Associate Professor **Robert Andrews**

Place of employment and host institution: University of Exeter, United Kingdom

Host principal investigator: Ingrid Willaing, Steno Diabetes Center Copenhagen

Title of project: How can an online education program improve knowledge of patients with Type 1 diabetes and health care professionals on managing glucose around exercise?

ABSTRACT

Physical exercise has significant benefits for people with type 1 diabetes (T1D). These include reduced mortality, reduced glucose variability and improved quality of life. These benefits are particularly relevant in the current times of pandemic and 'lockdown'. However, we and others have clearly demonstrated, using both subjective and hard objective measures, that exercise levels in people with T1D are only three-quarters that of people without T1D. These findings are also highly relevant to the Danish T1D population. Over the past 10 years, we have undertaken significant work to explore and address the barriers to exercise in people with T1D and to provide evidence-based support to undertake safe and effective exercise and to enjoy its associated health benefits. Our programme of work is now well established in the UK. The overarching purpose of this visiting professorship is to set up a clinical research programme around T1D and exercise in Denmark by bringing together a unique multi-disciplinary group of exercise and diabetes experts, people with T1D, and experts in developing structured education programmes from Denmark and the UK. Specifically, we will be aiming to culturally adapt and test an online education programme for people with T1D to guide insulin and carbohydrate adjustment for safe and effective exercise for a Danish population. We hope this has potential to expand across the other Steno centres in Denmark. Furthermore, we will use the visiting professorship opportunity to strengthen collaboration between the University of Exeter's Clinical Diabetes Research Team, Steno Diabetes Center Copenhagen (SDCC), and The University of Birmingham, as well as to identify collaborative funding opportunities to support a programme of ongoing international research across our sites. We will also pursue an international research program on type 1 biology (e.g. preservation of beta cells, SDCC), molecular biology (muscle physiology, University of Copenhagen) and clinical research programs on physical activity in children with T1D.