplistic explanation for a complex disease.

Dementia with Lewy bodies is the third most common type of dementia, where small clumps of protein (Lewy bodies) build up inside brain cells. The brain cells which die are those with high energy demands and those which regulate other processes. In dementia caused by Alzheimer’s disease memory declines over time, whereas in dementia with Lewy bodies, memory fluctuates over time.

We look at human brain tissue and cells under microscopes, looking at lots of different proteins. We hope to monitor the electrical patterns in the cells looking at the difference between regular and irregular rhythms.

What motivates you?
Meeting people with dementia and their families is all the motivation I need. I work with support groups in North East England and there’s so much hope but also knowledge that there’s nothing in the pipeline. I want to be able to walk in to these groups and tell them we’ve done it!

Are there any myths about your work which bother you?
There’s an arrogance in researchers thinking we know more than we do. We need to be open to new ideas until we know more answers. The media reporting of science needs to be more honest and we need to be careful of giving false hope.

In an ideal world, where do you see your work in the future?
Realistically, I’d like to have a more complete understanding of why some cells die in Lewy body disease. More aspirationally, I’d like to show what cell death in the brain looks like and for there to be a drug available to stop this.

About the artwork
When I spoke to Daniel on the phone, he drummed out an irregular beat to explain how cell signals can change in dementia with Lewy bodies and that stuck with me. This is represented in the border and the uneven traces between the neurons - Hana

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