



Ever Upward: August 2021

Scholarship Winners Announced

Stanley R. Mohler, M.D., Aerospace Medicine Endowed and AsMA International Aerospace Medicine Scholarships

Nina Purvis, M.Phys., M.Sc., Ph.D., PGCert, is the 2021 recipient of both the Stanley R. Mohler, M.D., Aerospace Medicine



Endowed Scholarship and the AsMA International Aerospace Medicine Scholarship. She is currently working on an M.B.B.S. in Medicine and Surgery at the Barts and The London School of Medicine and Dentistry, Queen Mary University of London. She earned an integrated Bachelor's and Master's degree in Astrophysics from the University of Hull in 2012 and then both a Postgraduate Certificate

in HE Research and Teaching and a Ph.D. in Medical Physics at Hull York Medical School in 2015. She received her M.Sc. in Space Physiology and Health in 2020.

A native of Britain, Dr. Purvis began as a Graduate Teaching Assistant at the University of Hull from 2012–2015. At the same time, she was also serving as a Doctoral Researcher as part of her Ph.D. From 2015 to 2016, she was a Postdoctoral Research Fellow in Oncological Imaging and Radiogenomics at Memorial Sloan Kettering Cancer Centre. Her teaching experience includes being a Physics Teaching Assistant, a Graduate Teaching Assistant, and lecturing on the physiology of commercial spaceflight. She is an author or co-author on seven papers. Her honors and awards include the Piramal Healthcare Student Award for Highest A2 Level in Physics; Finalist for 3-Minute Thesis at the University of York; both the International Society for Magnetic Resonance in Medicine (ISMRM) Conference International Student Travel Award and the Hull York Medical School (HYMS) Conference Travel Award for travel to the 2015 ISMRM in Toronto, Canada; runner-up of the Next Generation Aerospace Medicine Presentation Competition from the Royal Aeronautical Society; Suborbital Day Special Prize for Best Presentation; and the UKSEDS National Award for Research Project of the Year.

Anita Mantri, Ph.D., Memorial Travel Scholarship

Jason David, M.D., Capt., USAF, is the 2021 recipient of the Anita Mantri, Ph.D., Memorial Travel Scholarship. He is currently stationed at Nellis Air Force Base as an Emergency Medicine Physician. He graduated from a Residency in Emergency Medicine at the Kirk Kerkorian School of Medicine

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and University of Nevada, Las Vegas. He graduated with distinction from the U.S. Air Force Academy in 2014 and attended medical school at the Uniformed Services University of the Health Sciences (USUHS), receiving his M.D. in 2018. He started his career as an Emergency Medical Technician Basic at the U.S. Air Force Academy Health Clinic in Colorado Springs, CO, USA, from

2011–2014. From 2013 to 2014, he was also Cadet Commander at the U.S. Air Force Academy Cadet Wing Staff Ethics and Education. He attended USUHS from 2014–2018 and served his residency from 2018–2020. In 2020 he became Chief Resident at the University Medical Center Emergency Medicine Residency in Las Vegas. He will begin earning an MBA at the University of North Carolina at Chapel Hill in October 2021.

Dr. David is a member of the Special Operations Medical Association, the Government Services American College of Emergency Physicians, the American College of Emergency Physicians, the Space Medicine Association, and the Aerospace Medical Association (AsMA). He was a member of the American Medical Association Medical Student Section until May 2017 and a member of the Aerospace Medicine Student and Resident Organization of AsMA until May 2021. His awards include the Asia Institute of Political Economy Scholarship, the Brigadier General Ronald D. Reed Outstanding Achievement in Biology Research Award, a Government Services of the American College of Emergency Physicians Scholarship, a University of North Carolina at Chapel Hill MBA Program Fellowship, Resident Quality Improvement Project of the Year, and Emergency Medicine Resident of the Year from Nellis AFB. His military awards include the National Defense Service Medal, the Global War on Terrorism Service Medal, and the German Armed Forces Proficiency Badge (Gold).

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

Daniel Cox, B.A., M.Eng., M.D., is the 2021 recipient of the Jeffrey R. Davis, M.D., Aerospace Medicine Endowed Scholarship.



Originally from a small, rural town in Indiana, USA, he attended Indiana University in Bloomington, earning a B.A. in Biochemistry in 2017. He earned a Masters in Engineering at Duke University Pratt School of Engineering in 2021 and is working on his M.D. at the Duke University School of Medicine. He is working to help design new devices such as a catheter to be used in extracorporo-

See 'Scholarships,' p. N33

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real membrane oxygenation, a more functional surgical drain, and a device to assess hydration status. From 2015-2017, he worked as a Patient Care Associate at Kosair Children's Hospital Emergency Department in Louisville, KY, USA. His research projects have included work in natural product synthesis, medical education research, cardiac surgery research, NASA research involving strain analysis on mice previously irradiated, and drone delivery research to reduce the time to deliver naloxone in Durham County, NC, USA.

Dr. Cox is a co-author on an article in the *Journal of Cardiac Surgery* and on an article being submitted. He has taken part in four presentations and been a co-author of two submitted abstracts. He is a member of the Aerospace Medical Association and its Aerospace Medicine Student and Resident Organization. His awards include Indiana University Founders Scholar, Indiana University Excellence Scholarship, Harrison County Hospital Scholarship, Norton Hospital Dependent Scholar, a proclamation from the State of Ohio for service, the Dennis Peters Scholarship in Chemistry and the Ira E. Lee memorial Fund in Chemistry, the Leroy Dugan Scholarship, Medical Faculty Wives Scholarship, the Jessie L. and Arlie L. Fogal Scholarship, the G. Brent Walton Scholarship, the American Association for Thoracic Surgery Summer Internship Scholar, and the Chancellor's Service Fellowship.

2021 Fellows Announced

The following AsMA members have achieved Fellow status and were approved by the AsMA Fellows:

Christopher Backus; Roderick Borgie; Raymond Clydesdale; Robert Elliott; Michael Harrison; Deborah Hoar; Wilfred Lim; David Miller; Justin Nast; Glenn Pascoe; James Pattarini; Sanjiv Sharma; Rahul Suresh; John Venezia; and Robert York.

Denver Meeting App Available

The meeting app for the 91st Annual Scientific Meeting in Denver, Colorado is now available for download. Simply go to the Apple App Store (for iOS products) or the Google Play Store (for Android products) and search for "AsMA Events." Download the AsMA Events app to your phone or tablet. You'll find the AsMA Events app now offers you a list of scientific sessions, business meetings, and social events from which to choose. For the Denver meeting, you should select the 91st Annual Scientific Meeting.

The meeting app provides you all of the information you would find in the print issue of *Aerospace Medicine and Human Performance*, but the app allows you to search for speakers, scientific session numbers, and scientific session titles. You can also filter all scientific sessions by educational track (Aerospace Safety, Clinical Medicine, Human Performance, Space Medicine, Travel & Air Transport Medicine, Other/History). Best of all, you can select those scientific sessions, meetings, luncheons, and social events you plan to attend and create your personal schedule by selecting the "My Schedule" button at the top of the screen.

The AsMA Events app provides users with the most up-to-date meeting information available. Should a scientific session room or meeting room change, we can update the

AsMA Events meeting app in real time and push notifications to all users so you immediately know of any changes.

For those using a Windows-based phone, tablet or laptop, you can access the AsMA Events app at: <https://asma.gatherdigital.com/apps/2549>.

COVID-19 Information

The AsMA 91st Annual Scientific Meeting was postponed from the late May 2021 scheduled date to late August with hopes the COVID-19 virus pandemic would be under control through vaccination, allowing physicians and scientists from around the world to participate. Unfortunately, there has been an increase in the number of COVID-19 cases in many parts of the world due to the Delta variant. The U.S. government has responded to the increase in cases by restricting entry into the United States from many countries. [The April 30, 2021 US Centers for Disease Control and Prevention \(CDC\) public health statement on U.S. entry restrictions can be read here.](#)

For those who currently hold paid registrations for the meeting and who find they cannot attend the Denver meeting, please send your request for refund to membership@asma.org. AsMA will accept refund requests until August 21, 2021. Please be sure to request the refund by August 21, 2021.

Denver COVID-19 Recommendations

Denver City and County are currently in COVID-19 Condition BLUE (Concern). The most recent one-week cumulative incidence increased by 51. The Delta variant is a concern but there are only 24 confirmed cases in the city/county. The [July 1, 2021, Public Health Order](#) removes most face covering requirements and crowd restrictions for events and businesses in Denver. This Public Health Order expires July 31, 2021. A new Public Health Order is expected to be published before the end of July. We recommend all attendees at the 91st Annual Scientific Meeting bring a face mask and wear it when indoors during the meeting to reduce the risk of possible transmission of the COVID-19 virus.

New Members

AsMA welcomes 22 new members in August.

- Attridge, Bryan; Reno, NV, United States
- Bastian, Aaron; Mineola, NY, United States
- Davis, Cole; Denham Springs, LA, United States
- Feibel, Shana; West Chester, OH, United States
- Geister, Brit; Enterprise, AL, United States
- Herman, Jason; Augusta, GA, United States
- Ingram, Eva; Memphis, TN, United States
- Kingry, Karl; Beaufort, SC, United States
- Nairne, Anastasia; Comrie, Scotland, United Kingdom

See 'New Members,' p. N34

Visit Us on Social Media!

Twitter: https://twitter.com/aero_med

FB: www.facebook.com/AerospaceMedicalAssociation

LinkedIn: [https://www.linkedin.com/company/2718542?trk=tyah&trkInfo=tarId:1404740611720,tas:Aerospace Medical,idx:1-1-1](https://www.linkedin.com/company/2718542?trk=tyah&trkInfo=tarId:1404740611720,tas:Aerospace%20Medical,idx:1-1-1)

- Newsome, Jelaun; Enterprise, AL, United States
- Paine, Gregory; Naples, FL, United States
- Richard, Clara; Valencia, Spain
- Rud, Benjamin; Tucson, AZ, United States
- Sawamoto, Naoya; Sapporo, Japan
- Solak, John; Boston, NY, United States
- Somasundar, Tharun; Boston, MA, United States
- Tan, Michelle; Fresno, CA, United States
- Tays, Grant; Fainesville, FL, United States
- Terry, Jennifer; FPO, AP, United States
- Wagner, Scott; Ormond Beach, FL, United States
- Whitlock, Addison; Yarmouth, ME, United States
- Wilson, Bryan; Iowa City, IA, United States

AsMA welcomes back two former members:

- Cherry, John; Mayfield East, New South Wales, Australia
- Stork, Benjamin; Enterprise, AL, United States

Obituary Listing: Jerald Felder

The AsMA Home Office was recently informed of the passing of Jerald B. Felder, M.D., M.P.H., FAsMA, a Life Member of AsMA, in February. A native of Texas, he graduated from Yale University in 1955. He entered Yale in 1951 with a full academic and athletic scholarship and won many swimming competitions. After graduation from Yale, he entered Baylor College of Medicine in Houston, where he earned his M.D. in 1959. He then served 4 years as a flight surgeon in the U.S. Air Force. He completed a residency at Baylor, becoming a Board-certified Otorhinolaryngologist and a Fellow of the Academy. He then practiced for 7 years in Reno, NV, before rejoining the military and serving another 24 years of active duty in the U.S. Navy. His tours included the USS *Nimitz*, Wing Surgeon of the Second Marine Aircraft Wing, and Commander, fellowship in Aerospace Medicine of the Medical Departments of the Atlantic Surface fleet. While there, he designed medical facilities for the USS *Mercy* and USS *Comfort*. He then completed a second residency and earned an M.P.H. at UCLA. He retired from active duty in 1994 and served as Medical Director, Eastern Oregon Correctional Institution, Pendleton, OR, for 12 years. He fully retired in 2011. An online obit can be read at <https://www.legacy.com/us/obituaries/name/jerald-felder-obituary?id=4312518>.

CAMA Annual Meeting

The 2021 Civil Aviation Medical Association (CAMA) Annual Scientific Meeting will take place at the Embassy Suites - Brooks, San Antonio, TX, on September 23-25, 2021. Registration will open in early May. More info is available at <https://civilavmed.org/annual-meeting/>.

Save the Date

4th International Conference and Expo on Aerospace and Aeronautical Engineering; October 25-27, 2021; Valencia, Spain. Visit <https://www.scientificfederation.com/aerospace-aeronautical-engineering/> for more.

New Aerospace Medicine Exhibit on Display

The Seattle Museum of Flight recently opened an exhibit on aerospace medicine. In this exhibit, both past and present members of the Aerospace Medical Association are mentioned, including Theodore C. Lyster, Louis H. Bauer, Charles Berry (who is prominently mentioned), John Paul Stapp, Harry G. Armstrong, and Randolph Lovelace II. Current members noted include Michael Barratt, Serena Aunon, David Alexander, and Natacha Chough. The exhibit tells the story of how doctors and aeromedical professionals work to ensure the safety and health of those who go up into the atmosphere and space. The exhibit is in the T. A. Wilson Great Gallery and admission is included with a general admission ticket. It runs through February 6, 2022. Visit the description and link to purchase tickets at <https://www.museumofflight.org/Exhibits/Stranger-Than-Fiction>. An interview with Dr. Barratt, who was a member of the team that created the exhibit, can be found at <http://www.collectspace.com/news/news-070221a-stranger-than-fiction-aerospace-medicine-museum-of-flight.html>.

CAMA Program During AsMA Meeting

The Civil Aviation Medical Association will present three medical education programs during the Aerospace Medical Association Annual Scientific Meeting in Denver, CO, August 29-30, 2021. The combined total medical education presentation time for the CAMA Sunday program and the CAMA Luncheon is 5.00 hours.

CAMA Sunday Lectures – 4 hours comprised of four different presentations; August 29, 2021; 8:30 am to 12:45 AM; Denver Sheraton Hotel Downtown; Room number TBD.

CAMA Luncheon Keynote Medical Education Presentation; August 30, 2021; CAMA Luncheon 12:00 Noon to 2:00 PM; Presentation (1 Hour) 1:00 PM to 2:00 PM; Denver Sheraton Hotel Downtown; Room number TBD.

For more information on these, please see the schedule posted at <https://www.asma.org/asma/media/AsMA/pdf-meetings/2021%20Reno/CAMA-programs-AsMA-annual-meeting.pdf>.

MEETINGS CALENDAR

Please check meeting websites for changes.

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

August 3-6, 2021; Society of U.S. Naval Aerospace & Operational Physiologists (SUSNAOP) Lecture Series on Military Pilot Optimization; Virtual and In Person. For more info, please visit <https://www.susnaop.com/>.

Sept. 22-24, 2022; 1st International Conference of Aerospace Medicine (ICAM 2022); Paris, France. For more info, please [click here](#).

Sept. 23-25, 2021; Civil Aviation Medical Association (CAMA) Annual Scientific Meeting; Embassy Suites - Brooks, San Antonio, TX. See the [meeting schedule](#) for more details.

NEWS OF CORPORATE MEMBERS

Mayo Clinic Finds Monoclonal Antibodies Prevent Hospitalization

In a large observational study, Mayo Clinic researchers have shown that two monoclonal antibodies administered separately helped prevent hospitalization in high-risk patients who became infected with COVID-19. The findings appear in *The Journal of Infectious Diseases*. The researchers reviewed patient outcomes among a population of 3,596 patients from across Mayo Clinic with a median age of 62. All patients had at least one condition that made them high-risk, and just over half had multiple comorbidities. Patients received bamlanivimab or casirivimab-imdevimab infusion. After 28 days, the hospitalization rate due to COVID-19 was 2.56%. After adjusting for comorbidities, no significant difference was observed in the hospitalization rate between the two monoclonal antibodies. It is important to note that this study was conducted between November 2020 and February, which is before COVID-19 variants were discovered. While casirivimab-imdevimab remains active against COVID-19 variants, the Food and Drug Administration no longer authorizes bamlanivimab alone as an emergency use treatment. Bamlanivimab is now authorized only as part of a drug combination with etesevimab. Still the authors say this study is an important confirmation that monoclonal antibody use effectively treats high-risk patients with COVID-19.

—Visit <https://newsnetwork.mayoclinic.org/discussion/monoclonal-antibodies-help-covid-19-patients-avoid-hospitalization/> to read more about this.

UTMB-Led Study Provides Vaccine Protection Data

A new study published in *Science Translational Medicine* reports on the Ebola vaccine-mediated protection of five mucosal vaccine vectors based on the human and avian paramyxoviruses. The study comprehensively characterized the antibody response to each vaccine, identifying features and functions that were elevated in survivors and that could serve as vaccine correlates of protection. The multi-year study, led by Alexander Bukreyev, Ph.D., of the University of Texas Medical Branch (UTMB) Galveston National Laboratory looked at whether all the vaccines conferred protection and produced robust antibody responses. The team also explored 139 different immune and vaccine response parameters to see which ones were responsible for improving the “quality of survival.” Research Scientist Michelle Meyer, Ph.D., of UTMB served as lead author of the paper, “Ebola vaccine-induced protection in non-human primates correlates with antibody specificity and Fc-mediated effects”, which reports the efficacy results of the vaccines in cynomolgus macaques challenged with EBOV. The five mucosal vaccines tested differed in the degree of protection against death and disease, ranging from disease-free survival to only partial protection. The work, supported by grants from the National Institute of Allergy and Infectious Diseases, was a collaboration involving scientists from the University of Texas Medical Branch, the Ragon Institute of MGH, MIT and Harvard, the Scripps Research Translational Institute, Virginia-Maryland Regional College of Veterinary Medicine,

Vanderbilt University Medical Center and the Plum Island Animal Disease Center.

—Please see <https://www.utmb.edu/newsroom/article13608.aspx> for more on this.

AOPA's STEM Curriculum Earns Accreditation

The AOPA Foundation's High School Aviation STEM Curriculum received two accreditation honors from the prestigious independent credentialing and education research organization STEM.org. The high school curriculum and corresponding materials were vetted during a rigorous and thorough process, earning two Trustmarks that are indicative of meeting a range of standards set by STEM.org experts which include: develop critical thinking, collaboration, and communication skills; promote science, technology, engineering, and math skills that prepare students for the future of aviation and aerospace; strengthen the STEM skills students need for twenty-first century careers; support the development of STEM skills future-focused employers desire. More than 8,000 students participated in the AOPA Foundation's STEM curriculum for the 2020-2021 school year. By the end of the two pathways, students have learned the material needed to pass the FAA private pilot or remote pilot knowledge tests. The AOPA Foundation's curriculum was used in more than 200 schools across 38 states in the 2020-2021 school year and will expand in the coming years. The curriculum is also attracting more students from backgrounds that are currently underrepresented throughout the aviation field, with 20 percent of the students in the curriculum being female, and 45 percent people of color. Schools that use the AOPA Foundation's curriculum are accepted

See 'Corporates,' p. N36

Corporate News Bites

MedAire: AOKpass, a mobile app launched by MedAire, the International Chamber of Commerce, and SGS Group, is being tested by EVA Air. The app allows passengers and airlines to securely verify COVID-19 test results. The pilot runs will be on flights between Taiwan Taoyuan Airport (TPE) and San Francisco (SFO) / Los Angeles (LAX). Please visit <https://www.ttrweekly.com/site/2021/07/eva-air-launch-digital-health-passport/> to read more.

Serco: Serco Australia has launched a dedicated First Nations People Careers Campaign designed to provide specific career opportunities for First Nations people across the national workforce. Positions are available on their First Nations People Careers page and more will be added regularly. Serco also encourages First Nations people to apply for any of the roles on their careers page. Serco's reconciliation vision is to promote equality for First Nations people and employment opportunities are a key element to achieving this. For more on this, please see <https://www.serco.com/aspac/news/media-releases/2021/serco-seeks-first-nations-talent-with-new-career-campaign>.

through an application process, and schools interested in applying for the 2022-2023 school year are encouraged to contact AOPA's high school curriculum specialists. The curriculum is provided to schools for free because of generous donations made to the AOPA Foundation.

—Please visit <https://www.aopa.org/news-and-media/all-news/2021/july/01/aopa-foundations-high-school-aviation-stem-curriculum-earns-important-accreditation> for the full news release.

KBR Collaborates with Arafura Resources for Rare Earth Project

KBR was appointed as the Project Management Consultant by Arafura Resources for the Nolans Project in late 2019, through which we work in collaboration with our sub-consultant Wave International Engineering as an Integrated Project Management Team (IPMT). The IPMT will project manage the Process Plant and Non-Process Infrastructure for the Nolans Project to source critical rare earths minerals in Australia's Northern Territory. Located 135km north of Alice Springs, the Nolans Project is one of the largest rare earths projects in the world, most of which is enriched with 'magnet feed' rare earths, known as neodymium-praseodymium (NdPr). Rare earths are key elements used in the automotive consumer electronics, high speed magnet trains, wind energy, aerospace and healthcare sectors, and in oil refining, robotics and military applications. The project is in a positive position to advance onto the next stages, with Arafura Resources recently announcing the project has received support from Export Finance Agency (EFA) and from Northern Australia Infrastructure Facility (NAIF).

—Please see <https://www.kbr.com/en/insights-events/stories/kbr-teams-arafura-resources-deliver-world-class-rare-earths-project> to read more.

Journal Delays Continue

The online and print versions of the July issue of *Aerospace Medicine and Human Performance* (AMHP) are delayed. The August issue will also be delayed. These delays are due to ongoing disruptions from COVID-19 at the India-based typesetters and the change to a new typesetting company used by our publishing company. We and our publishing company are doing everything possible to get July 2021 posted and to get August published as soon as possible.

We apologize for the inconvenience and thank you for your patience during these difficult times.

FAA AME Seminars

August 6–8, 2021	Virtual, Zoom	Refresher
Sept. 23–25, 2021	San Antonio, TX	CAMA
Oct. 18–22, 2021	Oklahoma City, OK	Basic
Nov. 19–21, 2021	Albuquerque, NM	Refresher

Please check the [FAA website](#) for more information.
PLEASE NOTE: There is NO seminar being held in conjunction with AsMA's 2021 meeting in Denver.

Future AsMA Annual Scientific Meetings

Aug. 29–Sept. 2, 2021; Sheraton Denver Downtown, CO
May 22–26, 2022; Peppermill Resort Hotel, Reno, NV
May 21–25, 2023; Sheraton New Orleans Hotel, LA
May 5–9, 2024; Hyatt Regency Chicago, Chicago, IL