

Ever Upward: April 2023

Scholarship Winners Announced

AsMA International Aerospace Medicine Scholarship Sophie Levasseur is a third-year medical student at McGill University in Montreal, Canada. She holds a bachelor's de-



gree in Honours Behavioral Neuroscience from Concordia University. She began her career as a Research Assistant at the McGill Centre for Studies in Aging in Verdun, Quebec, Canada. She then became a Research Assistant at the Neurobiology of Learning Lab at Concordia University, Montreal, Quebec. She went on to become a Medical Scribe for Jewish General Hospital's

Emergency Department in Montreal. She is currently a vaccinator with the Quebec COVID-19 Vaccination Campaign.

Sophie is the founder and co-president of McGill University's first Space Medicine Interest Group (SMIG), a Co-President of the McGill Student Surgical Society, and a CSTARS CSAM Medical Student Representative. She also mentors other students as an Osler Co-Leader and an Academic Immersion in Health Mentor. Her achievements include receiving the Leon Cynader Scholarship in the Sciences from Concordia University, the Science College Scholarship, also from Concordia, and the McGill University Faculty of Medicine Entrance Scholarship from McGill University. Her current research focuses on the effects of spaceflight on venous thromboembolism formation.

Anita Mantri, Ph.D., Memorial Travel Scholarship

Samuel Stephenson, M.D., is a recent graduate of Eastern Virginia Medical School (EVMS). He is from Culpeper, VA, and completed his undergrad in 2019 at the University of



Virginia with a major in kinesiology. He then moved to Norfolk, VA, to attend Eastern Virginia Medical School, from which he will graduate in May 2023 with an M.D. During medical school, he has spent over 200 hours volunteering in the local community. He helped to fight the COVID-19 pandemic by working on a team that used 3-D printers to make respirators which were

used by the Children's Hospital for the King's Daughters during the early pandemic when there was a critical personal protective equipment (PPE) shortage, and he volunteered at numerous vaccine clinics helping administer COVID-19 vaccines to the local community. He also worked hard to spread his passion of exercise and nutrition as medicine by leading exercise classes and nutrition discussions at the Salvation Army Adult Rehabilitation Center, working with the Portsmouth Diabetes Prevention Program, and even serving as a running pacer at local half marathons.

While at EVMS, Samuel has also worked extensively with Professor Richard Britten in his research lab looking at the effects of space radiation on cognitive function in rats. Sam developed a novel touchscreen switch task and completed and published his first study titled, "Simulated Space Radiation Exposure Effects on Switch Task Performance in Rats" in Aerospace Medicine and Human Performance. He has a second manuscript currently under review for publication and the switch task he developed is continuing to be used by his lab for future space radiation research projects. He completed the NASA Aerospace Medicine Clerkship last October, where he worked with Justin Pratte and Arian Anderson on the project he will be presenting at AsMA's 93rd Annual Scientific Meeting titled, "Principles for Termination of Medical Care in Austere Analog Environments for Development of Spaceflight Protocols". He will begin his residency training in June 2023 at UTMB in the combined Internal Medicine/Aerospace Medicine program.

Samuel's honors and awards include Area of Distinction Recognition in Medical Knowledge, Service to the Community, Research, and Scholarly Activities; Dean's Honor List 2015-2018; Intermediate Honors in Fall 2017, and receiving the "Z Society" Award. He is author or co-author on 12 publications/presentations and is a member of the Ultrasound Club, the Undersea and Hyperbaric Medical Society, the American College of Cardiology, the American College of Physicians, the American Medical Association, the Aerospace Medicine Student and Resident Organization, and the Aerospace Medical Association.

Stanley R. Mohler, M.D., Aerospace Medicine Endowed Scholarship

Cyril Mani is a final-year aerospace engineering student at McGill University, Montreal, Canada, completing—with a parabolic flight campaign—his ESA-funded thesis investi-



gating spacecraft propulsion in microgravity. From 2019-2022, he led 25 engineering students to build and launch the first Canadian experimental student rocket, while also working on Canada's very first commercial launch capacity. His work on leading the development of Montreal's first rocket engine test facility led to being invited to present at IAC

2022 in Paris and CI/CS 2022 in Ottawa amongst other presentations.

After seeing the impact of propulsive technologies in the war in Ukraine, Cyril pivoted his career to aerospace medicine and joined the Space Medicine and Astronaut Health division of the Canadian Space Agency (CSA). There, he applies his engineering skillset and system-based perspective to develop biomedical technologies that optimize patient care in deep space. He contributes to the flagship Connected Care Medical Modules program, where

See 'Cyril,' p. N11

From 'Cyril,' p. N10

cutting-edge medical tools and AI platforms are deployed in space station medical bay mock-up containers for testing across remote communities in Canada. Simultaneously, he pursues aerospace medicine research with firms like Thales, where he explores the combination of machine learning models and biomonitoring devices for point of care medical decision support systems and interoperable pipelines for diagnostic support.

Cyril will use his scholarship to finance his participation in AsMA 2023 and to support application fees for M.D.-Ph.D. programs in Canada. He wishes to obtain a Ph.D. in biomedical engineering and clinical experience through an M.D., to explore the aerospace use cases for healthcare technology tools from an engineering, physiological, and clinical point of view. He is a member of the IEEE Engineering in Medicine and Biology Society, the McGill Institute for Aerospace Engineering, the Order of Engineers of Quebec, Youth Science Canada, the Aerospace Medicine Student and Resident Organization, and the Aerospace Medical Association. His previous awards include the fullride Schulich Leader Scholarship at McGill University in 2019, the Director's award of the CSA in 2022, the Future (2019) and Succession (2023) Scholarship of the Order of Engineers of Quebec, and the Canadian Association of Physicists Award (2019).

Jeffrey R. Davis, M.D., Aerospace Medicine Endowed Scholarship

Alex Suh is an M2 medical student originally from Omaha, NE, studying at Tulane University School of Medicine in New



Jniversity School of Medicine in New Orleans, LA. His passion for science and the human body led him to pursue an undergraduate degree in Cell and Molecular Biology at Tulane University. He began his education studying physics at the University of Nebraska at Omaha and then was part of an exchange program at Yonsei University, Seoul, Korea, studying microbiology and taking a Korean Intensive

Language Program before attending Tulane University.

Alex's fascination with astronomy and space began in childhood, sparking an interest in applying for an internship at NASA. He started as a Research Intern at the University of Nebraska Medical Center in the Departments of Pharmacology and Experimental Neuroscience and Ophthalmology and Visual Sciences. He then designed a prototype of an aircraft wing at the Tulane University Novel Tech Challenge. Later he became a videographer and editor at Suh-Hermsen Omni Glasses. Last summer, he had the opportunity to conduct research in the Cardiovascular and Vision Laboratory at NASA's Johnson Space Center as a University Space research Association Intern. During this time, he investigated the effects of spaceflight on the human body, applying his knowledge of biology and physiology to an entirely new field of study.

Alex is President of the Tulane University Aerospace Medicine Student and Resident Organization and is serving as Communications and Logistics Chair in the Tulane University Social Contexts in Medicine Program. He took part in a

Late Breaking Room Changes for AsMA's 93rd Annual Scientific Meeting

Changes to the Napoleon Ballroom scientific session rooms were made in an effort to maximize seating space. The table below explains the changes.

Napoleon Rooms in the April AMHP Journal Napoleon Rooms in the Meeting App & Addendum

Napoleon Ballroom C1-D1 Napoleon Ballr Napoleon Ballroom C2-D2 Napoleon Ballr Napoleon Ballroom C3-D3 Napoleon Ballr Napoleon Ballroom A1-B3 remains the same.

Addendum Napoleon Ballroom C1-C2 Napoleon Ballroom D1-D2 Napoleon Ballroom C3

In addition, the workshops were originally listed as being in the Napoleon Ballrooms as well, but are now in Rhythms Ballroom as below:

The Aerospace Medicine Faculty Development Workshop is now in Rhythms Ballroom III.

The Altitude Decompression Sickness—Pathophysiology, Diagnosis, Treatment, and Mitigation workshop is now in Rhythms Ballroom I.

The Establishing Peer Support Programs Across All Aviation Segments workshop is now in Rhythms Ballroom II.

Medical Mission Trip with Rotary Club International as a Mission Leader in July 2022 and is a volunteer at Luke's House Eye Clinic in New Orleans. He is author or co-author on over 15 publications and his awards include being a semifinalist in the Coca-Cola Scholars Program in 2017, receiving the 2018 Veterans of Foreign Wars Voice of Democracy Scholarship, becoming a National Speech and Debate Quarter-Finalist in Informative Speaking in 2018, winning a Tulane University Center for Public Service Felson Service Grant 2018-2020, and being both a Tulane University Distinguished Merit Scholar and Weatherhead Scholar from 2018-2022.

2023 Associate Fellows Announced

The following members of the Aerospace Medical Association have achieved Associate Fellow status and were approved by the Executive Committee: Jeffrey Althoff, Chris Bates, Quen Shaw (Thomas) Chong, Joseph Connolly, Daniel Danczyk, Ari Epstein, Erik Frijters, Patrice Guillemautot, Candice Nicole Hatcher-Solis, Amy Kreykes, Charles Mahakian, Carlos Navarro, Nina Purvis, Michael Schmidt, Philip Strawbridge, and Frank Villamaria.

Authors!

The cost of color printing has dropped significantly. Please consider printing your Figures and Images in full color for the next issue of *Aerospace Medicine and Human Performance*. If interested, download the Agreement to Pay Extra Charges form from Editorial Manager for your next submission.

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In Memoriam: Ken Money

It is with great sadness that the family of Dr. Ken Money has announced his recent passing. He was an elected Fellow of



the Aerospace Medical Association (AsMA) in 1985 and had been an active member of the Association for many years even after his retirement. He was awarded the Kent Gillingham Award by AsMA in May 2000 for his contributions to knowledge of disorientation and situational awareness in flight. Dr. Money retired as the Senior

Scientist and Bioscience Director of the Defence and Civil Institute of Environmental Medicine (predecessor of DRDC), Department of National Defence, Canada. He was a prolific and internationally well-known researcher in motion sickness, spatial disorientation, and vestibular physiology. He was recognized for having invented and demonstrated semicircular canal plugging, an experimental surgical operation used in North American and European hospitals to treat specific types of dizziness. He made significant contributions to the knowledge of the effects of alcohol on the inner ear (positional alcohol nystagmus) and the biological effects of spaceflight. He published over 110 scientific articles and authored six different topics for the World Book Encyclopedia and one for Microsoft Encarta.

Dr. Money worked with the NASA space program in 1962 and consulted as a scientific advisor to the U.S. agency. He was a co-investigator on a range of experiments on six Space Shuttle missions. He also launched Canada's initial medical experiments performed in space when the first Canadian astronaut flew aboard Shuttle mission STS-41G. He was one of the original six Canadian astronauts from the Canadian Space Agency (1984–1992). He served as an alternate payload specialist for Canada's flight on NASA Mission STS-42. He also served in the Royal Canadian Air Force Reserve Squadron as a pilot and retired as a Major. He flew a number of aircraft and helicopters and participated in a number of search and rescue operations. He was a Professor at the Department of Physiology, Faculty of Medicine, University of Toronto, for many years teaching undergraduate and graduate courses.

Dr. Money was the W. Rupert Turnbull lecturer, Canadian Aeronautics and Space Institute, in 1981 and was elected an Academician of the International Academy of Astronautics (IAA) in 1984. He received the Wilber R. Franks award in 1986 from the Canadian Society of Aviation Medicine for his contributions to aviation medicine. In 1989, he was awarded

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Visit the AsMA, Member, & Industry News to read all about it! **Members:** please check the Job Fair each month; new jobs are posted as we receive them.

Visit Us on Social Media!

Twitter: https://twitter.com/aero_med

FB: <u>www.facebook.com/AerospaceMedicalAssociation</u> **LinkedIn:** <u>https://www.linkedin.com/company/</u> <u>2718542?trk=tyah&trkInfo=tarld:1404740611720,tas:</u> <u>Aerospace Medical,idx:1-1-1</u> the Grass Foundation Neurosciences Lectureship, Penn State University. He was the Wellmark Lecturer for the Canadian Association for Clinical Microbiology and Infectious Diseases in 1992 and was awarded the Meritorious Service Cross in 1994 by the Governor General of Canada for his many contributions to science and technology. He was also a kind and generous mentor.

New Members

AsMA welcomes 26 new members in April.

- Ali, Syougi; Jakarta Barat, Indonesia
- Ariyada, Kenichi; Tokyo, Japan
- Barateig, Barthélémy; Paris, France
- Bekker, Aedrian; Rugeley, Staffordshire, United Kingdom
- Carlson, Judith; Fremont, CA, United States
- Cole, Catie; Pensacola, FL, United States
- Counts, Joshua; Knoxville, TN, United States
- Dhillon, Paul; Sechelt, British Colombia, Canada
- Herman, Ashlyn; Augusta, GA, United States
- Hester, Michael; Shrewsbury, MA, United States
- Hilditch, Cassie; Moffett Field, CA, United States
- Jahangir, Eiman; Nashville, TN, United States
- Juneau, Eric; Vancouver, British Colombia, Canada
- Lennon, Jack; Preston, Lancashire, United Kingdom
- Litevich, Aaron; Lynchburg, VA, United States
- McAleer, Claire; Witney, Oxfordshire, United Kingdom
- Nietsch, Katrina; New York, NY, United States
- Omar, Nasra; Daressalaam, Tanzania
- Posadas, Maria Socorro; Pasay City, Philippines
- Romeijn, Niels; Veenendaal, Utrecht, Netherlands
- Seguro, Charmaine; San Pablo, CA, United States
- Self, Tyler; Bethesda, MD, United States
- Waters, Anthony; Orlando, FL, United States
- Wiekenkamp, Alexander; Soesterberg, Utrecht, Netherlands
- Zapp, Edward; Houston, TX, United States
- Zembrzuski, Krzysztof; Jersey City, NJ, United States

AsMA welcomed back three returning members:

- Parmar, Prashant; Highlands Ranch, CO, United States
- Skelley, Nathan; Sioux Falls, SD, United States
- Wolfe, John; Greenbrier, AR, United States

FAA AME Seminars

These are offered by the FAA AME Program office.

May 22-26, 2023 New Orleans, LA AsMA June 12-16, 2023 Oklahoma City, OK Basic Aug. 4-6, 2023 Washington, DC Refresher Oct. 5-7, 2023 Omaha, NE CAMA Oct. 23-27, 2023 Oklahoma City, OK Basic Nov. 17-19, 2023 Jacksonville, FL Refresher Please check the FAA website for more information.

ADDMAN Group Is Newest Corporate Member

The ADDMAN Group is the Aerospace Medical Association's (AsMA's) newest Corporate Member. They are a manufacturing and engineering company. Founded in 2020 with the belief that additive manufacturing could address issues faced by manufacturing organizations, ADDMAN now has over 500 staff members located across 6 states with over 45 years of expertise. Their mission is to ensure a better tomorrow through additive-based engineering and manufacturing. The companies under their umbrella are Castheon, an additive manufacturing research and development service company; ADDMAN Precision Machining and Tech Manufacturing, which offer complex, tight-tolerance parts in medium to large sizes; Harbec, which specializes in pre-production and production of precision machined components; and Dinsmore, which offers 3D printing, prototyping, and product design and development. In the aerospace & defense field, they produce components for land, sea, and air vehicles.

—Please visit https://www.addmangroup.com/ to read more about this company.

Mayo Clinic Named One of 'Best Fertility Clinics'

Mayo Clinic in Rochester was ranked No. 9 in the nation by Newsweek in its list of "America's Best Fertility Clinics," released in February. This ranking is a testament to the dedication and expertise of the reproductive endocrinology and infertility team at Mayo Clinic in Rochester. The reproductive endocrinology and reproductive team understand the challenges of infertility, as the team has been committed to advancing fertility care and researching tools and techniques to help patients since 1989. The group comprises dedicated nurses, providers, and embryologists who have personal experience with infertility and can relate to the struggles of families both locally and worldwide. The team not only has extensive experience and a solid commitment to fertility care, but also has the advantage of having specialized reproductive surgery and leading-edge IVF laboratory equipped with advanced technologies. The Newsweek rankings are based on physicians' and other fertility medicine professionals' survey results along with key performance indicators and accreditation data to produce a listing of the top 100 fertility clinics in the country.

—Please visit https://newsnetwork.mayoclinic.org/discussion/ mayo-clinic-in-rochester-top-ranked-on-americas-bestfertility-clinics-in-newsweek-rankings/ to read more.

AOPA Honors Sen. Inhofe

The Aircraft Owners and Pilots Association (AOPA) honored retired Sen. James Inhofe (R-OK) with the 2022 R. A. "Bob" Hoover Trophy in early March. He was awarded the trophy for his many aviation achievements, including championing "important policies and legislation that have benefited every pilot and aircraft owner flying today." Inhofe was the driving force behind "the Pilot's Bill of Rights," "the BasicMed program used by tens of thousands of pilots," "extending the Volunteer Protection Act to include volunteer pilots," and reducing checkride wait times. He also opposed general aviation (GA) user fees and attempts to raise taxes on GA, and successfully fought against air traffic control (ATC) privatization. During the awards ceremony in Washington, DC, AOPA also honored others. Retired Rep. Peter DeFazio (D-OR) was presented with the Joseph B. "Doc" Hartranft Award for his longtime support of GA on Capitol Hill. He also opposed ATC privatization and GA user fees and defended aviation during the push to enable 5G C-band wireless network activation. Other award winners were Mike Dale, a pilot based at Culpeper Regional Airport in Virginia, who received the Sharples Award; Ramone Hemphill, who received the Brigadier General Charles McGee Aviation Inspiration Award; the National Association of Air Traffic Controllers, who received the AOPA Air Safety Institute's General Aviation Safety Award; and the AOPA Foundation Future of Flight Award was given to Scott Donnelly and Textron.

—Please see https://www.aopa.org/news-and-media/allnews/2023/march/09/aopa-to-honor-inhofe-with-hoovertrophy-during-awards-gala for the full write-up.

ALPA Reiterates Need for Safety Standards

Pilot leaders from the Air Line Pilots Association, Int'l (ALPA), reiterated the need to keep aviation safety standards strong and identify areas of continued improvement during a safety summit in mid-March hosted by the Federal Aviation Administration (FAA). ALPA joined aviation stakeholders from across the industry in discussions on how to ensure that the United States continues to maintain the gold standard of global aviation amid several recent high-profile incidents. ALPA has worked for more than 90 years to help design, build, and strengthen U.S. aviation and continues to fight to protect the exceptional safety record that has made U.S. commercial aviation the safest form of transportation in the world. Data collection and collaboration, along with two highly trained and well-rested pilots, are essential to maintaining the safest air transportation system in the world. These programs, as a foundation to safety management system processes, are built upon a collaborative model that differentiates U.S. aviation safety from the rest of the world.

—Please visit https://www.alpa.org/news-and-events/newsroom/2023-03-15-strong-aviation-safety-standards for more. See 'Corporate News,' p. N14

Corporate News Bites

MedAire: MedAire360 portal users can now access airport risk assessments using the app. Introduced in early March, this feature allows users to search and compare up to seven airports at a time. The platform filters alerts, revealing patterns, trends, and potential risks from medical, safety, and security issues at most airports. This feature lets users assess which airports to use based on the level of risk considered acceptable. The historical data goes back to 2016 for aviation security and to 2015 for travel health and security. *Please visit https://www.ainonline.com/aviation-news/business-aviation/2023-03-09/medaire-opens-historical-airportrisk-data-portal-users for more on this.*

From 'Corporate News,' p. N13

KBR Wins Dual NASA Awards

KBR has been awarded NASA's Large Business Prime Contractor of the Year for 2022 at two agency centers: NASA Goddard Space Flight Center (GSFC) and NASA Ames Research Center (ARC). Announced yearly, these accolades are a part of NASA's Small Business Industry Awards, which honors its contractors' small business partnerships. KBR earned the Large Business Prime Contractor of the Year awards for its overall contract performance, participation in NASA-related outreach events, sound small business practices, and use of small business contractors. Nominated by its customers, KBR's dual win is indicative of its operations and procurement teams' strategic efforts to support diversity and small business growth around the country. This is not the first time NASA's Office of Small Business Programs has recognized KBR for this achievement. KBR received the agencylevel Mentor-Protégé Agreement of the Year Award for three consecutive years from 2018 through 2020, distinguishing KBR as NASA's best overall mentor during this time. Specifically, KBR was praised for its mentorship of MORI Associates in 2018, as well as for its mentorship of JES Tech, a woman-owned small business, in 2019 and 2020.

—Please see https://www.kbr.com/en/insights-news/press-release/kbr-wins-dual-nasa-prime-contractor-year-awards-continues-enhance-small to read more.

MEETINGS CALENDAR

Please check the websites of meetings listed to see updates.

Calls for Papers—Ongoing: IAF's Global Networking Forum Space Conversations Series, online. For more info, please visit <u>https://www.iafastro.org/events/ iaf-gnf-</u> space-conversations-series/.

HFACS Workshops: Workshops on the The Human Factors Analysis and Classification System (HFACS) are available online and in-person. For more info, please visit https://www.enrole.com/erau/jsp/course.jsp?categoryld= &courseld=HFAC for in-person & https://www.enrole. com/erau/jsp/course.jsp?categoryld=558570F8&courseld =OHFA for online.

April 17-18, 2023; International Conference on Aerospace Medicine (ICAM); London, UK. For more info, visit <u>https://waset.org/aerospace-medicine-conference-in-</u> april-2023-in-london#nav-topics.

June 7-9, 2023; 10th International Conference on Recent Advances in Air and Space Technologies (RAST-2023); Istanbul, Turkey. For more info or to register, visit https://www.aiaa.org/events-learning/event/2023/06/07/ default-calendar/10th-international-conference-onrecent-advances-in-air-and-space-technologies-(rast2023).