

Alumni Feature: Sara Elfarrash, PhD student from Poul Henning Jensen's Group

In brief, tell me about your specific field of research and explain why you are interested in this particular area?

During my PhD, I have been studying a protein called alpha synuclein that is believed to play an important role in the pathology of different neurodegenerative diseases including Parkinson's disease. Using organotypic hippocampal slices, we have managed to introduce and validate a novel model that replicates the pathology reported in brains of Parkinson's disease patients, including aggregation of alpha synuclein protein, which is spreading between neurons and formation of Lewy pathology. This was followed by using our new model to manipulate the pathology using different compounds or drugs. This was a very exciting project and we believe that it will help improve and fasten our understanding of PD and other alpha synuclein related diseases.

What was most memorable to you about your experiences in your PhD program, and what was most memorable to you about your experiences at DANDRITE and Aarhus University?

It is quite difficult to highlight one memorable thing in doing my PhD! Doing a PhD itself is the most memorable thing I guess. It's like a roller coaster, it can be tough but in the end, most of the people will enjoy the ride. Doing my PhD in a healthy environment like DANDRITE made things easier. The diversity at DANDRITE makes it easier to fit in. Research-wise being exposed to the different topics of neuroscience studied in different groups, either during casual discussions, attending the weekly DANDRITE meeting or lectures given by invited speakers, helped me to grow as a researcher and to expand my knowledge in the field of neuroscience. It also allowed me to gain different insights, perspectives and feedback for my own project.

Describe your career path since completing your education at Aarhus University? Where are you now?

After finishing my PhD, I was appointed Assistant Professor of Physiology at the Faculty of Medicine, Mansoura University, Egypt. I am teaching different courses related to Neuroscience and neuro physiology for medical students and for postgrads. I am also running my small research group, where we focus on Alzheimer's diseases and investigate the role of oxidative stress in the progression of the disease using mice models and brain slices.

How have you used your skills and experiences gained at DANDRITE and Aarhus University in your subsequent positions? What advice would you give to someone who is considering pursuing a PhD within science?

Because I have continued to investigate neurodegenerative diseases in my new position, I have the chance to use all the technical experience and knowledge gained during my PhD in a direct way. Other skills like building collaborations, arranging journal clubs and writing funding applications were all useful to continue my career as a more mature and independent scientist. My advice for someone considering doing a PhD will be that they should only do it, if they believe that this is what they want to do. Also, when it comes to choosing their PhD topic, they need to

choose the topic that they do not mind thinking continuously about for the next 5 years. Last but not least, I encourage them to always follow their values and not their goals.

Text by Sara Elfarrash