

## **2017-2020 PHD RESEARCH** **DANIEL HILL – PHYSIOLOGY**

### **OVERVIEW AND AIMS OF THE RESEARCH PROJECT**

Daniel's research will look at whether we can physically enhance Outlook's expedition participants to better prepare them for an expedition and as a result, increase their general health and well-being.

Through various research projects and activities (see below), Daniel plans to devise practises and training methods that will help to increase participant satisfaction levels. One of the possible ways to do this would be via a fitness-based intervention designed to reduce fatigue and increase enjoyment levels whilst on expedition.

### **RESEARCH ACTIVITY**

1. Project 1 (November 2017-August 2018) was split into two studies; a retrospective and prospective study. The retrospective study analysed Outlook's past data to determine the biggest physiological issues participants are having on expedition. The prospective study is an observation of participants during expedition and a prediction of their physiological responses (e.g. sense of effort) based on information gathered during their Final Preparation Day.
2. Project 2 (November 2018-October 2019). Building on data gathered from both of project one's studies, the next phase is to create an intervention(s) to enhance the physiological variable(s) found to cause the biggest issues during expedition. This project will be split into two phases; a design phase and an implementation phase.
3. Project 3 (June 2019-May 2020). An evaluation of the effectiveness of the intervention(s) created in project two.

### **CURRENT STATUS – SUMMER 2018**

In the last quarter, the main focus was on the retrospective study in Project 1. It involved analysing all the cases where physiological issues were reported to the Outlook Expeditions Operations Room during the 2017 season. Each case has been categorised into the cause type, for example; fitness levels, altitude, heat and nutrition. Not all physiological issues are reported as many minor issues are dealt with by Expedition Leaders with no need for external support. Daniel has been looking at all other available information sources to help design the prospective study.

Daniel has also been looking at each stage of the build-up programme to understand how participants are currently being prepared for expedition. He will be working some shifts in our Operations Room this summer to understand first hand what sorts of physiological issues are reported and what the causes and outcomes are. He will also be working with some of our expedition teams, conducting pre-departure fitness tests and training the team on how to conduct further tests while on expedition.