



Charlemont Grant Report

Recipient Name:	Dr Darrell Andrews
Discipline:	Sciences
Amount and year awarded:	€1,778 in 2019
Title of Project:	Screening novel synthetic lipoxin mimetics in a zebrafish model of inflammation and resolution



Summary of findings:	<p>Summary of findings: I achieved both of the primary objectives set out in this proposal. I successfully screened a series of novel synthetic lipoxin mimetics in a zebrafish model of inflammation and resolution. Furthermore, I performed additional experiments to investigate the molecular mechanisms underlying the mechanism of action of these compounds. These experiments have revealed novel mechanistic insights into the biological activity of these compounds in vivo.</p> <p>Key achievements: The key achievements of this research visit include: The opportunity to receive research training unavailable in Ireland. During this research visit I developed new skills in the area of zebrafish models of inflammation and live imaging of zebrafish and I am now proficient in these techniques. These techniques are key to the on-going progress of my research. I also established a research collaboration with the Rossi laboratory at the University of Edinburgh. I have already had extensive discussions with Prof Rossi regarding the future direction of our collaborative efforts. During my research visit I generated a significant body of primary data. This data will form an integral part of a planned publications and fellowship application. Furthermore, I am currently in the process of establishing this model in UCD and I have already applied for and successfully received the relevant ethics approvals for this. This model is not currently used in any other laboratory in the country. It will complement my other on-going zebrafish research in UCD. Finally, the research visit has also given me the opportunity to continue to develop my career and expertise in the use of zebrafish as a tool to study inflammation and its resolution. The opportunity to train under a leader in the field has allowed me the opportunity to learn cutting edge skills and techniques which will be instrumental to my future career development.</p>
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Plans for continuing collaboration:	I plan to continue my collaboration with Prof Rossi and his research group at the University of Edinburgh. I have already had extensive discussions with Prof Rossi regarding the future direction of our collaborative efforts. In the short term we are planning a paper for submission for publication which will include the data I generated during my research visit. This data will also form the basis of a planned fellowship application. Furthermore, I will return to Edinburgh in December 2019 to discuss the logistics and specifics of our continued collaboration.
Publication plans:	At present we are planning a paper for submission for publication which will include the data I generated during my research visit. I also plan to generate further research publications and review publications during my fellowship.
International dissemination:	I recently presented the data generated during this research visit at the American Society of Nephrology conference in Washington (5-10th Nov 2019). The poster presentation was very well received.
National dissemination:	I plan to submit an abstract (oral presentation) to the Irish Nephrology Society conference (April 2020) and the Irish Society of Immunology annual meeting (Sept 2020) to present the data generated during this research visit.
Additional collaborations:	This project also represents a continued collaboration with Prof Patrick Guiry's group (UCD School of Chemistry) whose lab generated a number of the molecules tested in this model, as well as a continued collaboration with our international collaborators at Monash University, Melbourne (Prof Mark Cooper and Dr Philip Kanthardis).
Outreach:	The Diabetes Complications Research Centre in UCD which I am part of has run a number of patient engagement events over the last two years for patients with diabetes and their families. The aim of these events is to inform patients about the research going on in the centre. I have participated in and presented at these events previously. I will present some of the research undertaken during my research visit as part of the next planned event. Last year I also presented at a Summer School for 4th and 5th year secondary school students. I spoke to the students about the utility of zebrafish to investigate human disease. I will participate in this event again this year where I will share some of the data generated during the course of this project.