SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Enabling the Future - Developing the Space Workforce (5)

Author: Prof. Jeffrey Sutton
Center for Space Medicine, Baylor College of Medicine, United States

Prof. Dorit Donoviel
Center for Space Medicine, Baylor College of Medicine, United States
Dr. Jonathan Clark
United States
Ms. Nancy Gibbins
United States

TRAINING THE NEXT GENERATION OF SPACE DOCTORS

Abstract

Humans living and working in space for long periods of time require specialized healthcare services from medical professionals who understand the physiological and behavioral adaptations to spaceflight. These caregivers must know how to provide routine, emergency, and disease management care in extreme environments. There are few places in the world that provide such specialized training.

To meet the future demands of human space exploration, the Center for Space Medicine (CSM) was established in 2008 at a department level within a major U.S. medical school, Baylor College of Medicine (BCM). CSM has 13 core faculty members and more than 40 affiliate members, including physician astronauts. The primary activities are medical education, research in space medicine, and collaboration at the frontier of clinical care. Leading researchers and physicians regularly visit CSM to contribute to its activities.

Between 2009 and 2012, CSM established a novel four-year Space Medicine Track for undergraduate medical students. The first year didactic elective is among the most popular on campus, with more than 40 percent of students enrolled in 2014. Non-didactic elective courses include a space medicine journal club, and a mentored research elective. Examples of research projects include work on physiologic monitoring systems for aerospace applications, cerebral oxygen delivery at high altitude, and evaluation of pupillometry for detection of intracranial pressure changes in healthy volunteers and idiopathic intracranial hypertension patients.

The Space Medicine Track is a significant draw for student recruitment to BCM. Seven students have completed the track. In addition, an M.D. resident completed his Ph.D. in neuroscience and space medicine, and two M.D./Ph.D. graduates are commencing their aerospace medicine residencies in 2015.

CSM partners with the National Space Biomedical Research Institute, a NASA-funded academic consortium, and together they are located in the Consolidated Research Facility in the heart of the Texas Medical Center. State-of-the-art laboratories enable CSM to fully utilize local medical expertise and resources while attracting world-renown clinicians and researchers to help it train the next generation of space doctors.