Roundtable IV: Human Enhancement & Biomedical Innovation

Speaker Biographies

Bioethics in Commercial Space Travel: Charting Humanity's Next Frontier

March 19, 2026
12:00–1:30 p.m. EST
Via Zoom

DR. AMIR HADANNY

Aviv Clinics

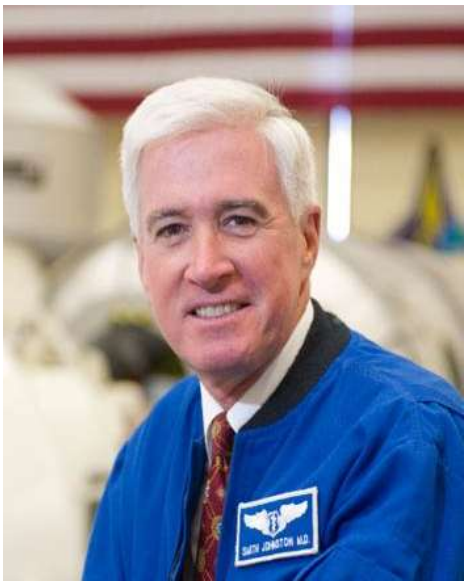
Discussant

Meet Dr. Amir Hadanny, Chief Executive Officer & Chief Medical Officer.

Amir Hadanny, MD, PhD, is a neurosurgeon, researcher, and executive specializing in novel aspects of hyperbaric medicine. He also serves as Head of Research at Aviv Scientific.

Dr. Hadanny completed his MD at Tel Aviv University, his PhD in Bioinformatics and Computational Biology focused on machine learning from Bar Ilan University, and his neurosurgery training at Galilee Medical Center in Israel. He completed a Stereotactic and Functional Neurosurgery fellowship at Albany Medical Center and a Harvard Research Fellowship at Massachusetts General Hospital.

Dr. Hadanny has published more than 70 studies on the use of a unique hyperbaric oxygen therapy protocol for neurorehabilitation and recovery in different brain pathologies.



DR. SMITH JOHNSTON

SolaMed Solutions

Subject Matter Expert

Dr. Johnston has spent most of his career as a Medical Officer and Operational Flight Surgeon for NASA's Medical Operations Branch at the Johnson Space Center. Over 35 years, he supported the medical care of the Astronaut Corps, their families, and retired astronauts. He provided operational support for two ISS Expedition missions and more than 25 Shuttle missions, including Neurolab STS-90, the Hubble repair missions STS-91 and STS-109, and the STS-107 Columbia mission. In his final years at NASA, he served as Medical Director of the Aerospace and Occupational Medicine Clinics and led NASA's Astronaut Medical Selection and Retention Standards, as well as programs in fatigue management, human health, performance, and longevity.

He became Axiom Space's first Chief Medical Officer in 2019 and retired after the successful Ax-1 mission, the first commercial crewed mission to the ISS. He recently joined the Aerospace Medicine faculty at the University of Central Florida and serves as Director of Health Innovation at SOLAMED Solutions, in addition to consulting for multiple commercial companies.

Dr. Johnston has authored over 100 publications and eight book chapters and has received major honors including the NASA Distinguished and Exceptional Service Medals, the Society of NASA Flight Surgeons Lovelace Award (2011), the Space Medicine Association Lifetime Achievement Award (2012), and the Kerwin Award (2021). Board-certified in Aerospace Medicine in 2000 and 2010, he is an Emeritus Fellow of the Aerospace Medical Association. His educational work on space medicine and its applications to human health has been featured widely, including in NOVA, Discovery Channel, Scientific American, The New York Times, The Wall Street Journal, and numerous podcasts.

DR. SARALYN MARK

SolaMed Solutions

Moderator

Saralyn Mark, MD, FAMWA, is an endocrinologist and women's health specialist and the founder and CEO of **SolaMed Solutions**, including its space medicine subsidiary. She is also the founder of **iGIANT®**, a nonprofit focused on advancing sex- and gender-specific design.

Dr. Mark has served as a medical and scientific advisor to the White House Office of Science and Technology Policy, NASA, and other public- and private-sector organizations. She previously served as Senior Medical Advisor to the U.S. Department of Health and Human Services Office on Women's Health and to NASA, where she contributed to initiatives spanning public health, emerging technologies, and human performance in space.

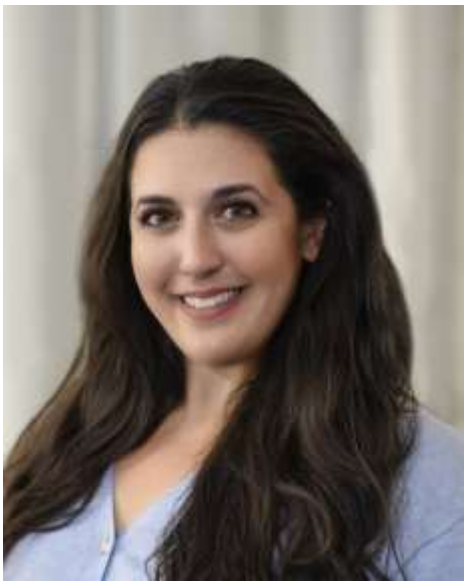
She is an adjunct Associate Professor at Yale and Georgetown Universities and a Distinguished Senior Fellow at George Mason University. Dr. Mark is the author of *Stellar Medicine* and has received multiple awards for distinguished public service.

DR. HELEN MESSIER

Bioscope.AI

Discussant

Dr. Helen Messier is a physician-scientist and leader in precision and longevity medicine, working at the intersection of molecular biology, clinical care, and new models of care delivery. Trained in genetics and holding a PhD in molecular immunology and an MD in family medicine, she has focused her career on moving medicine upstream toward prediction, prevention, and understanding root cause. A pioneer in bringing multi-omics into clinical practice, she has advanced the use of genomics, metabolomics, microbiomics, and AI to make complex biological data actionable for clinicians. She has founded concierge medical practices, led genomic strategy at Human Longevity Inc., and served as Chief Medical Officer at Viome, Fountain Life, and now Bioscope.ai. A long-standing educator with the Institute for Functional Medicine, scientific advisor, and sought-after speaker on AI, longevity, and women's health, Dr. Messier is driven by a deeply human approach to translating data into care that helps people live longer, healthier lives with greater vitality and resilience.



DR. VASILIKI RAHIMZADEH

Baylor University College of Medicine

Ethicist

Vasiliki Rahimzadeh, PhD, is an assistant professor of medical ethics and health policy at Baylor College of Medicine. Her National Institutes of Health-funded research program investigates the ethical, legal and social issues (ELSI) of sharing genomic and related health data on Earth and in space. She directs the Mission to Enhance Ethics Education, Outreach and Research in Space (METEORS) program where she contributes to evidence-based standards for human research protections in the commercial spaceflight industry and supports space medicine investigators navigate emerging ELSI in their work. She is also a standing member of the Bioethics Panel for the National Aeronautics and Space Administration and chairs the Astro-Ethics Affinity Group through the American Society for Bioethics and Humanities. Dr. Rahimzadeh has a BS in microbial biology from the University of California Berkeley and earned a PhD with specialization in biomedical ethics from McGill University before completing a postdoctoral fellowship at Stanford University.

DR. JOSEF SCHMID

NASA

Discussant

Dr. Joe Schmid is a NASA/USAF (ret.) Flight Surgeon and Family Physician at the Johnson Space Center in Houston, Texas. He is the Lead, Orion (Artemis) Medical Operations. Dr. Schmid is a Senior FAA Aviation Medical Examiner qualified for all class certificates. Dr. Schmid's patients are current Astronauts and their family members, other flight surgeons, engineers, retired Astronauts including those from the Gemini and Apollo programs, an X-15 pilot and retired shuttle Astronauts. Dr. Schmid is the physician TRR board member and 1st call surgeon for Astronaut analog training missions. Dr. Schmid is the Chair, Lifetime Surveillance of Astronaut Health, a current member and previous executive secretary of the JSC Aerospace Medicine Board. Dr. Schmid is the physician board member of the (Stafford) NASA Advisory Committee. He is the former deputy of the JSC Flight Medicine Clinic and the current Medical Operations representative to the Exploration Medical Capability Project. He is the former Lead for Space Medicine Training, responsible for training medical students, other flight surgeons, astronaut crew medical officers and biomedical engineers. He served as the UTMB Aerospace Medicine Residency Co-Director for 13 years. He is also the former Lead for the Electronic Medical Record system. His space medicine experience is as a SURGEON console operator for Shuttle, ISS and for EVAs and Crew Surgeon for Shuttle missions STS-116, STS-120 and for the long duration missions to the International Space Station (ISS) for Expeditions 18, 24, 29, 38, 48, 55, 62 and upcoming 68 with additional missions with shuttle and Soyuz landing and crew recovery operations at KSC, Edwards AFB, Baikonur, Arkalyk and Dzezkazgan, Kazakhstan. Dr. Schmid is a recently retired Major General, USAFR, as the ranking Air Reserve medic and Mobilization Assistant to the Surgeon General of the Air Force, Headquarters U.S. Air Force in Washington, D.C. His previous assignment was as the Deputy Joint Staff Surgeon and Director, Reserve Medical Readiness Operations and Affairs, Special Staff to the Chairman, Joint Chiefs of Staff, Washington, D.C.

General Schmid graduated Summa Cum Laude from Belmont Abbey College in 1988. Among his previous military assignments were at Travis, Kadena and Rhein-Main AB as a Flight Surgeon, Family Practitioner, staff Family Physician, Emergency Services,

Public Health Officer, Chief of Occupational Medicine and Specialist in Aerospace Medicine. He has deployed in support of the Defense Institute of Medical Operations to Nepal, Mexico, Rwanda, Romania and Sri Lanka. He was an IMA to Space Command Surgeon. He has been the Chief of Hospital Services, 433d MDS and then Commander, 433d Aeromedical Squadron, Lackland AFB.

Dr. Schmid became an aquanaut during NEEMO12, a 12 day mission to National Oceanic and Atmospheric Administration's (NOAA's) undersea Aquarius habitat. In October 2021, Dr. Schmid became the first human to be "Holoported" off the planet and into the ISS.

DR. MICHAEL SCHMIDT

Sovaris Aerospace

Discussant

Dr. Michael A Schmidt, PhD, MPhil, FAsMA a Professor of Aerospace Medicine at the UCF College of Medicine and is the CEO and Chief Scientific Officer of Sovaris Aerospace in Boulder, CO. He is considered among those leading the advancement of precision (personalized) medicine in human spaceflight and high-performance operations on Earth. Dr. Schmidt has also been instrumental in development of the field of multiomics applied to human spaceflight (genomics, epigenomics, transcriptomics, proteomics, metabolomics, microbiomics, and pharmacogenomics), coupled with physiological and behavioral phenotyping in high performance environments. His work also includes leading development of the Astronaut Digital Twin Program.

Beyond spaceflight, Dr. Schmidt has three decades of experience working with elite performers in extreme environments, which includes molecular profiling and countermeasure efforts for humans ranging from wilderness medicine, SWAT, high altitude ascent, military Special Operations Forces, military aviators, Olympic athletes, and professional athletes (NFL, NBA, etc.). Among this work, he led the molecular profiling and countermeasures efforts for the Golden State Warriors when they set the NBA record for wins in a season (73-9) and Corvette Racing when they won the 24 Hours of Le Mans.

Dr. Schmidt is on the NFL Players Association (NFLPA) Mackey-White Health and Safety Committee and is a founding member of the NFLPA Scientific Advisory Board. He is also an advisor to the US Naval Special Warfare Group TWO (SEAL teams) and to the US Navy Strike Fighter Tactics Instructor Program (TOPGUN School).

Dr. Schmidt is co-editor of the textbook (2025), “Building a Space Faring Civilization” and the forthcoming (2027) “Fundamentals of Research for Human Spaceflight,” (Academic Press, Elsevier). He is a Fellow of the Aerospace Medical Association (FAsMA) and is the former President of the Life Sciences and Biomedical Engineering Branch of the Aerospace Medical Association (currently on the Board of Governors). Dr. Schmidt also currently leads the chapter development on the biomedical drivers of

space architecture for the American Institute of Aeronautics and Astronautics (AIAA) Space Architecture 2025-2034 Decadal Survey (AIAA Space Architecture Technical Committee).

Dr. Schmidt did his PhD research in Molecular Medicine and Biochemistry within the Space Biosciences Division at NASA Ames Research Center under the Chief Medical Officer. This also included work with the NASA Human Information Processing Research Branch, and a Fellowship at NASA's Human Systems Integration Division and the Psychophysiology Research Laboratory. He received a second Ph.D. in Neuroscience from Lancaster University focused on molecular modulators of neuroplasticity (with pilot work at the University of Cambridge, Addenbrookes Hospital) and did additional studies in data and models at MIT.

DR. WALTER SIPES

Consultant

Discussant

Walter Sipes, PhD is an experienced aerospace and operational psychologist who has provided several years of mental health support for individuals (US Air Force personnel, aircrew, astronauts) and their families. His own operational experience firstly as a US Army aviator include logging 500 combat flight hours in helicopters and later logging another 500 flight hours as an Air Force psychologist as the psychology Human Factors Consultant to the US Air Force Surgeon General. He has been a human factors consultant on 37 aircraft accident investigation boards. He participated in US and Canadian astronaut selection programs for 35 years and screening commercial spaceflight participants for 4 years. After he retired from the Air Force, he was a psychologist for NASA at Johnson Space Center for 15 years where he conducted training and psychological support/services for both Shuttle and ISS missions to astronauts and their families. He retired from NASA and as an independent contractor, he has had contracts with the Canadian Space Agency and Axiom Space. His research and publications have spanned topics of military pilot psychological test norms, spatial disorientation, psychological support for long-duration missions, cognitive performance in spaceflight, training ISS astronauts, and fatigue countermeasures for long duration spaceflight missions. He is currently on two international committees focused on developing medical standards for commercial passengers and on developing training standards for commercial spaceflight passengers.

KONRAD SZOCIK

University of Information Technology & Management

Ethicist

Konrad Szocik is a philosopher and bioethicist, and professor and vice-rector for research and international cooperation at the University of Information Technology and Management in Rzeszów, Poland. His research focuses on the philosophy, ethics, and bioethics of space exploration, human enhancement, feminist bioethics, population ethics, and selected issues at the intersection of futures studies, technology, and the environmental crisis. He is the author of The Bioethics of Space Exploration (Oxford University Press, 2023) and Feminist Bioethics in Space: Gender Inequality in Space Exploration (Oxford University Press, 2024), as well as numerous journal articles and book chapters on space ethics, space bioethics, antinatalism, and climate-related existential risk. Previously, he was a Visiting Fellow at the Yale Interdisciplinary Center for Bioethics (2021–2022).

DR. PAUL ROOT WOLPE

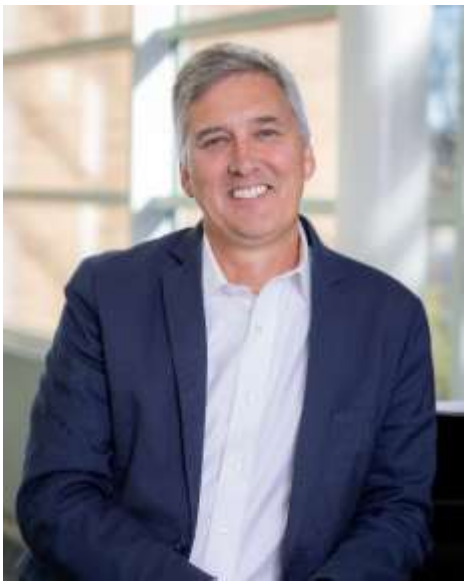
Emory University

Moderator

Paul Root Wolpe, Ph.D., is the Raymond Schinazi Distinguished Research Chair of Jewish Bioethics at Emory University and Professor of Medicine, Pediatrics, Psychiatry, Sociology, and Neuroscience and Behavioral Biology. After 16 years directing Emory's Center for Ethics, he is now building the university's Center for Peacebuilding and Conflict Transformation (PACT). Dr. Wolpe spent 17 years as NASA's first Senior Bioethicist, shaping policies for human health in spaceflight, and served as the first National Bioethics Advisor to Planned Parenthood Federation of America. He is Past President of both the Association of Bioethics Program Directors and the American Society for Bioethics and Humanities, and is a Fellow of the Hastings Center and the College of Physicians of Philadelphia. He received an Honorary Doctorate of Humane Letters in 2019.

A national thought leader, Dr. Wolpe's work examines the ethical, social, and ideological impact of medicine and biotechnology. A founder of neuroethics and former Editor-in-Chief of *AJOB Neuroscience*, he was named one of Trust Across America's "Top 100 Thought Leaders in Trustworthy Business Behavior" and received the 2011 World Technology Network Award in Ethics, the 2022 Tzedek Award, and the 2025 Humanitarian Award from the International Center for Missing and Exploited Children.

Author of more than 150 publications and over 500 invited presentations, Dr. Wolpe has been recognized as a Faculty Row "SuperProfessor" and a Teaching Company "Superstar Teacher." His TED Talk has over two million views, and he has been featured widely in media, including *60 Minutes* and a personal profile in the *New York Times* Science Times.



DR. MATTHEW WYNIA

University of Colorado

Ethicist

Dr. Wynia is a clinician-researcher and leader in bioethics with a history of exploring some of the most contentious ethical issues in health care, focusing on those related to the social roles of health professionals. He is a professor of medicine and of public health at the University of Colorado, where he directs the CU Center for Bioethics and Humanities.

Prior to his current role, he spent 18 years at the American Medical Association, where he led the AMA's Institute for Ethics and Center for Patient Safety, and he was the Director of Patient and Physician Engagement for the Improving Health Outcomes team. While there, he co-founded the Commission to End Health Care Disparities and he led the Project on the History of African-Americans and the Medical Profession that, in 2008, prompted the AMA's public apology for a legacy of racial discrimination and exclusion in organized medicine. He has served on advisory boards for the US DHHS Office of Minority, the Joint Commission, the American Board of Medical Specialties, American Board of Internal Medicine, and other national medical, public health and bioethics professional organizations. At the National Academies, he currently serves on the Board on Health Sciences Policy and has served on multiple consensus committees and chaired special projects on team-based care, transdisciplinary professionalism, and public health approaches to preventing ideologically-motivated violence.

LAURIE ZOLOTH

University of Chicago

Ethicist

Professor Laurie Zoloth holds the Margaret E. Burton Chair of Religion and Ethics at the University of Chicago. She has a distinguished career as a bioethicist and scholar of Jewish ethics, writing or editing 10 books, and over 350 articles. She was both President of the American Academy of Religion and President of the American Society for Bioethics and Humanities, receiving its Distinguished Service Award in 2007. She was a co-founder of the Society for Jewish Ethics and founding chair of the HHMI Bioethics Board. She served on the NASA National Advisory Council, for which she received the NASA National Public Service Award. She has served as both the dean of the Divinity School and as Senior Advisory on Social Ethics at the University of Chicago. Her honors include the Graduate Theological Union's alumna of the year, an honorary doctorate from the American Jewish University, the Engelhardt Award in Bioethics and the Borsch-Rast Book Award in Religion. She is a Fellow of the Hastings Center and a Life Member of Clare Hall, University of Cambridge. In addition to her 1999 book about justice and health care policy, The Ethics of Encounter, and five edited books, her most recent books (2022-2023) are Second Texts and Second Opinions: Essays toward a Jewish Bioethics and Ethics for the Coming Storm: Climate Change and Jewish Thought, both from Oxford University Press, and May We Make the World?: Gene Drives, Malaria, and the Future of Nature, from MIT.