



Graduate School of  
Biomedical Sciences

Department of Physiology & Anatomy

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## **Justin Lawley, Ph.D.**

*Professor & Chair, Division of Performance Physiology & Prevention, Department of  
Sports Science  
University of Innsbruck, Austria*

### **“Normal gravitational gradients on Earth: What does microgravity add to the mix?”**

Humans evolved under the constant weight of Earth’s gravity, thus they are particularly susceptible to changes in gravitational gradients. This seminar will discuss some of the health concerns about “space travel”, particularly the recent phenomena of Space Flight Associated Neuro-ocular Syndrome (SANS) and the potential of cerebral hypoperfusion in space. Firstly, we will discuss the potential pathophysiology of SANS, including some background on intracranial pressure and cerebral spinal fluid dynamics. Thereafter, examine both ground based and parabolic flight studies that aimed to identify the most likely pathological cause of this syndrome and thereafter the development of potential countermeasures. The final part of the seminar will slightly change in focus to examine the impact of bedrest on cerebral blood flow, including recent unpublished data, and critical comparisons to parabolic flight, the International Space Station and post ISS flight experiments.

**Friday, January 15, 2021, 11:00AM-12:00PM, Zoom  
University of North Texas Health Science Center  
Fort Worth, Texas**