



Ever Upward: April 2022

Scholarship Winners for 2022

Anita Mantri, Ph.D., Memorial Travel Scholarship

Victoria Tucci is currently in her final year of pursuing an Honors Bachelor of Health Sciences at McMaster University in Ontario, Canada. After graduation, she plans to pursue a medical degree. She is intrigued by the potential for innovation and exploration regarding human health in space and is interested in finding solutions to medical care delivery in space, as they can have meaningful impacts on healthcare delivery here on Earth. This is especially true for regions that have populations living in remote and isolated areas. She is currently completing research on the intersection of healthcare and artificial intelligence in terms of autonomous medical advisory systems. Her ultimate goal is to better understand the factors that impact the health and wellness of those experiencing the challenges of remote and extreme environments. She hopes to help find ways to support and provide sustainable and quality healthcare in these settings, and how technology, like artificial intelligence, can play a role in facilitating this.



Victoria is also active in the field as an aerospace medicine researcher at AdvancingX, Inc., a global leader in astronaut training, research, technology development, and STEM programming. Specifically, she works on developing risk mitigation strategies for extreme environments, in hopes that their findings will translate to health maintenance of astronauts in space. She also works as the Global Project Manager and as a Career Astronaut Liaison for AdvancingX, Inc. She is excited to share her research as a presenter at the Aerospace Medical Association's 92nd Annual Scientific Meeting. She works to make opportunities in the space sector more accessible for students; for instance, she works with NASA as a Canadian National Program Coordinator for the Scientist for a Day space outreach initiative, and is the inaugural leader of the Canadian Society for Aerospace Medicine Student and Resident Subgroup (CStaRS). As an active member of AsMA, the Aerospace Medical Student & Resident Organization (AMSRO), the Space4Women Network, and the Women in Aerospace Medicine Association, she collaborates with others to contribute to forward-thinking and creative approaches to health-related challenges in space.

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

Lauren Church is currently a final-year medical student at Kings College London, London, UK, working on her



M.B.B.S. She holds an M.Sc., in Physiology and Health from King's College, earned in 2020. From 2017-2020, she served as a Team Mentor and Biomedical Payload Development Associate at the International Space School Education Trust and served an Internship at the Laboratory for Equilibrium Investigations and Aerospace (LEIA), University of Antwerp, from January to March

2022. Her research experience includes data collection for a study on metabolic phenotypes in HIV and Hepatitis C mono- and co-infection, studying intra-voxel incoherent motion MRI for the prediction and treatment of cancer, payload development at Kennedy Space Center, a literature review and article on non-invasive monitoring of spaceflight-associated neuro-ocular syndrome, and a research project on brain changes in spaceflight. She was also involved in a quality improvement project at Evelina Children's Hospital for ensuring the gold standard protocol was followed for children presenting to the emergency department with asthma symptoms.

Lauren has five publications to her name and 14 presentations. She is a member of the Royal Aeronautical Society, King's College London Aviation and Space Medicine Society, the National Undergraduate Aerospace Medicine Conference Organising Committee, King's College London Radiology Society, UK Students for the Exploration and Development of Space, the Aerospace Medicine Student and Residents Organization, and the Aerospace Medical Association. Her awards include King's College London Student Opportunities Fund Scholarship Award in both 2019 and 2020, the Mars Generation 24 Under 24 Leaders and Innovators in STEAM and Space in 2020, and the King's College London Future Alumna Award in 2020.

Aerospace Medical Association International Scholarship

Ahmed Baraka is the Head of the COVID-19 Vaccination Clinic, at Shoubra Khit General Hospital, a Consultant of Space Life Science at the Egyptian Space Agency (EgSA), a clinical pharmacist and (part-time) hospital manager at Dr. Ahmed Abdul Aziz hospital, Alexandria, Egypt, and a former teaching associate in the space sciences department at the International Space University (ISU) in Granada, Spain. Ahmed is working on his master's degree in biotechnology.

See 'Baraka,' p. N14

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Currently, he is serving as the regional coordinator for the Middle East for the Space Generation Advisory Council (SGAC) and was a former regional communications manager for the Middle East, a member of the national steering committee for the upcoming AMADEE mission in Egypt (Mars analog mission), a member of the technical committee for the first Egyptian Lunar Mission, a member

of The International Astronautical Federation (IAF) Space Life Sciences Committee, the chair of the International Outreach Committee for the Aerospace Medicine Student & Resident Organization (AMSRO), and the founder and president of the AMSRO regional chapter in Alexandria, Egypt. Additionally, he is working on projects such as the space medicine program for Egypt in coordination with the EgSA and the French Space Agency (CNES), building the first Mars/Moon analog station in the Western Desert of Egypt in coordination with EgSA and the Austrian Space Forum (OeWF), and a roadmap to enable Africa to have sustainable human spaceflights by 2030.

In 2019, Ahmed received the African Space Leaders Award from the Space Generation Advisory Council (SGAC) in recognition of his efforts. In 2021, he was selected as the recipient of the 2021 Space Medicine Association International Scholarship, was one of the IAF Emerging Space Leaders Grant recipients for 2021, and recently was classified in the African Space Industry Top 10 Under-30 Class of 2021. He is an active member of many space professional organizations like the Aerospace Medical Association (AsMA), AMSRO, the Space Medicine Association (SMA), the Planetary Society, the Mars Society, the Space Generation Advisory Council (SGAC), the Moon Village Association (MVA), the Society for Neuroscience, the Egyptian Pharmacist Syndicate, and the Alexandria Syndicate of Pharmacists.

Pandya Honored by Explorers' Club

Dr. Shawna Pandya, a member and Associate Fellow of the Aerospace Medical Association (AsMA), was recently named one of 50 Explorers Changing the World by the Explorers Club. She is a physician, aquanaut, scientist-astronaut candidate program graduate with the International Institute for Astronautical Sciences (IIAS)/ Project PoSSUM, skydiver, pilot in training, VP Immersive Medicine with Luxsonic Technologies, Director of Medical Research at Orbital Assembly Corporation, and Fellow of the Explorers Club. She is Director of IIAS' Space Medicine Group, Chief Instructor for IIAS' Operational Space Medicine course, and podcast host with World Extreme Medicine's WEMCast. She was on the first crew to test a commercial spacesuit in zero gravity in 2015. Her aqua-



Credit: Cooper and O'Hara Photography

naut designation was earned during the 2019 Nautical Experiments in Physiology, Technology and Underwater Exploration (NEPTUNE) mission. In 2021, she was granted an Honorary Fellowship in Extreme and Wilderness Medicine and named one of the Canadian Women's Executive Network's Top 100 Most Powerful Women. Her career was captured at the Ontario Science Center's "Canadian Women in Space," exhibit, where she is permanently exhibited alongside Dr. Roberta Bondar, the first Canadian woman in space (and Dr. Pandya's idol growing up). The writeups for Dr. Pandya and her fellow honorees can be found at https://www.explorers.org/wp-content/uploads/Explorers-Club-50_2022.pdf.

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Associate Fellows Class of 2022

The following members of the Aerospace Medical Association have achieved Associate Fellow status and were approved by the Executive Committee: James Pavela; Constance Ramsburg; Anna Clebone Ruskin; Robert Krause; Robin Low Chin Howe; Kevin Divers; Ross Semeniuk; Arthur Formanek; Ryan Peirson; William Timberlake; Shawna Pandya; Aubrey Florom-Smith; Virginia Wotring; Jeffery Kinard; and Joelle Thorgrimson.

Proposed Bylaws Changes

In accordance with Article XII of the Aerospace Medical Association Bylaws, the following proposed changes to the Bylaws are printed herein. The changes will be voted upon at the next Aerospace Medical Association Annual Business Meeting to be held Tuesday, May 24, 2022. The meeting is open and all members are encouraged to attend (no lunch purchase is necessary to participate in the meeting).

The proposed Bylaws changes presented below are designed to remove the requirements for in-person meetings for conducting the business of the Aerospace Medical Association. The impact of the COVID-19 restrictions on travel and in-person events forced the association to conduct many of its business meetings virtually. The Bylaws need to be updated to reflect the ability to conduct the association business virtually in the future.

The deletions are listed as ~~strike throughs~~. The additions are *italicized and underlined*.

Article IV. CORPORATE FORUM

Section 3. Activities

Forum Events: The Corporate Forum will plan and conduct an annual Advisory event, in coordination with Council ~~at the Annual Scientific Meeting.~~

Article V. FELLOWSHIPS

Fellow:

(2) All those now holding the grade of Fellow, or who may be hereafter elected to such, shall constitute the group of Fellows. The group shall meet and shall elect annually ~~during the Annual Scientific Meeting,~~ its chair, who shall hold office until a successor is elected.

D. Associate Fellow:

(2) All those holding the grade of Associate Fellow, or who may hereafter be elected to such, shall constitute the group of Associate Fellows. The group shall meet annually ~~during the~~

See 'Bylaws Changes,' p. N15

From 'Bylaws Changes,' p. N14

Association's scientific meeting during which the election of officers will be announced.

ARTICLE VIII. COUNCIL OF THE AEROSPACE MEDICAL ASSOCIATION AND EXECUTIVE COMMITTEE
SECTION 5: Executive Committee

B. Except as otherwise provided in these Bylaws, the Executive Committee shall have the power to exercise all the functions of the Council between ~~Association meetings annual meetings of the Association~~ and when the Council is not in session.

D. The Executive Committee shall be responsible to the Council for the program of *scientific meetings*. ~~the scientific sessions.~~

I. The Executive Committee shall select the time, ~~and~~ place, *and format* of the Annual Scientific Meeting.

ARTICLE XI. ELECTIONS.

Elections shall be held at the ~~Annual Business Meeting~~ of the Association.

ARTICLE XII. COMMITTEES.

SECTION 3. Standing Committees Functions.

N. The report of the Nominating Committee shall be made ~~prior to the Annual Scientific Meeting~~ as stipulated in the Policies and Procedures Manual and orally at the opening ceremony of the Annual Scientific Meeting.

O. Registration Committee: The Registration Committee assists with ~~onsite~~ registration activities associated with the Annual Scientific Meeting.

ARTICLE XIII. MEETINGS

SECTION 1. Required Meetings.

Required meetings may be conducted in one of the following formats (1) in-person only, (2) combined in-person and virtually, or (3) virtual only.

A. The Association shall conduct at least one Annual Business Meeting which shall be open to the general membership and devoted to the reception of annual reports, the nomination and election of officers, consideration of amendments to the Bylaws, consideration of resolutions, and any other such business as decided by the Council.

B. The Association shall conduct at least one scientific meeting each year.

SECTION 2. Time and Place of Meetings.

The Annual Scientific Meeting shall be conducted at a time and place, *and in a format* selected by the Executive Committee. Meetings shall be held as provided for in these Bylaws. In cases of emergency, the Council shall have the authority to cancel, postpone, or change the site *or format* of an annual meeting, or a special Association meeting may be authorized or called by the Council.

ARTICLE XVI. AMENDMENTS.

The Bylaws of the Association may be amended at any Annual Business Meeting of the Association by two-thirds vote of active members present at such meeting. Association Bylaws amendment proposals may be submitted by any member of Council or a petition of at least 2% of the active membership of the Association. Proposed amendments must

be communicated to the Association Headquarters *at least 60 days prior to a Council meeting* by the end of December and approved by two-thirds vote of the Council members for consideration at the Annual Business Meeting. The membership must be notified of the proposed amendments no less than 60 days prior to the Annual Business Meeting. The Policy and Procedures Manual will describe the process for review, modification, and presentation of amendment proposals for the membership vote on each amendment at the *Annual Business annual* Meeting.

New Members

AsMA welcomes 30 new members in April.

- Akbarialiabadi, Hossein; Kampala, Uganda
- Alanazi, Asma; Riyadh, Saudi Arabia
- Bal, Gurvardaan; Simi Valley, CA, United States
- Bello, Joseph; Hanover, NH, United States
- Bilger, Camille; Uxbridge, West London, Hillingdon, United Kingdom
- Bobnick, Sarah; Dover, DE, United States
- Chapapas, Holly; JBSA Lackland, TX, United States
- Clarke, Christopher; Victoria, British Columbia, Canada
- Cosentino, Anthony; Tucson, AZ, United States
- Dhar, Sarit; Toledo, OH, United States
- Dupre, Derek; Natchitoches, LA, United States
- Feliciano, Eucaris; Isabela, Puerto Rico
- Fuller, Shandi; Concord, CA, United States
- Grubic, Tyler; Lexington Park, MD, United States
- Hawker, Emily; Chicago, IL, United States
- Holthe, Tom; Trondheim, Norway
- Ireland, Natalie; Milton, FL, United States
- Kim, Seung Chan; Seoul, South Korea
- Lee, Spencer; Oakville, Ontario, Canada
- Lotterhos, Joseph; Colorado Springs, CO, United States
- Nako-Phuthego, Onalenna; Mogoditshane, Botswana
- Orabi, Maia; Aliso Viejo, CA, United States
- Ramos, Joseph; Northglenn, CO, United States
- Reed, Justin; Dayton, OH, United States
- Rizk, Fadi; Pompano Beach, FL, United States
- Schwertz, Hansjorg; Bozeman, MT, United States
- Shillingburg, Ryan; Knoxville, TN, United States
- So, Olivia; Toronto, Ontario, Canada
- Suleiman, Riya; London, United Kingdom
- Teigen, Alexander; Ormond Beach, FL, United States

AsMA welcomes back four members:

- Grubb, Jefferson; Norfolk, VA, United States
- McCoy, Robert; McChord AFB, WA, United States
- Webster, Thomas; Wexford, PA, United States
- Welsh, Timothy; Pensacola, FL, United States

A Reminder to Members:

Beginning with the July 2022 issue, the online journal will become the default member benefit and members will be asked to opt in and pay to receive a paper copy. This is driven by factors such as paper cost & availability. However, this change means we will be able to print color for substantially less and therefore have a better product. For more on this, please see Pam Day's commentary ([February newsletter](#)) and Fred Bonato's editorial ([January AMHP](#)).

FAA News: Weather Reporting Stations in Alaska

The U.S. Department of Transportation's Federal Aviation Administration (FAA) has started installing technology across Alaska to provide weather conditions to pilots before they take to the skies. Eight new Automated Weather Observing Systems (AWOS) will provide continuous, real-time and accurate weather information on remote areas of Alaska. The sites, recommended by the Alaska aviation community, should be operational by October 2022. The eight new stations will be located in Akiachak, Coldfoot, Crooked Creek, Kotlik, Nulato, Perryville, Tok Junction and Tununak. Weather information from these locations gives all pilots a preview of what to expect when arriving, and allows Instrument Flight Rule pilots to conduct instrument approaches to the lowest possible minimums, increasing the safety and predictability of operations. Last fall, the FAA released recommendations to increase safety in Alaska after a yearlong,

sweeping examination of safety challenges specific to flying in the state. The Alaska aviation community repeatedly told the FAA that additional weather information for pilots was necessary. Aviation safety is especially important to rural and Tribal communities in Alaska, 82% of which are only accessible only by air. The FAA and National Weather Service currently manage nearly 132 similar weather systems in Alaska.

Please visit <https://www.faa.gov/newsroom/faa-begins-adding-weather-reporting-stations-across-alaska> for the complete press release.

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NEWS OF CORPORATE MEMBERS

MedAire Founder Gives Keynote Speech at WAI

Joan Sullivan Garrett, the founder of MedAire, gave one of the keynote speeches at the Women in Aviation International (WAI) conference in mid-March. She spoke about how losing a young patient in the mountains of Arizona motivated her to found MedAire, a global aviation medical support company, and campaign for better access to equipment and telemedicine worldwide. Garrett began as a flight nurse and, after serving as CEO of MedAire until 2008, is now the board chair. She recently released an autobiography, is a former member of the National Business Aviation Association, served on the Advisory Board for the International Aviation Women's Association, was a former chair for the Flight Safety Foundation Board, and was inducted into the International Aviation Hall of Fame in 2019. MedAire recently became a Platinum Corporate Member of the Aerospace Medical Association.

—Please visit <https://www.medaire.com/about/news-centre> for more MedAire news. For information on Joan Sullivan Garrett, visit <https://joansullivanagarrett.com/about/>.

MEETINGS CALENDAR

Please check the websites of meetings listed to see updates.

Calls for Papers - Ongoing: International Astronautical Federation Global Networking Forum Space Conversations Series, online. Visit <https://www.iafastro.org/events/iaf-gnf-space-conversations-series/> for more information.

HFACS Workshops: Workshops on the The Human Factors Analysis and Classification System. For more, visit <https://www.enrole.com/erau/jsp/course.jsp?categoryId=&courseId=HFAC> for in-person or <https://www.enrole.com/erau/jsp/course.jsp?categoryId=558570F8&courseId=OHFA> for online.

May 16-20, 2022; Global Conference on Space for Emerging Countries; Quito, Ecuador. For more visit <https://www.iafastro.org/events/global-series-conferences/the-global-conference-on-space-for-emerging-countries-2022/>.

Mayo Clinic's Platform Accelerate Has Launched

Mayo Clinic Platform Accelerate, an immersive program for health tech startups, has launched with its initial cohort of participating companies. The 20-week program will help four artificial intelligence (AI) companies get market-ready. The program offers participants access to Mayo Clinic experts in regulatory, clinical, technology and business domains with a focus on AI model validation and clinical readiness. Technology experts from Google and Epic also will provide workshops for the participants. Participants will: work with data science experts to delineate AI model requirements; check for fairness and bias in their AI models; gain understanding of Food and Drug Administration clearance pathways; access de-identified Mayo Clinic patient data in a secure environment; conduct model validation with guidance from data science experts; plan clinical validation studies, such as clinical simulation or clinical trials; and explore eligibility to partner with Mayo Clinic Platform.

—Please see <https://newsnetwork.mayoclinic.org/discussion/3-23-mayo-clinic-platform-accelerate-program-begins-with-four-ai-startups/> for more about this.

AOPA Supports BasicMed Expansion

AOPA supports the FAA's proposal to expand BasicMed for those who want to serve as safety pilots and to change medical certificate requirements for individuals completing medical flight tests. The changes would alleviate confusion and burdens for individuals operating under BasicMed and those obtaining medical flight tests. The FAA proposes allowing pilots who operate under BasicMed to serve as a required pilot flight crewmember when not acting as pilot in command, and to allow individuals to receive medical flight tests while not holding a medical certificate. Currently, pilots may operate under BasicMed while operating as pilot-in-command; however, they cannot use the same privilege as a required flight crewmember when not acting as pilot-in-command.

See 'Corporate News,' p. N17

From 'Corporate News,' p. N16

This change would allow an individual who takes advantage of BasicMed to serve as a safety pilot. AOPA also supports removing the requirement for pilots receiving a medical flight test to hold a medical certificate. The FAA determined that requiring an aviation safety inspector to act as pilot-in-command during medical flight tests put an unnecessary burden on the inspector. AOPA also recommended the FAA allow designated pilot examiners (DPEs) to perform exams while using BasicMed.

—Please visit <https://www.aopa.org/news-and-media/all-news/2022/april/pilot/aopa-action-april-2022> to read more about this.

NIOSH-Supported Consensus Study Report Released

The National Institute for Occupational Safety and Health (NIOSH), along with the Environmental Protection Agency (EPA), the Department of State, and the CDC Foundation, commissioned the Consensus Study Report, *Frameworks for Protecting Workers and the Public from Inhalation Hazard*, to provide recommendations for the oversight and guidance of respiratory protection in the United States. This report was released in early February. It was written in response to the evolving need for available and appropriate respiratory protection for workers not already within a workplace respiratory protection program, and for the public who could be exposed to inhalation hazards such as viruses, wildfire smoke, and mold as a part of daily life. The purpose of the report's proposed framework is to provide a unified and authoritative source of information for the effective oversight of the development, approval, and use of respiratory protection. The report includes considerations for the challenges of implement-

ing effective respiratory protection on such a large scale, such as identifying the appropriate respiratory protection for a hazard, as well as product design and availability.

—Please see <https://www.cdc.gov/niosh/updates/upd-02-10-22.html> for the complete press release.

KBR Continues to Support NASA

KBR announced it has been awarded a Ground Systems and Mission Operations-3 (GSMO-3) contract to support more than 10 NASA exploration missions, including continued efforts on the James Webb Space Telescope, Lunar Reconnaissance Orbiter, and Earth Observing System. Under the terms of the indefinite-delivery/indefinite-quantity (IDIQ) contract, KBR will provide systems engineering, facility engineering, launch and early orbit support, flight operations, and flight dynamics support to various NASA missions managed by Space Science Mission Operations and Earth Science Mission Operations at NASA's Goddard Space Flight Center in Greenbelt, Maryland. Throughout the 5-year contract, KBR will perform mission IT and systems engineering, as well as design, implementation, integration, and testing of ground systems and operations products for NASA's key projects, including the: Earth Observing System, Earth Observing System Data and Operations System, Magnetospheric Multi-Scale mission, Global Precipitation Measurement mission, Lunar Reconnaissance Orbiter, James Webb Space Telescope, Fermi Gamma-ray Space Telescope, Geostationary Operational Environmental Satellites, Nancy Grace Roman Space Telescope, and Solar Dynamics Observatory. KBR was awarded this contract following its support on NASA's Ground Systems and Mission Operations-2 (GSMO-2) contract.

—Please visit <https://www.kbr.com/en/insights-news/press-release/kbr-continues-support-nasa-exploration-640m-contract> for the complete press release.