Proposal Acronym	SCUBAfix
Proposal Title:	Investigating the pathophysiology of acute and chronic damages associated with SCUBA diving and the procedures to counteract them
Surname:	Barak
First name(s):	Otto
Research area:	Life sciences LIF
Sub-discipline of research area:	Physiology, Pathophysiology Organ physiology
Category of research:	applied
[redacted]	[redacted]
Abstract:	The goal of the proposed project is to observe what manoeuvres may ameliorate the damages associated with self contained under water breathing apparatus (SCUBA) diving. This goal will be accomplished through two specific aims. First we want to investigate the impact of pre-dive exercise and repetitive diving on the incidence of arterialization, endothelial function, and vascular inflammation. We hypothesize that repetitive diving alone will cause cumulative damages while including exercise before diving will reduce them. Second, we want to investigate the acute effects of arterialization. This will include the quantity and timing of arterial gas emboli (AEG) that may travel through the brain and whether these cerebral emboli correlate to acute alterations in cognitive function testing. We hypothesize that AGE will result in cerebral emboli detectable by the transcranial Doppler and its quantitative markers will correlate with performance alterations in cognitive functions.
Does this proposal possess any of the sensitive ethical issues detailed in ethical issues table?:	Yes