Best Outstanding Output

Name: Alaa Droubi
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Position: Research Associate
Research area: immune cell biology

I trained as a Doctor of Veterinary Medicine in my 1st degree, which I completed in my home country of Syria in 2008. During my undergraduate studies, I discovered my passion for basic research while taking up courses in cell biology and biochemistry. In 2010, I moved to the UK to pursue a master's degree in biochemistry at the University of Manchester. After completing my master's with distinction, I moved to Cambridge University to undertake my PhD research in the lab of Robin Irvine, where I developed a strong interest in the field of inositol lipids signaling. Following the completion of my PhD in 2015, I joined the lab of Martin Lowe in Manchester as a postdoc to research a group of inositol 5-phosphatases, which has been a focus of Martin Lowe lab for many years.

In your own words, please describe your outstanding research whether that be an output, impact, contribution to the environment:

Investigating enzyme function by genetic knockout is often complicated by indirect and compensatory changes as well as potential redundancy among related genes. These pitfalls have made it difficult to understand the functions of the poorly-understood enzyme INPP5B. In this research project, I created an acute and inducible removal system of the endogenous INPP5B in an avian B cell lymphoma model. Using this approach, I have gained unique and unexpected insights into the physiological role of INPP5B and the ways in which it interacts with the B Cell Receptor (BCR) signaling. I was able to demonstrate that INPP5B is required for BCR clustering, B cell spreading, and downstream signaling. This novel discovery is not only important because it advances our understanding of how BCR activation is initiated, but it also establishes INPP5B as a novel potential drug target for treatment of B cell malignancies caused by aberrant BCR signaling.

What motivated you to do this?

Creating knowledge and the curiosity as to how cells work, particularly, what function INPP5B fulfil in the cell, have been the biggest motivation.

What are you planning to do next?

I will soon be joining the Department of Biopharm Discovery at GSK to work on the discovery and development of novel therapeutic antibodies. I am so excited about the next chapter of my career, and I look forward to putting all the knowledge, expertise, and values that I have gained over the years in Manchester to good use for the benefit of human well-being.