**Space Medicine Association**

**2016 Officer Election**

**Ballot**

**Vote for one President-Elect candidate:**

**\_\_\_\_** John B. Charles

**\_\_\_\_** Joseph P. Dervay

**\_\_\_\_** Jeffrey P. Sutton

**Vote for one Secretary candidate:**

**\_\_\_\_** Tarah L. Castleberry

**Vote for two Member-at-Large candidates:**

**\_\_\_\_** Andrea Hanson

**\_\_\_\_** Judith Hayes

**\_\_\_\_** Kathryn Hughes

**\_\_\_\_** Derek Nusbaum

**SMA Officer Election 2016**

**Candidate Biographies**

Candidates for President-Elect:

John B. Charles, Ph.D

John B. Charles, Ph.D., is the Chief Scientist of NASA’s Human Research Program (HRP), responsible for the scientific direction of research and development enabling astronauts to go beyond low Earth orbit and eventually to Mars. Previously he was HRP’s Associate Manager for International Science and led NASA’s space life sciences planning for the joint US/Russian one-year mission on ISS and the Twins Study.

Dr. Charles earned his B.S. in biophysics at The Ohio State University and his doctorate in physiology and biophysics at the University of Kentucky. He came to the Johnson Space Center in 1983 a postdoctoral fellow and became a civil servant in 1985. He is co-developer of the Shuttle-era fluid-loading countermeasure, and investigated the cardiovascular effects of space flight using ultrasound, re-entry data recording and in-flight lower body negative pressure on Space Shuttle astronauts and on crewmembers of the Russian space station *Mir*. He coordinated all of the NASA-sponsored biomedical, biological and microgravity science investigations as Mission Scientist for American astronaut missions on *Mir*, on STS-95, John Glenn’s Shuttle flight, and on STS-107, Columbia’s last mission in January 2003.

He is a Fellow of the Aerospace Medical Association and has been a member since 1983. He is also a Full Member of the International Academy of Astronautics (IAA) and co-chaired the 18th IAA “Humans in Space Symposium” in Houston in 2011.

He has published over 60 scientificarticles and has received several professional awards.

**Joseph P. Dervay, MD, MPH, MMS, FACEP**

Dr. Joe Dervay has been a Flight Surgeon at the NASA Johnson Space Center since 1995, and has served as the Lead, Medical Operations Group. As Crew Surgeon or Deputy, he has supported numerous Space Shuttle missions, ISS long-duration missions, and the Shuttle-Mir program.

Within the Space Medicine Association, he served as “Member-at-Large” (2010-2013). An AsMA Fellow and member since 1985, he has served on AsMA ExCom & Council, and was the Scientific Program Chair for the 2007 Annual Meeting in New Orleans. He has been a member of, or Chaired, several other AsMA committees.

Trained as a Navy Flight Surgeon, he completed: residency in Emergency Medicine, the UTMB Aerospace Med. residency, the UTMB/NASA-JSC Space Med. Fellowship, and clinical Hyperbaric training at Univ. of Texas, Houston. Board Certified in Aerospace Med., Emergency Med., and Undersea & Hyperbaric Medicine.

Dr. Dervay serves as Co-Chair of the Multilateral Medical Operations Panel (MMOP), representing the international partners of the ISS, and Chairs the MMOP EVA (extravehicular) Working Group. He has conducted research and published on Hypobaric Bubble Nucleation & Decompression Sickness, and presented at several AsMA meetings.

Dr. Dervay currently holds the rank of Captain in the US Navy, with over 30 years of Active Duty/ Reserve service with numerous Navy and Marine Corps units.

Jeffrey P. Sutton, M.D., Ph.D.

Jeffrey P. Sutton, M.D., Ph.D., is the Chief Executive Officer, President and Institute Director of the National Space Biomedical Research Institute (NSBRI). He holds the Friedkin Chair for Research in Sensory System Integration and Space Medicine at Baylor College of Medicine, where he is the founding Director of the Center for Space Medicine (CSM) and a tenured Professor of Medicine and Space Medicine. Dr. Sutton received his education at the University of Toronto and Harvard Medical School. He holds M.D., M.Sc. and Ph.D. (theoretical physics) degrees, and is a Fellow of the Royal College of Physicians and Surgeons of Canada and a Diplomate of the American Board of Psychiatry and Neurology. He was a faculty member in the Harvard-MIT Division of Health Sciences and Technology for 20 years. Dr. Sutton founded the Neural Systems Group at the Massachusetts General Hospital in 1995, integrating patient care, teaching and research, including discoveries in functional MRI, computational neuroscience and smart medical systems. He served as the Team Leader of the NSBRI Smart Medical Systems Team prior to becoming the NSBRI Director in 2001. Recognition of his NSBRI leadership includes a President’s Special Citation from The Society of NASA Flight Surgeons and the NASA Distinguished Public Service Medal. In 2008, Dr. Sutton was appointed Director of CSM and subsequently developed the first-ever Space Medicine Track for undergraduate medical education. He is a lifetime member of the Space Medicine Association, sponsor of its Scientific Achievement Award, and honored to be nominated as an officer candidate.

**Candidate for Secretary:**

Tarah L. Castleberry, DO, MPH

Tarah L. Castleberry, DO, MPH – Born in Vernon, Texas, and earned a B.S. in Biology from Grand Canyon University in Phoenix, Arizona, and a D.O. degree from Kirksville College of Osteopathic Medicine in Kirksville, Missouri. She completed Aerospace Medicine residency training in the U.S. Navy, which included receiving a Master of Public Health degree from Johns Hopkins School of Public Health, and then served as a Naval Flight Surgeon for 5 years before completing Family Medicine residency at Mayo Clinic Arizona. She is board certified in Family Medicine, Aerospace Medicine, and General Preventive Medicine. Tarah was hired by the University of Texas Medical Branch (UTMB) in 2009, and served as a Wyle contracted Flight Surgeon for NASA for 3 years, supporting astronaut training in Star City, Russia, and serving as Deputy Crew Surgeon for the Expedition 30/31 crew. She is now Program Director for the UTMB Aerospace Medicine and General Preventive Medicine residencies and is also serving as the Flight Surgeon for Virgin Galactic. She enjoys running, cooking, reading, gardening, and any outdoor activities.

Candidates for Members-At-Large:

**Andrea Hanson, PhD**

Dr. Andrea Hanson manages the Exercise Physiology and Countermeasures (ExPC) Laboratory at NASA Johnson Space Center, and serves as the ISS Exercise Countermeasures Hardware Specialist. She has earned a BS in Chemical Engineering at the University of North Dakota, and Master’s and PhD in Aerospace Engineering at the University of Colorado. Dr. Hanson performed her post-doctoral work as an NSBRI Fellow in the Department of Orthopaedics and Sports Medicine at the University of Washington where her research focused on biomechanics in reduced gravity environments. She was the recipient of the 2010 AsMA Fellows Scholarship. Her research interests have focused on muscle and bone atrophy during spaceflight and development of pharmaceutical and exercise based musculoskeletal countermeasures. Dr. Hanson was a co-investigator on two shuttle payloads and principal investigator of ISS research. Today, she supports ground evaluations of portable load monitoring devices and advanced exercise concepts. She is also leading efforts in technology development to enhance human health and performance during exploration missions through application of outcomes based healthcare, and works closely with industry and DoD partners with cross cutting interests and needs. She is exploring means of incorporating exercise into a precision medicine model for the next generation of space explorers. She serves as a member of the US Space & Rocket Center (home of Space Camp) Alumni Advancement Board, and is passionate about promoting STEM education and inspiring future generations of space scientists, engineers, and teachers. She enjoys traveling, sailing, kayaking, snow skiing, and hiking with family and friends in her free time.

**Judith Hayes, MPH**

Judith Hayes is the NASA Biomedical Research and Environmental Sciences Division Chief in the Human Health and Performance Directorate at the Johnson Space Center (JSC).  She came to JSC in 1984 as a research scientist in the Neurosciences Laboratory. She established the JSC Exercise Physiology Laboratory in 1987. She was principle investigator on two Space Shuttle experiments studying the effects of microgravity on skeletal muscle performance in astronauts. During her career she managed the physiology laboratories, Reduced Gravity Programs, Space Medicine Project, and integration of biomedical research for the Space Shuttle, Russian Mir-Shuttle, and International Space Station programs.   In addition to JSC, she managed NASA laboratories at the Gagarin Cosmonaut Training Center in Star City, Russia.

She works closely with NASA’s international partners in negotiations of multiple international contracts the Japanese (JAXA), European (ESA), and Canadian (CSA) to provide ISS medical and experiment support.  She is a member of the International Countermeasures Working Group for developing global standards for spaceflight exercise and research.

Judy is the Director of the Space Life Sciences Summer Institute at JSC, an educational series for summer interns, undergraduate, graduate, and medical students.  She has published papers and book chapters related to spaceflight exercise physiology.  Over the years, she has lectured for various graduate programs at University of Texas Medical Branch and the University of Texas-School of Public Health, as well as various training programs for NASA flight surgeons and astronaut candidates.

Judy earned a Bachelor of Science and Master of Science in Exercise Physiology from West Virginia University followed by a Master of Public Health degree in Occupational Health/Aerospace Medicine from the University of Texas Health Sciences Center.  She completed a joint fellowship at The Royal College of Surgeons of England and the London School of Hygiene and Tropical Medicine supporting epidemiologic research in the development of clinical practice guidelines for the National Health Service in the United Kingdom.  She has been awarded the NASA Silver Snoopy and WVU Outstanding Alumnus. She was inducted into the WVU Hall of Fame and the WVU Academy of Distinguished Alumni.

She has been an AsMA member since 1986 and is an Associate Fellow. She currently serves as Space Medicine Association Executive Committee Secretary and has previously served as a Member-at-Large.

**Kathryn Hughes, MD, MPH**

Colonel Kathryn G. Hughes is Director, Human Systems Integration Directorate with the 711th Human Performance Wing, Air Force Research Laboratory, Wright-Patterson Air Force Base, Ohio. Her Directorate is the Air Force’s (AF) executive agency for Human Systems Integration consultation to optimize warfighter capability through a human-centric approach to system development, acquisition, and sustainment for both the AF Medical Service and Line of the AF.

Dr. Hughes graduated from the Air Force Academy in 1988, served as a pilot for seven years before attending medical school at the University of Nebraska Medical Center and becoming a physician in 1999. She earned her Masters in Public Health at the University of Michigan then completed Residencies in Aerospace and Occupational Medicine at the USAF School of Aerospace Medicine, Brooks City-Base, TX. Dr. Hughes also earned the Diploma in Aviation Medicine from Kings College London and has been an FAA Medical Examiner since 2001.

Her flying experience includes over 3,800 hours in over 25 aircraft, primarily in the T-38, RC-135, A-10 and BAE Hawk as both a pilot and pilot-physician. She is an avid Bonanza owner and private pilot with multi-engine commercial, instrument and flight instructor ratings.

Dr. Hughes served as an instructor and reconnaissance pilot before becoming a pilot-physician in 2002 when she flew the A-10 on an active duty tour with the Idaho ANG. She was then handpicked to serve as the Senior Medical Officer/Pilot on exchange with the Royal Air Force Centre of Aviation Medicine at RAF Henlow, UK, flying in clinical and flight equipment trials, providing critical feedback during flight equipment trial especially for the Typhoon and Joint Strike Fighter. She was the 412 Aerospace Medicine Squadron Commander and Chief of Aerospace Medicine at Edwards AFB, responsible for advancing the Test Wing mission through comprehensive aeromedical, dental, occupational, environmental, health promotion, optometry and aircrew performance services. Prior to her current position she served as the Chief, Aeromedical Branch for the Air Force Reserve Command (AFRC) at Robins AFB, GA, providing oversight of physical standards and all key aspects of AFRC's aerospace medicine program. She also assisted with management of AFRC flight medicine, immunizations, occupational health and environmental programs providing medical dispositions and recommendations for over 71,000 Air Force Reserve members at 60 bases.

Dr. Hughes has been a member of AsMA since 1998, presented at seven meetings, chaired three panels and spoke at the annual luncheon of the Aerospace Physiology Society. She has been involved with many constituent organizations, most significantly the Society of USAF Flight Surgeons since 1999 where she is currently a Member at Large and previous Chair of their Awards Committee for five years. Dr. Hughes has been a member of the International Association of Military Flight Surgeons Pilots since 1999 and held the positions of Secretary, President-Elect and President (2013-2015). As IAMFSP President, she served on AsMA Council for two years. She also supported numerous AsMA committees/groups, notably the Nominating Committee for four years, Awards Committee for three years, Aerospace Safety Committee and Associate Fellows Group.

Dr. Hughes was selected as AsMA Fellow in 2011 as she finished her Residency in Aerospace Medicine, also earning the Julian Ward Award for Outstanding Resident in Aerospace Medicine the same year. She was awarded the Harry G. Moseley Award in 2009 for contributions to flight safety and earned the Certificate in Aerospace Physiology in 2014 through the Aerospace Physiology Society.

Derek Nusbaum, MD

Derek Nusbaum is a resident physician in Aerospace Medicine at the University of Texas Medical Branch. He completed an Internal Medicine residency at the Baylor College of Medicine in Houston, Texas and, while there, completed a Ph.D. in Neuroscience and Space Physiology.  His research during and following graduate school focuses on the physiologic and functional changes of impaired visual function and elevated intracranial pressure associated with long-duration spaceflight.  He received his B.A. in Biological Sciences from Northwestern University in Chicago, Illinois, with a concentration in Neurobiology and his medical degree from Michigan State University College of Human Medicine.  He is an associate member of the Center for Space Medicine at the Baylor College of Medicine, a member of the American College of Physicians, a resident member of the Space Medicine Association and an Associate Fellow of the Aerospace Medical Association (where he has participated as the Deputy Chair of the Education and Training Committee, as well as a member of the Science and Technology Committee, the Corporate and Sustaining Membership Committee, and the Long Range Planning Committee). He has received the Space Medicine Association Wyle Scholarship in honor of Robert Ellis, the Jeffrey R. Davis, M.D., Aerospace Medicine Endowed Scholarship, the International Association of Military Flight Surgeon Pilots Scholarship, the Space Medicine Association Jeffrey R. Davis Scholarship, and the Aerospace Medical Association/Aerospace Medicine Student and Resident Organization Scholarship.

Dr. Nusbaum has special interests in remote/mobile, international, and travel medicine and has spent time working in Zambia, Botswana, Tanzania, Costa Rica, and Nepal, utilizing telemedicine to improve access to medical care for underserved areas of the world.  For his efforts, he has received multiple grants, including the Christus Foundation for Healthcare, Hitoshi Nikaidoh, M.D. Memorial Endowed Scholarship.

Dr. Nusbaum has recently served as the Medical Coordinator for the Wings Over Houston Airshow and has acted as medical support for missions at the Aquarius Underwater Laboratory off the coast of Key Largo, Florida. He is also a volunteer physician at the San Jose Free Clinic in Houston and works part time as an instructor for medical students on ultrasound imaging techniques for use in austere environments. In his free time, he enjoys SCUBA diving, running and hiking and is currently completing his private pilot certification and Class A parachuting certification.