



Ever Upward: July 2019

2019 Award Winners of the Aerospace Medical Association

Honors Night Ceremonies of the 90th Annual Scientific Meeting of the Aerospace Medical Association were held May 9, 2019 at the Rio All Suite Hotel and Casino, Las Vegas, NV. Twenty awards for outstanding contributions in aerospace medicine and human performance were presented (the Sidney D. Leverett Environmental Science Award was not presented). The presentations were made by Dr. Roland Vermeiren, President of the Aerospace Medical Association, assisted by the chair of the Awards Committee Cheryl Lowry, M.D., Jeff Myers, M.D., Al Parmet, M.D., and Tracy Dillinger, Psy.D. The winners were recommended by the Awards Committee and approved by the Executive Committee of the Aerospace Medical Association.

Louis H. Bauer Founders Award Michael A. Berry, M.D., M.S.

This award was established to honor Louis H. Bauer, M.D., founder of the Aerospace Medical Association. It is given annually for the most significant contribution in aerospace medicine. It is sponsored by the Mayo Clinic.

Michael A. Berry, M.D., M.S., is the 2019 recipient of the Louis H. Bauer Founders Award for his achievements in and lifelong dedication to aerospace medicine. Throughout his over 45-year Aerospace Medicine career, Dr. Berry has contributed significantly to international aerospace medicine in numerous ways and in a variety of settings. His contributions began in 1973 while in the U.S. Air Force, continued while a NASA flight surgeon, as an independent Aerospace Medicine Consultant, and in the FAA where, as Federal Air Surgeon, he now provides executive leadership for the strategic management of all of the FAA's Office of Aerospace Medicine nationwide programs.

Michael A. Berry received his M.D. degree from the University of Texas Southwestern Medical School in Dallas in 1971. After a general surgery internship in the United States Air Force, he spent 4 years as a fighter squadron flight surgeon in Spain and England. As the Commander of the 401st Air Transportable Hospital in 1975, during deployment to Sardinia, he coordinated hospital functions with the local Italian medical authorities, contributing to the superior achievements of the hospital during the NATO Operation Flaming Lance.

In 1976, he entered his residency in Aerospace Medicine at Ohio State University in Columbus, OH, and received his master's degree in Preventive Medicine in 1977. In 1978, he

was certified by the American Board of Preventive Medicine in Aerospace Medicine. Following his residency, he became the Chief of the Flight Medicine Clinic at the NASA Johnson Space Center in Houston, TX, where he was responsible for the screening and selection of new astronauts and participated in the certification and training of astronauts for space flight. In addition to participating in the extensive medical preparations for the first flight of the Space Shuttle, he served as a member of the Flight Control Team for the first two flights of the Shuttle Columbia.

On leaving NASA in 1981, he entered the private practice of Aerospace Medicine with Preventive & Aerospace Medicine Consultants, in Houston, TX, where he was a consultant and FAA Aviation Medical Examiner for 25 years. During this time, he also served as an FAA Human Intervention Motivation Study (HIMS) trained AME monitoring many airline and corporate pilots during their recovery from substance use disorders. In 2006, Dr. Berry accepted a Senior Executive position with the Federal Aviation Administration in Washington, D.C. as the Manager, Medical Specialties Division at FAA Headquarters where he was responsible for aerospace medicine policy and procedures. In March 2014, Dr. Berry was selected as the FAA Deputy Federal Air Surgeon and became the Federal Air Surgeon in 2017. Dr. Berry has been a Senior Aviation Medical Examiner for the FAA since 1979 and was an Aviation Medical Examiner for Transport Canada from 1999-2008.

Dr. Berry attended his first International Congress of Aviation and Space Medicine in Munich, Germany, in 1973. He was elected an Academician of the International Academy of Aviation and Space Medicine in 1978 and has been extremely active in the leadership as a Selector, Director, Web Master, Academy President in 2010 and 2011, and most recently Emeritus Member in 2016. He has attended and participated in many International Congresses, and presented numerous papers at these international meetings, reporting on unique medical cases, medical decisions contrasting U.S. medical standards and ICAO standards, and U.S. FAA special issuance medical certification statistics.

Dr. Berry was a member of the ICAO Medical Problems Working Group, most recently addressing the subject of emphasizing preventive medicine principles as part of all medical certification evaluations. As manager of the FAA Human Intervention and Motivation Study, a program addressing substance abuse/dependence in pilots, Dr. Berry also actively participated in educational outreach efforts to the Australian CASA in 2009 and 2015, presenting the unique regulatory as-

See 'Berry', p. N30



Michael Berry (center), accepts the Bauer award from AsMA President Roland Vermeiren (right) and Dr. Steven Altchuler (left), representing Mayo Clinic.

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pects of this program. He was the U.S. representative at the European Panel on Pilots and ATCOs with Insulin Treated Diabetes in 2014, presenting the U.S. FAA medical standards and position on the important subject of insulin treatment for diabetes in commercial airline pilots.

A Fellow and Past President of AsMA, he is also a Fellow of the American College of Preventive Medicine. He is a past Vice-President of the Civil Aviation Medical Association. He served as a Board Member and Trustee of the American Board of Preventive Medicine and as the Vice-Chair for Aerospace Medicine from 1990-1998.

Dr. Berry is the recipient of numerous national awards, including AsMA's Won Chuel Kay, John A. Tamiseia, and Kent K. Gillingham Awards; the AMA Physician's Recognition Award; the USAF National Defense Service and Outstanding Unit Medals; and numerous NASA service and group achievement awards, including a First Shuttle Flight Achievement Award presented in appreciation of the contributions to the success of the First Manned Orbital Flight of the Space Shuttle. He has several academic appointments, has authored many scientific papers and book chapters, and delivered the 4th Annual Reinartz Lecture at AsMA's 88th Annual Scientific Meeting in 2017.

Admiral John C. Adams Award James R. De Voll, M.D., M.P.H.

This award was established by the Society of U.S. Naval Flight Surgeons in honor of Admiral John C. Adams. The award is given annually for the most significant contributions to operational Aerospace Medicine, either during a single defined period (e.g., deployment), or over a career.

James R. De Voll, M.D., M.P.H., is the 2019 recipient of the John C. Adams Award. As Manager of Medical Appeals, in the Medical Specialties Division of the FAA Office of Aerospace Medicine, Dr. De Voll spearheaded the office's effort, over the previous 20 months, to safely implement, and integrate the directives of the 2016 FAA Extension, Safety, and Security Act, through the program now commonly known as BasicMed. This program is the biggest change in operational aerospace medicine, as it relates to general aviation pilots in the U.S., over the last 70 years.



James De Voll (left) accepts the Adams award from CAPT Tim LaVan (center), representing the Society of U.S. Naval Flight Surgeons, while Roland Vermeiren (right), AsMA President, looks on.

The 2016 FAA Extension, Safety, and Security Act directed the FAA, within 180 days, to “issue or revise regulations to ensure that an individual may operate as pilot in command of a covered aircraft” without having to undergo the medical certification process. The final rule, published without interpretation, on 01/11/2017, the requirements of this Section now known as “BasicMed”. This rule initiated a major change in operational aerospace medicine relating to general aviation. The rule came to fruition through the monumental efforts of a Rule Making Committee comprised of representatives from multiple FAA offices. Dr. DeVoll, who was the only aerospace medicine member of the committee, was charged with implementing the medically related provisions of the Act. He helped the team meet an extremely accelerated timeline – condensing a normal 2- to 3-year process into 6 months. The diligent effort and oversight of Dr. De Voll, ensured that aeromedical safety mitigating factors were part of the final rule.

Since its implementation, Dr. De Voll has been instrumental in addressing unforeseen aerospace medicine issues that continue to arise. He worked with AOPA and the Mayo Clinic to assure a Congressionally mandated education course be available on time and aeromedically accurate. He coordinated the aerospace medicine input for the required report to Congress on the safety impact of the rule. He worked with the Senior Regional Flight Surgeon, and the Flight Standards Service to develop educational material for airmen, AMEs, and private physicians ensuring understanding of this new BasicMed program. He provided the aerospace medical input to the BasicMed Frequently Asked Questions on the FAA website. In 2018, he was the primary aerospace medicine interface with the Congressional Office of the Inspector General in their review of FAA implementation of BasicMed. Dr. De Voll was the FAA Flight Surgeon of the Year for 2017.

Raised in Southern California, Dr. De Voll graduated summa cum laude from Tulane University in New Orleans, LA, in 1977. Dr. De Voll was commissioned as an Ensign in the Navy in 1978 after selection for the Armed Forces Health Professions Scholarship Program. The Emory University School of Medicine in Atlanta, GA, awarded him his Doctor of Medicine degree in 1981. After graduation and promotion to Lieutenant, he interned in Internal Medicine at the Naval Hospital, Portsmouth, VA. He attended the Naval Aerospace Medical Institute in Pensacola, FL, and was designated a Naval Flight Surgeon in 1982.

In 1983, Dr. De Voll was assigned to support deploying Marine Corps helicopter squadrons at Marine Air Group 26 at MCAS(H) New River, Jacksonville, NC, and was assigned as Flight Surgeon for HMM-261. He participated in Operation Urgent Fury in Grenada and was part of the multi-national peacekeeping force in Beirut, Lebanon.

Following a tour at Naval Medical Center in Portsmouth, VA, from July 1986 through April 1989 that included additional training in musculoskeletal medicine, Dr. De Voll reported to the 6th Marine Expeditionary Brigade at Camp Lejeune, NC. He next served as the Assistant Force Surgeon for II Marine Expeditionary Force from July 1990–July 1991, and deployed as Assistant Division Surgeon, 2nd Marine Division for Operation Desert Shield/Desert Storm.

Dr. De Voll earned his M.P.H. (Epidemiology and Biostatistics) from Columbia University School of Public Health, See 'De Voll', p. N31

From 'De Voll', p. N30

New York City in 1992. He then reported to the Naval Aerospace and Operational Medical Institute in Pensacola, FL, where he completed residency training in Aerospace Medicine in June 1994.

In July 1994, Dr. De Voll reported to USS *Enterprise* in Norfolk, VA, as Senior Medical Officer. During this period he oversaw the complete rebuilding of the medical department and re training of department staff after a 4-year overhaul. Dr. De Voll reported to the Bureau of Medicine and Surgery in September 1996 as Assistant Director, Aerospace Medicine for the Assistant Chief, Operational Medicine and Fleet Support. In May 1998, Dr. De Voll assumed the role of Director of Aerospace Medicine and Specialty Leader for Aerospace Medicine. In October 1999, Dr. De Voll then moved to be the Medical Corps Career Plans Officer for the Chief of the Medical Corps.

Dr. De Voll reported to the National Naval Medical Center, Bethesda, MD, in August 2001 as the Director for Neuro-Musculoskeletal Services. He also was assigned by the Surgeon General to chair the working group on the Navy Medicine strategic plan focused objective that created and implemented the "Task Organized for Contingency Response" concept revolutionizing Navy-wide medical capabilities for scalable, flexible and rapid response to emerging threats.

Dr. De Voll retired from the Navy in October 2004, but has continued as a volunteer physician at the National Naval Medical Center, Bethesda, MD, as well as serving as a Red Cross volunteer at the Naval Medical Clinic Patuxent River, MD. His Awards include Meritorious Service Medals (with three Gold Stars) and Navy-Marine Commendation Medals (with one Gold Star).

In 2004 Dr. De Voll joined Science Applications International Corporation (SAIC) as Chief Medical Officer for the Health Solutions Business Unit. He then moved to The Advisory Board Company, where he served as Director for Physician Leadership. In 2006 he joined the FAA as Manager, Medical Appeals Branch Division, Medical Specialties Division, Office of Aerospace Medicine, a position he still holds today.

Dr. De Voll is board certified in Aerospace Medicine. He joined AsMA in 1982 as a Junior Flight Surgeon in the Navy. He became an Associate Fellow in 1993 and a Fellow in 2001. He is also a Fellow of the Civil Aviation Medical Association, and member of the American Medical Association and American College of Preventive Medicine. As a reviewer articles for Aviation, Space and Environmental Medicine (ASEM), he has reviewed numerous articles involving human factors issues. He has served on many AsMA committees including the Registration Committee, Human Factors, Publications, Finance, and Science and Technology, and most recently ad AsMA as Treasurer and Vice President. Dr. De Voll is a member of the Society of US Naval Flight Surgeons since 1982, and a member of the Aerospace Human Factors Association (Past President and Fellow).

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The AsMA, Industry, & Member News (and the Job Fair) pages are updated as we get news. Members: Check the Job Fair - new jobs are posted monthly!

Boothby-Edwards Award Eduard Ricaurte, M.D., M.S., FAsMA

Established in memory of Walter M. Boothby, M.D., pioneer aviation medicine researcher, and Howard K. Edwards, M.D., clinical practitioner of aviation medicine, this award is presented annually for outstanding research and/or clinical practice directed at the promotion of health and prevention of disease in professional airline pilots. (The separate Boothby and Edwards Awards were given annually 1961-73, and then alternately until 1985.) Sponsored by Harvey W. Watt and Company.

Eduard Ricaurte, M.D., M.S., FAsMA, was the 2019 recipient of the Boothby-Edwards Award for his contribution to



safety risk management of medical record review of hundreds of selected pilots and Air Traffic Controllers, with specific medical conditions with the inclusion of disabilities while working for the FAA. He has also contributed to writing a report entitled "Medical Certification Strategies in Response to Technologically Advanced Prosthetic Devices." This work, released in 2018 by the Federal

Aviation Administration, discusses a few advanced technologies to illustrate some of the challenges associated with the use of new technologies and devices in a high-stress environment with the purpose of proposing recommendations pertaining to the evaluation of advanced neuroprosthetics and aeromedical certification of amputee pilots. This work raises the importance of investigating human performance in unusual operational settings in aviation in the context of great technological progress of medical devices.

A native from Colombia, South America, Dr. Ricaurte earned an M.D. at the University of Cartagena School of Medicine in 1989 and served a 1-year internship at Colombia Navy Hospital in Cartagena from 1988-1989. He completed the primary course in Aviation Medicine at the National University of Colombia in Bogota in 1992. He served in a Fellowship in Aviation Medicine and Aircraft Accident

See 'Ricaurte', p. N32



Michael Berry (center) accepts the Boothby-Edwards Award for Eduard Ricaurte, who could not be at the meeting, from Charles DeJohn (left), representing Harvey W. Watt & Co., the sponsor, as Roland Vermeiren (right), AsMA President, looks on.

Investigation at FAA Civil Aerospace Medical Institute (CAMI) from 1996–1997. During his training in aerospace medicine and human factors engineering at Wright State University from 2001–2004, he was involved in research projects to determine the usefulness of electro-tactors embedded in a vest as a countermeasure to spatial disorientation.

Dr. Ricaurte left the FAA after 14 and is currently providing system safety at the Boeing Corporation in Oklahoma City, OK. He previously supported FAA CAMI Safety Risk Management for projects assigned through the Operational Analysis Program Directive to CAMI. Previously, he contributed to the design, development, and administration of the Aviation Accident Injury and Autopsy Database (AA-IADS) to reduce injuries in aircraft accidents and improve occupants' survivability.

Dr. Ricaurte is the co-author of an accident investigation chapter in the fourth edition of the guide text book: *Fundamentals of Aerospace Medicine*. He has also conducted studies on aviation related safety issues, published scientific manuscripts, made recommendations, delivered reports, briefings, and presentations to technical groups and organizations, and provided research-project leadership for highly complex and challenging activities. His new challenges include the support of projects for safety risk management to evaluate aeromedical certification criteria and policy development in pilots with previously identified medical conditions.

Dr. Ricaurte is a member of the Aerospace Human Factors Association, where he has been Newsletter Editor and Member-at-Large; the Iberoamerican Aerospace Medicine Association, where he has been President; the Colombian Aviation Medicine Association, where he has been Vice President; and the Colombian Aviation Safety Council; and an elected member of the International Academy of Aviation and Space Medicine. He is a Fellow of the Aerospace Medical Association, where he has been Chair of the Aerospace Safety Committee, a member of the Scientific Program Committee, and the coordinator and co-editor of a Spanish panel.

Dr. Ricaurte has received the Outstanding Service Award from the Colombian Civil Air Patrol, and Outstanding Service Award from the Colombian National Police, a Certificate of Recognition for Aeromedical Education Accomplishments from the Colombian Congress's House of Representatives, and an Academic Scholarship from the International Academy of Aviation and Space Medicine. He is the recipient of the John A. Tamisiea Award, John Paul Stapp Award, and Arnold D. Tuttle Award from the Aerospace Medical Association.

David M. Clark Award Mayo Clinic (Robert Haddon, M.D.)

This award was established by the Aerospace Medical Association to honor an AsMA corporate member who has made significant contributions to the advancement of aerospace medicine. The award is given for contributions in a single year or over a defined period.

The 2019 Clark award was presented to the Mayo Clinic for their involvement in research, clinical evaluation, and education within the field of Aerospace Medicine for over eight decades. Starting in the World War II era, successful Mayo

research projects included the 5-bladder G-suit, the BLB oxygen delivery mask for civilian aviation flight, and the M-1 straining maneuver to reduce risk of G-induced loss of consciousness. In more recent years, Mayo Clinic physicians have identified genetic markers to predict altitude illness, investigated cohort data to identify risk factors for crashes of certain categories of aircraft such as balloons and gliders, and published a variety of peer-reviewed articles on rare and complex illnesses and results of forensic determinations by colleagues in the FAA and other international certification authorities.

Today, Mayo physicians and researchers are investigating innovative tools designed to detect and combat spatial disorientation, vestibular abnormalities, and new oxygen delivery systems to be installed in aircraft being developed by major manufacturers. Studies focused on human adaptation at high altitudes and remote locations are also being conducted to mitigate the effects of altitude sickness experienced by individuals visiting destinations at high altitude, and to allow safe air travel at altitudes greater than 40,000 feet (12,100 meters), referred to as "thin air" flights. With the introduction of a state-of-the-art hyperbaric and altitude chamber facility on the Rochester, MN, campus, and development of a hypoxia simulation and vestibular laboratory at Mayo Clinic's campus in Arizona, Mayo aerospace researchers are advancing various projects applicable to high-altitude aviation as well as programs for space travel.

The Mayo Clinic Aerospace Medicine program is a valuable resource for pilots, aircraft manufacturers, airlines and corporate flight departments. From routine Federal Aviation Administration (FAA) flight physicals to complex evaluations for aviators needing Special Issuance Authorization waivers, the Mayo Clinic programs in Aerospace Medicine offer a comprehensive set of medical services for recreational pilots, business aviation flight crews, professional air transport personnel, and even individuals traveling to high-altitude environments on land or in the air. Mayo Clinic also features several aviation medical examiners who are trained in providing care to pilots requiring surveillance in the Human Intervention and Motivation Study (HIMS). This surveillance is required for certain pilots with prior substance abuse issues or aviators prescribed antidepressant medications monitored by the Federal Air Surgeon's Office.

Mayo Clinic School of Graduate Medical Education offers exceptional preventive and aerospace medicine fellowships at

See 'Mayo Clinic,' p. N33



Robert Haddon (center), accepts the Clark award from AsMA President Vermeiren (right) and Richard Leland (left), representing the Aerospace Medical Association.

From 'Mayo Clinic' p. N32

Mayo Clinic's campus in Rochester, MN. Mayo Clinic faculty have served on a variety of AsMA committees, helped to organize the RAM Bowl, and have been authors or co-authors on a variety of projects. Mayo Clinic has also been a corporate member of AsMA for over 15 years and has provided sponsorships including recurrent funding for the welcoming reception(s) and the Louis H. Bauer Founders Award.

Accepting the 2019 David M. Clark Award on behalf of Mayo Clinic was Dr. Robert Haddon. He joined Mayo Clinic in 2013 after working with NASA on Space Shuttle and International Space Station missions as a Crew Surgeon. Dr. Haddon is a Senior Aviation Medical examiner and Hyperbaric/Hypobaric Altitude Medicine Practitioner at Mayo Clinic and his experiences in extreme environment medicine and infectious disease treatment complements the research and patient care offered at Mayo Clinic.

John Ernsting Award John Caldwell, Ph.D.

Established and sponsored by Environmental Tectonics Corporation in memory of Professor Ernsting. It is given for outstanding research in altitude physiology, and/or long-standing exceptional performance in the education, development, and administration of Aerospace Medicine and related specialties.

John Caldwell, Ph.D., FAsMA, FAsHFA, was the 2019 recipient of the John Ernsting Award. He was honored in recognition of sustained excellence in the advancement of aerospace medicine education. He has contributed significantly to the awareness of relevant fatigue management issues throughout his research career spanning more than 30 years. His research on sleep and fatigue management for operational settings—both military and civilian—is internationally respected within the scientific and operational communities, leading to awareness of the threat of inadequate sleep to operational aviation safety and performance. His hallmark lecture series on Aircrew Fatigue has been presented annually at the AsMA scientific meeting for the past 16 years and has educated hundreds of AsMA attendees.

Dr. Caldwell is currently an independent consultant and an ORISE Research Fellow working with the US Army Research Institute of Environmental Medicine. During his career with the US Army Medical and Materiel Command, he conducted extensive fatigue-countermeasures research with an array of rotary-wing pilots, and during his time with the US Air Force and NASA, Dr. Caldwell contributed to general and military aviation safety by extending his sleep, fatigue, and safety research into the fixed-wing and space communities. His work on pharmacological and behavioral performance optimization strategies has been integral to Army and Air Force fatigue-management practices. He holds the U.S. Air Force's highest award for research and development aimed at enhancing the operational effectiveness of aviation personnel.

Dr. Caldwell earned a B.S. in Psychology at Troy State University, AL, in 1976, then an M.A. in General Experimental Psychology from the University of South Alabama in 1979. He received his Ph.D. in General Experimental Psychology from the University of Southern Mississippi in 1984. From 1986 to 2002, he served as a Research Psychologist at the U.S. Army Aeromedical

Research Laboratory at Fort Rucker, AL. In 2002, he became Principal Research Psychologist at the U.S. Air Force Research Laboratory at Brooks AFB, TX. In 2005, he transferred to NASA Ames Research Center, Moffett Field, CA, to become Lead Research Psychologist for Fatigue Countermeasures. He returned to the U.S. Air Force Research Lab, now at Wright-Patterson AFB, OH, in 2006, where he was a Principal Research Psychologist. In 2007, he moved to Honolulu, HI, to become Chief Science Officer at Fatigue Science, LLC, where he stayed until 2012, when he took a position as Scientific Advisor at Clockwork Research, Ltd., in London, UK. He accepted his present position of Senior Research Fellow at Oak Ridge Associated Universities/USARIEM in Natick, MA, in 2014.

Dr. Caldwell has authored or coauthored three papers focused on EMS sleep and fatigue issues and taught a series of sleep/fatigue management courses to EMS personnel. He has published over 100 generally-related articles, book chapters, and technical reports on civilian and military aviation fatigue management. He has recently updated his book "Fatigue in Aviation: A Guide to Staying Awake at the Stick," and his contributions to Ernsting's Aviation and Space Medicine (Ch 36). He has taught and/or consulted internationally on fatigue and sleep management issues for organizations such as the National Sleep Foundation, the National Transportation Safety Board, the Swiss Aviation Safety Office, Swiss Air Rescue, the Colombian Aviation Authority, United Airlines, Etihad Airlines, and others.

Dr. Caldwell has been widely recognized for his professional achievements. He has been interviewed by the media over 70 times on sleep, performance, fatigue management, medical interventions, research procedures, and related topics. A Fellow of AsMA, he is also a Fellow in the Aerospace Human Factors Society (2015), and recipient of the William E. Collins Award for Outstanding Human Factors Publication of the Year (2010). He also is a recipient of the AsMA's Harry G. Moseley Award for the most significant contribution to aviation safety (2007), the Harold Brown Award for research and development in the USAF (2005), the Army Meritorious Civilian Service Award (1997), the Army Superior Civilian Service Award (1992), the DOD Civilian Desert Shield/Desert Storm Medal (1992), and the Army Commendation for Dedicated Service in Support of Desert Storm (1991). His outstanding work over the past 30 years in

See 'Caldwell,' p. N34



John Caldwell (center), accepts the Ernsting award from George Anderson (left), representing Environmental Tectonics Corp., and AsMA President Vermeiren (right).

the aerospace and aeromedical communities concerning fatigue management and countermeasures has been of profound importance in enhancing aircrew education, safety and performance.

Kent K. Gillingham Award Dwight Holland, MSE, M.D., Ph.D.

This award was established and sponsored by the AMST Group of Companies in Austria and the United Kingdom to honor the memory of Kent K. Gillingham, M.D., Ph.D. The award is presented annually to an individual who has made a significant contribution in the field of spatial disorientation and situational awareness related to flight.

Dwight Holland, MAL, M.S., MSE, M.D., Ph.D., received the 2019 Kent K. Gillingham Award. He was honored for his deep involvement with issues related to spatial disorientation/situational awareness (SD/SA). His early work included mishap database evaluation with SD/SA as contributors and assessed the cost of such mishaps. Later, he examined how fatigue in aerospace systems affected SD/SA. He redesigned and taught courses at the U.S. Navy (USN)/U.S. Air Force (USAF) Test Pilot Schools for 10 years with SD/SA as key components. He also taught an innovative course in Unmanned Aerial Systems Safety Management where SD/SA issues were highlighted. During the mid-1990s to early 2000s he and colleagues collected a series of case studies published in the well-known NASA 2012 book "Breaking the Mishap Chain." This work received widespread attention for putting together the way in which SD/SA issues blend with systems/human factors (HF) weaknesses to create an environment more conducive for mishaps to occur.

Dr. Holland is currently President of the Life Sciences and Biomedical Engineering Branch, as well as the Past-President of the International Association of Military Flight Surgeon Pilots (IAMFSP), the Aerospace Human Factors Association, and the Space Medicine Association. He is the Founder and a Principal of his consulting business in Systems Management/Human Factors Engineering for over 20 years. A lieutenant colonel in the USAF Reserve, he has been assigned to the 311th Human Systems Wing's Performance



Dwight Holland (center), accepts the Gillingham award from AsMA President Vermeiren (left) and Erich Roedig (right), representing AMST.

Enhancement Division at Brooks City-Base in San Antonio, the USN and USAF Test Pilot Schools (most recently as the IMA Deputy Director for the Education Division at Edwards AFB), and now as the IMA to the Chief of the Warfighter Readiness Research Division at the 711th Human Performance Wing.

Dr. Holland holds master's degrees in Geophysics, Systems Engineering, and a Ph.D. in Human Factors Engineering, from Virginia Tech. He is a graduate of USAF Pilot Training and is a fully-qualified USAF Acquisitions Officer. He has also completed a Medical Doctor degree from the University of Virginia and a master's degree with a focus in Political Science and International Relations from Hollins University. He served on a Geophysics research expedition to the Antarctic, where he managed the team's Gravity/Magnetics program and first-ever GPS use in Antarctica for scientific study.

Dr. Holland has served as an instructor and curriculum co-developer in the crew systems interface area at the Navy Test Pilot School at Patuxent River, MD. He was the first-ever reserve instructor attached to the USN Test Pilot School. In the past he was assigned to the USAF Office for Scientific Research (AFOSR) as an International Program Manager, where he also served as a USAF liaison to the Office of Naval Research for Internationally-related Bioterrorism issues and represented AFOSR and the Air Force Research Lab (AFRL) at the first high-level governmental anti-Bioterrorism Conference in the Western Hemisphere, and was a key S&T player in the outreach to Slovenia in 2002–2004 as it transitioned to being a NATO State. He was selected by the Secretary of the Air Force/Acquisition team to moderate brain-storming sessions on how to improve the systems engineering processes in the USAF Acquisitions system and served as the Technical Co-Chair for the largest international Systems Engineering Conference held to date.

Dr. Holland has over 100 academic presentations and publications to his credit, including chairing over 50 scientific sessions at international scientific meetings. He served as one of several co-authors on the article on all-night flying fatigue that received the AsMA 2005 Tuttle Award. His dissertation on dynamic peripheral visual acuity under various levels of workload and verbal intrusion earned him the 2002 Stanley N. Roscoe Award from the Aerospace Human Factors Association. He received AsMA's Won Chuel Kay Award and the Sidney D. Leverett Award. He co-managed the first-ever dedicated high G prescribed flight test with pilot physiological monitoring for different regular and advanced "full coverage" G suit models. This was nominated by the USAF Test Pilot School for the international Collins Award and won several flight test society awards for his team's research efforts. A Fellow of AsMA, he has served on the AsMA Council and Executive Committee, was the chair of the Awards Committee, a member of the Nominating Committee, and has served on the AsMA Scientific Program Committee for over 20 years.

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Walter & Sylvia Goldenrath Award Lt. Col. Thomas V. Massa, USAF

Established in memory of CAPT Walter L. Goldenrath, MSC, USN(Ret.), this award is presented for the most significant contribution in the field of aerospace physiology. It was created at the bequest of CAPT Goldenrath and is funded by the Walter and Sylvia Goldenrath Endowed Fund.

Lt. Col. Thomas V. Massa received the 2019 Walter and Sylvia Goldenrath Award for his unparalleled lifetime contributions to aerospace medicine and aerospace physiology. During his 32-year career, his actions as an operational physiologist, researcher, safety investigator and commander directly impacted Department of Defense operations and policy. He was one of the first AF enlisted members to conduct human physiological research on Hyperbaric Medicine breathing equipment. He is credited with testing and developing a Modified Hyperbaric Mask Assembly which was implemented Air Force-wide for operational and clinical treatment. As an operational physiologist, he has demonstrated superior insight and exceptional leadership. His expertise makes him the "go-to" authority for all physiological and G-related incidents.

Lt. Col. Massa is currently the Aerospace & Operational Physiology (AOP) Program Manager, Office of the Command Surgeon General, Headquarters Air Combat Command (ACC), Joint Base Langley-Eustis, VA. He advises the Commander of ACC and the Surgeon General on human factors/performance optimization, physiology, and safety for 402K personnel. He directs the highly visible ACC AOP program, providing guidance, leadership, and mentorship for 12 bases for over 215 personnel. He oversees CSAF AOP policy for the F-22, F-35, and U-2 aircraft and works directly with HQ ACC/A3T staff on F-35/F-22 physiological event issues, spatial disorientation, and back-up oxygen system training devices as well as requirements and curriculum development. He is a voting member of the AOP Corporate Advisory Board, developing the Air Force-wide AOP strategic plan and policies. Prior to his current assignment, he was a student and graduate of the Air War College at Maxwell AFB, AL.

Lt. Col. Massa entered the Air Force in October 1986 as an enlisted Aerospace Physiology Technician. He graduated with a Bachelor of Arts & Science degree from Texas State University in 1996 and was commissioned as a Biomedical



Thomas Massa (center), accepts the Goldenrath award from AsMA President Vermeiren (right) and Dr. Kim Broadwell, AsMA Foundation Chair (left), representing the Goldenrath Endowed Fund.

Service Corps Aerospace Physiologist in April 1997. He has been assigned to numerous operational and staff positions, including deployments to operation Southern Watch and recently served as the Squadron Commander for the 375th Aerospace Medicine Squadron, Scott AFB, IL. He currently is the President of the Aerospace Physiology Society, a constituent of the Aerospace Medical Association.

Lt. Col. Massa's honors include AMSUS-the Society of Federal Health Professionals Operational Medicine Award, Air Force Aerospace Physiologist of the Year, the Paul Bert Physiological Research and Wiley Post Operational Physiology Awards from the Aerospace Physiology Society, the Air Force Achievement Medal with four oak leaf clusters, the Air Force Commendation Medal with four oak leaf clusters, and the Meritorious Service Medal with four oak leaf clusters. He is a member of AsMA, AMSUS-Society of Federal Health Professionals, the Aerospace Physiology Society, the Undersea Hyperbaric Medicine Society, the Human Factors and Ergonomics Society, and the Military Officers Association of America.

Won Chuel Kay Award Gordon Cable, ACCAM, Dip.Av.Med., GDOHSM

Established and sponsored by the Korean Aerospace Medical Association in honor of Won Chuel Kay, M.D., the former Surgeon General of the Korean Air Force, founder and first Medical Director of Korean Airlines and first President of the Korean Aerospace Medical Association. This Award is presented annually to a member who has made outstanding contributions to international aerospace medicine.

Gordon Cable, M.B.B.S. (Hons.), ACCAM (Monash), PGDip.Av.Med. (Otago), GDOHSM (Adelaide), was the recipient of the 2019 Won Chuel Kay Award. He was honored for having been a driving force in both military and civilian aerospace medicine in Australia for more than 20 years, with achievements spanning teaching and training, clinical medicine, research, professional organization, and management of the specialty. His many contributions have arisen through his leadership and service to the Australasian Society of Aerospace Medicine (ASAM), including as President, Secretary, and Conference Chair. His focus on training led to world-class teaching initiatives, with particularly distinguished work on combined altitude depleted oxygen (CADO) when the

See 'Cable', p. N36



Gordon Cable (center) accepts the Kay award from Young Hwan Kwon (left), representing the Aerospace Medical Association of Korea, as AsMA President Roland Vermeiren looks on.

From 'Cable,' p. N35

service moved away from hypobaric chamber training. He was also intimately involved in setting up the Australasian College of Aerospace Medicine and Chaired its Assessments Subcommittee.

Dr. Cable graduated from the University of Sydney in New South Wales, Australia, with an M.B.B.S. in 1988. He earned a Postgraduate Diploma in Aviation Medicine from the University of Otago, New Zealand, in 1996. In 2008, he graduated from the University of Adelaide in South Australia with a Graduate Diploma in Occupational Health and Safety Management.

Dr. Cable is a specialist in aerospace medicine and a Senior Aviation Medical Officer for the Australian Defence Force. He has been a consultant to the Royal Australian Air Force since 1996 and is currently Head of Aerospace Medicine Training at the RAAF Institute of Aviation Medicine. He is an Honorary Life Member of ASAM, which has benefited enormously from his longstanding leadership as a member of the board for 22 years and as President for two terms (2001–2007), Conference Organising Committee Chair (five times), Journal Editor (1996–2004), and Secretary (current). He was also instrumental in bringing the International Congress of Aviation and Space Medicine to Australia twice (2002 as President and 2012 as Convenor). Additionally, he is Chair of the ASAM Space Life Sciences Committee which convenes the annual Humans in Space Challenges for Exploration course and is a member of the National Committee for Space and Radio Science.

Dr. Cable holds Fellowships with the Australasian College of Aerospace Medicine, the Aerospace Medical Association (AsMA), the Royal Aeronautical Society, and the International Academy of Aviation and Space Medicine. Additionally, he is a Clinical Associate Professor in the School of Medicine at the University of Adelaide and a Senior Lecturer in Aerospace Medicine with the University of Tasmania. In 2015, he was appointed a Member of the Order of Australia for contributions to aerospace medicine. His other honors include the Ellingson Award for Published Research from AsMA's Associate Fellows Group, AsMA's Arnold D. Tuttle Award as a co-author, the Eric Stephenson Award from the Australasian Society of Aerospace Medicine, and Membership in the General Division of the Order of Australia. He is a member of the International Academy of Aviation and Space Medicine, the Royal Australian College of General Practitioners, the Space Industry Association, and the Space Medicine Association.

Joe Kerwin Award Tina Bayuse, Pharm.D., R.Ph.

Established and sponsored by KBR in honor of Joseph P. Kerwin, the first physician/astronaut. It is presented for advances in the understanding of human physiology during spaceflight and innovation in the practice of space medicine to support optimal human health and performance in space.

Tina Bayuse, Pharm.D., R.Ph., was the 2019 recipient of the Joe Kerwin Award for her leadership and dedication to the support of optimal human health and performance in spaceflight. She has spearheaded efforts to provide a safe and effective pharmaceutical formulary for spaceflight and, as such,

has been responsible for pharmaceutical preparation and delivery in support of aerospace medical needs in low-Earth orbit. For years, she has been the key individual supporting the NASA aerospace pharmacy, providing clinical expertise and recommendations for pharmaceutical treatment options and preparing medications for flight and use by crewmembers. She has been heavily involved in efforts to evaluate the stability, effectiveness, pharmacokinetics, and pharmacodynamics of medications used in spaceflight, identifying and highlighting numerous knowledge gaps that limit our current ability to effectively provide pharmaceutical capabilities for future missions to the Moon and Mars. In addition, she has been instrumental in current efforts to evaluate and expand space pharmacy capabilities for exploration spaceflight.

Dr. Bayuse graduated from the University of Maryland, Baltimore School of Pharmacy with her Doctor of Pharmacy in 2000. Upon graduation, she accepted a position in the Pharmacology Laboratory at NASA's Johnson Space Center (JSC) as a government contractor working for Wyle (now KBRwyle) supporting various research projects, including pharmaceutical stability research for the on-orbit medical kits. In addition, she was responsible for the development and maintenance of medication monographs for the Space Shuttle and International Space Station Medical Kits. In 2002, she became the Lead Pharmacist for the first and only NASA pharmacy that opened its doors in 2003. As the Lead, she was responsible for the original start-up work for the pharmacy, including the physical layout, policy and procedure development for medication management, and implementation of pharmacy practice programs. As clinical staff team members, Dr. Bayuse and her pharmacist colleagues work with the JSC Clinic and Medical Operations Group in support of crewmember and employee health.

Dr. Bayuse serves as the pharmacist consultant to the Medical Operations and the Health Maintenance System groups for on-orbit medical care, including Medical Kit design, medication selection, and process development for the ISS, Commercial Crew, and Orion Programs. She is responsible for leading the pharmacist team in the provision and packing of the medications for spaceflight through the JSC Pharmacy as well as overseeing the medication management of the kits. She is a member of the operations team responsible for pharmacy practice for NASA's remote operations, such as the medical facility in Star City, Russia, and the Direct

See 'Bayuse,' p. N37



Tina Bayuse (center), accepts the Kerwin award from AsMA President Vermeiren (right) and Michelle Frieling (left), representing KBR.

From 'Bayuse,' p. N36

Return program which returns postflight astronauts to Houston within 24 hours after landing in Kazakhstan.

Dr. Bayuse serves as a liaison between the space medicine clinical and operational pharmacy program and the research community. In March of 2016 she joined the Exploration Medical Capabilities Element as a subject matter expert providing pharmacy operations expertise to the Clinician's Group in support of the team's goals. She has presented numerous topics in pharmacy practice as it relates to Space Medicine. She is a member of the American Society of Health-System Pharmacists (ASHP) and the American Pharmacists Association (APhA), as well as an active member of the Aerospace Medical Association (AsMA) and the Space Medicine Association (SMA), serving as treasurer from May 2015 to May 2019. She has won numerous awards from her contractor employer, KBRwyle, as well as NASA including the Silver Snoopy award (2018) and the NASA Exceptional Public Service Medal (2018), which is the highest honor awarded to a non-government individual for their contribution to NASA.

Mary T. Klinker Award David O'Brien, M.D., M.P.H., C.P.E.

Established by the Flight Nurse Section in 1968, this award became an official AsMA award in 1972. In 1978 it was renamed in memory of Mary T. Klinker, who was killed in a C-5A crash while performing a humanitarian mission. The award is given annually to recognize significant contributions to, or achievements in, the field of aeromedical evacuation. Sponsored by ZOLL Medical Corporation.

David O'Brien, M.D., M.P.H., CPE, received the 2019 Mary T. Klinker Award in recognition of his 28-year career in clinical and operational medicine leadership, directly supporting aeromedical evacuation for the Department of Defense, Federal agencies and U.S. allies. He is honored for his dedication and outstanding accomplishments establishing a highly successful global patient movement system, improving clinical care in flight and on the ground, and integrating teams across military services and medical career fields, ensuring that patients have the right care, at the right time, and to the right destination.



David O'Brien (center), accepts the Klinker award from AsMA President Vermeiren (left) and George Beck (right), representing ZOLL.

Dr. O'Brien received a Bachelor of Science Degree in Biology from Loyola Marymount University in Los Angeles, CA, in 1983 and a Doctor of Medicine Degree from Stritch School of Medicine, Loyola University of Chicago, IL, in 1987. He earned an M.P.H. at the University of Texas School of Public Health in Houston in 1994 and completed residency training at Brooks AFB, TX, between 1994 and 1996. He also graduated from Air Command and Staff College in 1996. He is board certified in both Aerospace Medicine and Occupational Medicine. He completed Air War College in 1999 and courses at the Federal Healthcare Executive Interagency Institute in 2012.

Dr. O'Brien became a Flight Surgeon at the 836th Medical Group, Davis-Monthan AFB, AZ, in 1988. From 1996-1999, he was the Flight Commander at the 354th Medical Operations Squadron, Eielson AFB, AK. In 1999 he transferred to the 47th Aeromedical Dental Squadron at Laughlin AFB, TX, to become Commander. He became Chief Flight Surgeon, Headquarters Air Mobility Command, Scott AFB, IL, in 2001, where he served until 2004, when he became Commander of the 96th Aerospace Medicine Squadron, Eglin AFB, FL. During 2006, he served as Medical Director of the U.S. Central Command Joint Patient Movement Center at Al Udeid Air Base in Qatar, where he then became U.S. Central Air Forces Forward Surgeon in 2007. During his time in Qatar, he was also Commander of the 1st Aerospace Medicine Squadron at Langley AFB, VA.

Dr. O'Brien transferred to Korea in 2008 to become Commander of the 51st Medical Group at Osan Air Base. In 2010, he returned to the United States to serve as Command Surgeon at 13th Air Force, Joint Base Pearl Harbor, Hickam, HI. In 2012 he returned to Scott AFB to become Command Surgeon at U.S. Transportation Command.

In these many roles, Dr. O'Brien's activities led and transformed aeromedical evacuation, including: 1) development and operational fielding of the Transport Isolation System and associated Concepts of Operation, for the aeromedical evacuation of Ebola and other infectious disease patients; 2) clinical validation and world-wide regulation exceeding 25,000 DoD and allied patients annually; 3) integration of 4 geographically separate patient movement centers into an integrated Global patient movement system; 4) in conjunction with the CDC, developed US and international aeromedical transport/infection control standards for SARS, MERS-CoV, and Ebola patients; 5) planned and executed DoD contingency patient evacuation during Operation Tomodachi following the Japan nuclear power plant disaster; 6) planned and coordinated the first-ever winter Night Vision Goggle medical evacuation from Antarctica; 7) coordinated Air Force and Army medical evacuation efforts in Southwest Asia, transporting 3,900 casualties, re-organizing touchpoints between fixed and rotary wing evacuation, and balancing aircrew and aircraft requirements to sustain high casualty operations; 8) developed and instituted flight surgeon training course for aeromedical evacuation for USAF School of Aerospace Medicine; and 9) validated 6,500 item allowance standard for Aeromedical Evacuation crews and Critical Care Teams.

Upon retirement from the U.S. Air Force in 2016, Dr. O'Brien joined the FAA and currently serves as the Federal Aviation Administration's Manager of the Aerospace Medical

See 'O'Brien,' p. N38

From 'O'Brien,' p. N37

Certification Division, Civil Aerospace Medical Institute, located at the Mike Monroney Aeronautical Center in Oklahoma City, OK. In this capacity, he oversees the medical certification of over 500,000 airmen operating in the U.S. National Aerospace System.

Dr. O'Brien is a Fellow of the Aerospace Medicine Association and the American College of Occupational and Environmental Medicine, and a Past-President of the American Society of Aerospace Medicine Specialists, and a former Secretary for the Society of USAF Flight Surgeons. A Certified Physician Executive, he is also a member of the American Association for Physician Leadership and of the American Academy of Family Practice.

Eric Liljencrantz Award Thomas Smith, M.B.B.S., D.Av.Med., D.Phil.

The Eric Liljencrantz award was established in memory of CDR Eric Liljencrantz, MC, USN, whose brilliant career in aviation medicine was cut short by his death in an airplane accident in 1942. It is given annually to honor excellence as an educator in aerospace medicine, or basic research into the problems of acceleration, altitude, or weightlessness. Sponsored by Aerospace Medical PLC.

Thomas Smith, M.B.B.S., DAvMed DPhil FRCA FAsMA, received the 2019 Eric Liljencrantz Award. He was honored for his exceptional achievements over more than 15 years of basic research into the problems of altitude physiology and hypoxia in particular, as well as acceleration and weightlessness.

Originally from Adelaide, Australia, he has been based in the UK for the past 15 years. He founded a successful aerospace medicine research group in Oxford following pioneering doctoral studies as a Rhodes Scholar, and has led numerous international research collaborations in altitude/hypoxia physiology, microgravity and acceleration, developing an outstanding record of excellence and innovation in this research. He is also an experienced educator in aerospace medicine and directs a master's degree program in space physiology. Using a remarkable number of different techniques, Dr. Smith's research in hypoxia/altitude physiology has changed our understanding of how cardiopulmonary responses to hy-



Thomas Smith (center), accepts the Liljencrantz award from Allen Parmet (right), representing Aerospace Medical PLC, and AsMA President Vermeiren (left).

poxia are controlled in humans, and how passengers are affected by cabin hypoxia during air travel, with important implications for both clinical medicine and aeromedical fitness-to-fly. He has also led weightlessness research on parabolic flights and centrifuge-based acceleration studies, and at AsMA this year he presented unique physiological data uncovering the respiratory challenges associated with upcoming commercial suborbital spaceflights.

Dr. Smith obtained an M.B.B.S. from the University of Adelaide, Australia, in 2000 and an Australian Certificate of Civil Aviation Medicine from Monash University, Australia, in 2002. He then commenced training in anesthesia. In 2003 he undertook an aerospace medicine rotation at NASA under a Churchill Fellowship before moving to Oxford under a Rhodes Scholarship for his D.Phil. (Ph.D.) in cardiopulmonary physiology, which he earned in 2008. He subsequently established and led the University of Oxford's aerospace medicine research group. In 2017 he was recruited by King's College London to lead research in aerospace medicine and physiology and run their internationally renowned master's degree in Space Physiology and Health, in collaboration with ESA's European Astronaut Centre.

Dr. Smith's research has been published in high-impact journals such as JAMA and features in several textbooks. He has co-authored over 50 papers and conference proceedings (15 in AsMA's journal) and been a peer reviewer for 15 journals. Dr. Smith is an Academician of the International Academy of Aviation and Space Medicine, and a Fellow of the Aerospace Medical Association (AsMA) and the Royal College of Anaesthetists. His honors include the Sir John Vane Award for Innovation in Pulmonary Vascular Research, the Ellingson Award for Published Research from AsMA's Associate Fellows Group, and the President's Prize for Research from the Australasian Society of Aerospace Medicine. He was selected to present on the 'Ernsting Panel' at the International Congress of Aviation and Space Medicine in 2015 and was chosen to give the John Lane Oration in Aerospace Medicine at the 2019 Annual Scientific Meeting of the Aviation Medicine Society of New Zealand.

Raymond F. Longacre Award Quay Snyder, M.D., M.S.P.H.

Established to honor the memory of MAJ Raymond F. Longacre, MC, USA. It is given annually for outstanding accomplishment in the psychological and psychiatric aspects of aerospace medicine. Sponsored by the Aerospace Human Factors Association.

Quay Snyder, M.D., MSPH, President and CEO of the Aviation Medicine Advisory Service (AMAS), was the recipient of the 2019 Raymond F. Longacre Award. He was honored for being a world leader in education, program design, and implementation in the psychological and psychiatric aspects of aviation medicine. He has been actively involved in supporting the psychological health of professional pilots and air traffic control specialists for many years. His educational efforts as HIMS Program Manager positively impacts hundreds of pilots struggling with addictive diseases. Advocating for Peer Pilot Support programs for those with mental distress and creating Fitness for Duty psychological and neurocognitive assessment and rehabilitation programs for fail-

See 'Snyder,' p. N39

From 'Snyder,' p. N38

ing aviators, he has consistently worked to improve the mental health of aviation professionals worldwide.

Dr. Snyder graduated from the U.S. Air Force Academy in 1977 with a B.S. in Biological Sciences. He earned his M.D. at Duke University School of Medicine, Durham, NC, in 1981 and served a Residency in Family Practice at Malcolm Grow U.S. Air Force Medical Center at Andrews AFB, MD, in 1984. He graduated from the University of Colorado Health Sciences Center, Denver, CO, in 1992 with an MSPH, and then served a residency in Aerospace Medicine at the U.S. Air Force School of Aerospace Medicine, Brooks City-Base, TX. Dr. Snyder is board certified in aerospace medicine, addiction medicine, occupational medicine, and family practice. He served for 25 years in the U.S. Air Force, Air Force Reserve, and Air National Guard as a flight surgeon, instructor pilot, and in leadership positions. He was an aerobatics and spin instructor at the USAF Academy's 94th FTS, receiving the squadron's Attached Instructor Pilot of the Year award in 2000 and retired in 2002. He currently serves as an FAA Safety Team representative and has been a Master Certified Flight Instructor since 2003.

Dr. Snyder has been the Air Line Pilots Association (ALPA), International, Aeromedical Advisor since 2010, after serving as Associate Aeromedical Advisor since 1994. He is also FAA/ALPA HIMS Program Manager, a member of the Flight Safety Foundation's Corporate Advisory Committee, and the NBAA Safety Committee, chairing the Fitness for Duty Working Group. He is President/CEO of Virtual Flight Surgeons (Aviation Medicine Advisory Service), providing medical certification and aviation safety guidance for pilot and air traffic controller unions as well as business and general aviation pilots. He also serves on the National Aviation Hall of Fame Board of Trustees and is a Fellow and member of the Council of the Aerospace Medical Association. He also serves on the FAA Pilot Fitness Aviation Rulemaking Committee Medical Expert Working Group. Most recently, he has chaired the National Business Aviation Associations Safety Committee's Fitness for Duty Working Group and co-chaired AsMA's Pilot Mental Health Working Group.

Dr. Snyder holds board certification in Aerospace Medicine, Addiction Medicine, Family Practice, and Occupational Medicine. He has been an FAA Certified Flight Instructor (Gold Seal) since 1975 and actively serves as a Designated

Pilot Examiner since 1998 and FAA Safety Team representative since 2003. He recently received the Soaring Society of America's World Distance Award for 40,000 km (Earth's circumference) of solo cross-country flight in his ASK-24B glider. He is the author of more than 90 scientific papers and articles on aviation medical issues in various professional pilot journals. He has been twice a finalist for the Malcolm Grow Award, a recipient of the Howard R. Unger Literary Award, and the General George E. Schafer Award from the Society of USAF Flight Surgeons. He has also received the Marie Marvingt and Boothby-Edwards Awards from the Aerospace Medical Association, as well as the NBAA Safety Committee's inaugural Meritorious Service Award in 2014.

Theodore C. Lyster Award Stephen Goodman, M.D.

This award was established to honor the memory of Brig. Gen. Theodore C. Lyster, the first Chief Surgeon, Aviation Section, United States Signal Corps. It is given annually for outstanding achievement in the general field of aerospace medicine. It is sponsored by the Army Aviation Medical Association.

Stephen Goodman, M.D., was the 2019 recipient of the Theodore C. Lyster Award. He was recognized for his many significant contributions to Aerospace Medicine over a 36-year career that continue to have direct effects for pilots and air traffic controllers. These contributions include policy allowing the safe use of antidepressants in aviation, and development of technology to allow virtual processing of over 330,000 aviator medical examinations annually. His expertise in the field of psychiatry was used in the development of the current Federal Aviation Administration (FAA) antidepressant medication policy for aviators that benefits over 1200 pilots annually. His forward thinking, scientific approach has allowed aviators to have their depressive illness treated, managed, and monitored rather than living day to day in fear of discovery. These contributions make aviation safer for all.

Dr. Goodman earned a B.A. in Political Science at Temple University in Philadelphia, PA, in 1968. He graduated in 1978 with his medical degree from the University of Pennsylvania in Philadelphia. His post-graduate training was undertaken at the University of Southern California in Los Angeles and he served a Psychiatry Residency there in 1981.

See 'Goodman,' p. N40



Quay Snyder (center), accepts the Longacre award from Ilaria Cinelli (right), representing the Aerospace Human Factors Association, and AsMA President Vermeiren (left).



Stephen Goodman (center), accepts the Lyster award from Mark Jacques (right), representing the Army Aviation Medical Association, and AsMA President Vermeiren (left).

From 'Goodman,' p. N39

Dr. Goodman began his career in Aerospace Medicine in 1982 in the FAA Western Pacific Regional Flight Surgeon Office overseeing the activities of over 275 Aviation Medical Examiners in the southwestern United States and U.S. possessions in the Pacific as far west as Guam. He managed the FAA internal drug-testing program for over 3000 federal employees and served as an expert witness for the FAA and other government agencies before federal courts and the National Transportation Safety Board. As the Senior Regional Flight Surgeon, he led the FAA Regional Flight Surgeon Work Group for 19 years and, during this time, developed the policy that allows the FAA to run the largest and most efficient aeromedical certification process in the world. Significantly, he assisted with the technology development for the virtual processing of over 330,000 aviation medical examinations annually, resulting in real time aeromedical decisions for 98% of the pilot applicants. He became Deputy Regional Flight Surgeon in 1982 and then Regional Flight Surgeon in 1988. He then served again from 2006 to 2016 as a Senior Regional Flight Surgeon. In 2008, he led the standardization of the FAA aviator autopsy program, and he provided oversight as the program transferred to researchers at the Civil Aviation Medical Institute. He has traveled to Thailand, China, Portugal and throughout the United States training physicians and medical staffs on FAA medical policy and aerospace medicine topics. He was selected to his current position as Deputy Federal Air Surgeon in 2016.

He is a member of the Aerospace Medical Association. He has been recognized with the Manager of the Year Award and the Superior Accomplishment Award for the Office of Aerospace Medicine. His other awards and honors include Special Acts of Service from the U.S. Treasury Department, the Department of Transportation, and the Office of Aerospace Medicine; an International Civil Aviation Organization Service Award; two Flight Surgeon of the Year awards from the Federal Aviation Administration; Service and Accomplishment awards from the Office of Aerospace Medicine; and two Senior Executive Performance Awards. He is certified as an FAA Senior Aviation Medical Examiner and Medical Review Officer.

Marie Marvingt Award Vincent Feuillie, M.D.

Established and sponsored by the French Society of Aerospace Medicine in memory of Marie Marvingt (1875-1963), a pioneer French pilot and surgical nurse who, for more than 50 years, actively and untiringly involved herself in the conception and development of air ambulance services and in the education of the general public regarding their use and benefits. The award is presented annually to honor excellence and innovation in aerospace medicine.

Vincent Feuillie, M.D., received the 2019 Marie Marvingt Award for his well-known expertise in infectious diseases, having worked for 10 years for the Pasteur Institute (58 publications and communications over more than 25 years). The award was presented during AsMA Honors Night Ceremonies, May 9, 2019, at the Rio All Suites Hotel in Las Vegas, NV. Dr. Vincent Feuillie has been working for Air France for more than 20 years. He is now the head of the Medical Passenger Department and the only referring medical advisor for

the whole company. He is in charge of passenger fit to fly repatriation, medical incidents on board aircraft, monitoring flight crew first aid training, first aid manual updating, safety manual rescue, medical kits on board content, disabled passengers, medical team crisis (SARS Hong Kong, bird flu, flight AF447 (Rio Paris), Japan Tsunami, Ebola, Zika, humanitarian referent, etc). He is also one of the organizers of the first Aerospace Medicine conference combining four of the global aerospace medicine societies (AsMA, ECAM, IAASM, and SoFRAMAS) to be held in Paris in 2020 and will be the chairman for this historic conference event. He was also notably recognized for his international cultural and humanism dimensions, diplomacy, and his open-minded point of view.

A native of France, Dr. Feuillie graduated from Xavier Bichat Medicine Faculty in 1987 and then undertook travel medicine training. Later he earned an Aerospace Medicine Specialization in 2001 and an Occupational Health Specialization in 2005 from Rene Descartes Paris V University. From 1987 to 1989, he served as a voluntary Medical Technical Assistance at the Departmental Directorate of Sanitary and Social Action in Gaudeloupe. He is well-known in France for his expertise in infectious diseases, working 10 years for the Pasteur Institute in the Infectious and Tropical Diseases Department from 1989 to 1999. In 1998 he also served in the Air France International Travel Clinic at Paris Invalides. In 2004, he took a position as a Medical Officer for two units of Air France Industries Occupational Health Department, Orly, Villeneuve le Roi. He became Deputy Medical Director in Air France's Roissy Medical Department in 2008 and served part-time at the Air France Medical Aviation Center AEMC in Roissy. In 2016, he became Medical Advisor at Air France, a position he still holds.

Dr. Feuillie is a member of the International Air Transport Association (IATA) Medical Advisory Group, and the

See 'Feuillie,' p. N41



Vincent Feuillie (left), accepts the award from Henri Marotte (right), representing La Société Francophone de Médecine Aérosapaciale, who presented the award to Dr. Feuillie when they returned to France.

International Academy of Aviation and Space Medicine (IAASM). He is past General Secretary for the Société de Médecine des Voyages and Secretary, Medical Commission, for CINDEX. He is also a Member Elect of the Executive Council of the Societe Francophone de Medecine Aerospatiale, a member of the Medical Council of the French Civil Aviation Authority, representative at the Flight Standards Technical Committee for the European Aviation Safety Agency (EASA), a Member-at-Large of the Executive Council of the European Society of Aerospace Medicine, and an Executive Council member of the Airlines Medical Directors Association. He has been an Aerospace Medical Association member since 2009, where he is a member of the Air Transport Medicine committee and represents AsMA as a member of the Commission on Accreditation of Medical Transport Systems. He has 65 publications and presentations to his name.

Harry G. Moseley Award John Barson, D.O., M.P.H.

Established in memory of Col. Harry G. Moseley, USAF, MC, in recognition of his material contributions to flight safety. It is given annually for the most outstanding contribution to flight safety. Sponsored by the International Association of Military Flight Surgeon Pilots.

John Barson, D.O., M.P.H., was the 2019 recipient of the Harry G. Moseley Award for his significant, material contributions to the safety of flight during his 35-year career in Aerospace Medicine. His accomplishments include the patenting of the Protective Helmet Retention System. He directed the ballistic testing of the AH-64 crew chest protector and of the dynamic force test program resulting in the placement of crash airbags on AH-64 Apache helicopters. He also participated as the Army representative to the Tri-Service Helmet Standardization Working Group. He has made aviation safer through his accomplishments.

Dr. Barson completed his Bachelor's degree at Michigan State University and his Doctor of Osteopathic Medicine at the Oklahoma State University Health Sciences Center in 1979. He then went on active duty with the U.S. Army and



John Barson (center), accepts the Moseley award from Jim Webb (left), representing the International Association of Military Flight Surgeon Pilots, and AsMA President Vermeiren (right).

completed the U.S. Army Basic Aviation Medicine Course at Fort Rucker, AL, where he was in the first Flight Surgeon Class to solo in the TH-55 training helicopter. After serving as the Flight Surgeon for the 2nd Armored Division, he was selected for the U.S. Army Aerospace Medicine Residency consisting of a Masters in Public Health at The Johns Hopkins University and training at the U.S. Air Force School of Aerospace Medicine. He became Board Certified in Aerospace Medicine in 1984. Following his residency, he was assigned as the 3rd Corps Flight Surgeon and 6th Cavalry Brigade Surgeon.

Dr. Barson was then assigned to the U.S. Army Aeromedical Research Laboratory at Fort Rucker, AL, first as a Branch Chief and later the Director of the Aircrew Protection Division. During his research assignment he was sent on a 3-year research exchange to the Royal Air Force Institute of Aviation Medicine at Farnborough, United Kingdom. While at the Institute he was co-inventor of a new aircraft helmet fitting system and received the Royal Air Force Strike Command Certificate for Engineering Merit. He is one of a handful of persons in the world who has gone to 60,000 ft of altitude without a pressure suit.

Following his return to the United States, Dr. Barson was assigned as the U.S. Corps of Cadets Surgeon and the Chief of Preventive Medicine for the U.S. Military Academy at West Point, NY. His next assignment was Fort Leonard Wood, MO, preparing the installation for the movement of the U.S. Army Chemical Defense School from Fort McClelland, AL. While at Fort Leonard Wood he was deployed as Chief of Preventive Medicine and Senior Physician for the U.S. Support Group in Port-au-Prince, Haiti, for peace keeping duty. Following his return from Haiti he was assigned as the Chief of Preventive Medicine for U.S. Army Forces Command in Atlanta, GA.

Dr. Barson retired as a Colonel from the Army after 22 years in 2001 and became a Physician Consultant for Federal Occupational Health Law Enforcement Medical Programs providing consulting services to 35 federal law enforcement agencies. In 2003, he joined the Centers for Disease Control and Prevention (CDC) as a Medical Officer in the Division of Bioterrorism Preparedness and Response. He was a member of the CDC Aero-Medical Evacuation Team (AMET) which was responsible for developing policies, procedures, and equipment requirements for evacuating a highly infectious patient, highly infectious lab specimens, or animals from sites around the world and the resulting device was recently used for evacuating American citizens with Ebola from Africa to the United States. He also was a subject matter expert for several conferences involving east and west coast airports preparedness for bioterrorism events and on a panel for the National Academies of Sciences Transportation Research Board. In November 2007 he became a Flight Surgeon, and later Deputy Regional Flight Surgeon for the Federal Aviation Administration's (FAA) Southern Regional Aerospace Medicine Division. He recently retired from that position.

Dr. Barson is a Fellow of the Aerospace Medical Association, an Academician with the International Academy of Aviation and Space Medicine (IAASM), Life Member of the U.S. Army Society of Flight Surgeon, and Member of the Army Aviation Medicine Association. His awards and honors include an FAA Outstanding Innovator Award, Outstanding Unit Citation for the Monkeypox Outbreak Response Team,

See 'Barson,' p. N42

a Silo Busters: Collaborative Success Award as a member of the SARS Preparedness Team, the Society of U.S. Army Flight Surgeons Order of Aeromedical Merit, the Order of Military Medical Merit, and an Outstanding Achievement Award from the Society of U.S. Army Flight Surgeons.

John Paul Stapp Award Barry Shender, Ph.D.

This award was established and sponsored by Environmental Tectonics Corporation to honor Col. John Paul Stapp, USAF (Ret.). The award is given annually to recognize outstanding contributions in the field of aerospace biomechanics and to promote progress in protection from injury resulting from ejection, vibration, or impact.

Barry Shender, Ph.D., received the 2019 John Paul Stapp Award for his 30+ years of experience primarily in developing requirements and protective means for humans in the extreme environments of sustained acceleration, thermal stress, pilot ejection, and aircraft impact, including the assessment of spinal injury risk and severity. His development of comprehensive math models and spine and neck injury criteria have helped predict and mitigate pilot injuries during aircraft operations. During his years with the Navy, he has established himself as an internationally recognized expert in maneuvering acceleration, hypoxia, thermal stress, neck and spinal injury, gender biodynamic differences, and the development of computational models of the neck and spine. He helped establish the Gender Neutral Dynamic Strength Requirements for High Performance Aircraft and conducted dynamic flight simulator research that demonstrated that small stature females had the capability to withstand repeated exposures to +Gz stress. He also led research to develop a parametric probabilistic injury prediction ligamentous model of the human head and spine.

Dr. Shender earned a B.A. in biology at Temple University in Philadelphia in 1977 and then attended a 1-year MBA program there. In 1985, he graduated from Drexel University in Philadelphia with an M.S. in Biomedical Engineering and then earned his Ph.D. in Biomedical Engineering, also from Drexel University, in 1988. He began his career in 1983 as a Research Assistant at Drexel University. In 1987, he joined the Naval Air Warfare Center Aircraft Division in Patuxent River, M.D., to serve in his cu-



Barry Shender (center), accepts the Stapp award from Bob Laurent (left), representing ETC, and AsMA President Vermeiren (right).

rrrent position as Senior Research and Development Lead for Digital Human Modeling at the Human Systems Department. From 1989–1996, he was also Electrical and Computer Engineering Liaison at Drexel. He has been an Adjunct Professor at Drexel and the Florida Institute of Technology in Patuxent River and is currently an Adjunct Professor at the University of Maryland University College in Adelphi. He is the author or co-author on over 60 papers and over 150 conference presentations and holds two patents.

Dr. Shender served on the Executive Committee of the 12th Annual International IEEE/EMBS Conference in 1990, was Technical Chair at the SAFE Association Symposium from 2012–2016, is an Honorary Life Member of the SAFE Association, and a Fellow of the Aerospace Medical Association (AsMA). His numerous awards and honors include the Laura S. Campbell Award for Excellence in Teaching from Drexel, the Life Sciences and Biomedical Engineering Branch's (LSBEB's) Professional Excellence Award, SAFE Association's Award for Team Achievement for the Aircrew Integrated Life Support System Program, LSBEB's Research and Development Innovation Award, the Excellence in Federal Career Outstanding Technical, Scientific Professional (Non-Supervisory) Bronze Award, and the SAFE Association's President's Award. AsMA has awarded him the Eric Liljencrantz and Sidney D. Leverett, Jr., Environmental Science Awards. He is the only person in living memory to serve as Chair of the Scientific Program Committee twice. He was also chair of the Science and Technology Committee and managed the Science and Technology Watch column for the AsMA journal for many years.

John A. Tamsiea Award David G. Schall, M.D., M.P.H., FACS

This award was established and sponsored by the Civil Aviation Medical Association in memory of John A. Tamsiea, M.D. The award is given annually to an aviation medical examiner or other individual who has made an outstanding contribution to the art and science of aviation medicine in its application to the general aviation field.

David G. Schall, M.D., M.P.H., FACS, was the recipient of the 2019 John A. Tamsiea Award in recognition of his exemplary contributions to aerospace medicine for 40 years. He contributed to general aviation as the FAA Great Lakes Regional Flight Surgeon for 7 years, where he transformed and greatly improved the reputation of this Region within the general aviation community. Now as a medical certification physician for the FAA in Oklahoma City, he handles over 2,200 certification cases annually. He is a consummate educator and mentor, presenting at five AME Refresher Seminars each year on the aeromedical aspects of fatigue, sleep apnea, and general otolaryngology, lectures to USAF Residents, Civil Air Patrol Cadets, and JROTC students. He has also provided aerospace medicine focused lectures at Oshkosh AirVenture for the International Experimental Aircraft Association, as well as other EAA and pilot forums.

Dr. Schall completed a Residency in Aerospace Preventive Medicine with the USAF at the School of Aerospace Medicine, Brooks AFB, TX, followed by a second Residency in Otolaryngology Head & Neck Surgery at the University of Nebraska, Omaha, NE. He then did an additional Fellowship with Dr. Michael E. Glasscock in Otolaryngology/Neurotology Skull

See 'Schall,' p. N43

From 'Schall,' p. N42

Base Surgery at the Ear Foundation, which is affiliated with Vanderbilt University in Nashville, TN. He currently serves as the Regional Flight Surgeon for the FAA's Great Lakes Regional Office and also as a Consultant to the Federal Air Surgeon in Otolaryngology Head & Neck Surgery/Neurotology Skull Base Surgery. He is a retired Air Force Colonel, having served 37 years in Active/Guard/Reserve capacities. He also served as the ENT Consultant to the Air Force Surgeon General and was a Chief Flight Surgeon with over 1600 hours of flying time. He has flown as a Flight Surgeon, in over 42 different military aircraft types from the F-4 Phantom, F-15 Eagle, F-16 Falcon, to C-130's, Blackhawk Helicopters and Cobra Gunships. He is also a private pilot.

Dr. Schall is a Fellow of the American College of Surgeons, the American College of Preventive Medicine, the American Academy of Otolaryngology-Head and Neck Surgery, the Society of Military Otolaryngologists, and the Aerospace Medical Association (AsMA). He is an Associate Fellow of the American Neurotology Society and a Senior Member of the Society of Air Force Clinical Surgeons. He is also a member of the Society of Military Consultants to the Armed Forces, an Emeritus Member of the Society of USAF Flight Surgeons, a member of the Space Medicine Association, and a Life Member of the Association of Military Flight Surgeons of the United States. His awards and honors include the Howard R. Unger Award for Literary Excellence from the Society of USAF Flight Surgeons, the USAF Air Medal, the U.S. Army Military Order of Medical Merit, the USAF Legion of Merit with two oak leaf clusters, the Military History Essay Award from the Association of Military Surgeons of the United States, the Defense Superior Service Medal, and the Federal Aviation Administration's Great Lakes Region Professional Excellence Award. He has also received the Civil Aviation Medical Association's President's Commendation and AsMA's Kent K. Gillingham Award.



David Schall (center), accepts the Tamisiea award from Warren Silberman (left), representing the Civil Aviation Medical Association, and AsMA President Vermeiren (right).

Future AsMA Annual Scientific Meetings

May 17-21, 2020; Atlanta, GA; Hyatt Regency Atlanta

May 23-27, 2021; Reno, NV; Peppermill Resort Hotel

Future meetings are listed on the [future meetings page](#) or in the [List of Past and Future Meetings](#).

Thomas J. and Margaret D. Tredici Award Karina Marshal-Goebel, Ph.D.

This award was established by Thomas J. Tredici and sponsored by an endowment fund managed by the Aerospace Medical Association Foundation. It is given for the most significant contribution to aerospace ophthalmology and vision science.

Karina Marshall-Goebel, Ph.D., was the 2019 recipient of the Thomas J. and Margaret D. Tredici Award. She was honored for her dedication to studying the mechanisms underlying the Spaceflight Associated Neuro-Ocular Syndrome (SANS) that occurs in astronauts during long-duration spaceflight missions on the International Space Station, and developing countermeasures to prevent the structural and functional ophthalmic changes associated with SANS. She has published more than 10 peer reviewed scientific articles related to SANS and is determined to develop the optimal countermeasure for SANS, enabling the safe and healthy future of human spaceflight. Throughout her educational endeavors, she has consistently achieved academic excellence and has dedicated her research career to understanding the changes that occur during long-duration spaceflight. Her master's thesis was the first published work describing ocular changes that occur during 6-month missions on the International Space Station, a topic which has since gained considerable attention in the aerospace community.

Dr. Marshall-Goebel earned a B.A. in Biology at the University of Vermont, Burlington, in 2010 and an M.Sc. in Space Studies at International Space University in France in 2011. She graduated from the University of Cologne Faculty of Medicine, Germany, in 2017 with a Ph.D. in Health Science with a focus on Physiology. In 2009, she was a Summer Scholar in the Geophysical Laboratory at the Carnegie Institute for Science, Washington, DC, and in 2011 served as a Research Intern at the Astronaut Office/Space Life Sciences Summer Institute at NASA Johnson Space Center, Houston, TX. Later in 2011 she served as Junior Science Officer in the Physical Engineering and Space Sciences Unit of the European Science Foundation, Strasbourg, France. In 2012, she became a Graduate Research Fellow at the Department of Space Physiology, Institute of Aerospace Medicine, German Aerospace Center (DLR), Cologne, Germany, until 2017. From 2016-2018, she was a Postdoctoral Research Fellow at

See 'Marshall-Goebel,' p. N44



Karina Marshal-Goebel (center right), accepts the Tredici award from Douglas Ivan (center left), representing Dr. Tredici, while Kim Broadwell (left), representing the Foundation, and AsMA President Vermeiren (right) look on.

the Neural Systems Group at Harvard Medical School, Massachusetts General Hospital, Boston. In 2018, she took her present position as a Senior Scientist in the Cardiovascular and Vision Laboratory, KBRwyle, at NASA-Johnson Space Center in Houston, TX.

Dr. Marshall-Goebel's awards and honor include scholarships from the National Science Foundation and the Air Force Office of Scientific Research, the University of Vermont, Boeing, the Hemholtz Association of German Research Centers, and the Aerospace Medical Association (AsMA) Fellows. She was also awarded a travel grant from the Albertus Magnus Graduate Center at the University of Cologne and was chosen for Forbes '30 Under 30' List for Science and Healthcare. She is a member of the American Physiological Society, Women in Aviation, the European Science Foundation Interdisciplinary College of Research Associates, and AsMA.

Arnold D. Tuttle Award Ian P. Curry, B.S., M.Sc., D.Av.Med.

Established in memory of Col. Arnold D. Tuttle, USAF, MC. Awarded annually for original research that has made the most significant contribution toward the solution of a challenging problem in aerospace medicine and which was published in Aerospace Medicine and Human Performance. Sponsored by KBR.

Ian P. Curry, BM, B.S., M.Sc., D.Av.Med., was the 2019 recipient of the Arnold D. Tuttle Award. He was recognized for his role as the lead author of "Clinical Diagnoses Leading to Suspension in Army Aircrew: An Epidemiological Study" [Aerosp Med Hum Perform. 2018; 89(7)587-592]. He and his co-authors, Amanda Kelley, Ph.D., and Steven Gaydos, M.D., conducted an epidemiological review of U.S. Army medical records to identify the most prevalent conditions affecting Army aviators' careers. They found four leading waiver causes and two leading causes for permanent suspension. They also saw a correlation between age and diagnosis presence, but no association with negative occupational outcome. Their goal was to inform leadership of the leading causes of medical waiver and suspension to help understanding of disease prevalence and its impact on flying status and therefore to help direct policy and strategies for health protec-



Ian Curry (center), accepts the Tuttle award from Michelle Frieling (left), representing KBR, and AsMA President Vermeiren (right).

tion.

A native of the United Kingdom, Dr. Curry earned a B.Med.Sci. (Hons.), BM, B.S. from Nottingham Medical School in 1988. He completed the British Army Flying Training Course in 1994 and earned a Diploma in Aviation Medicine from the Royal College of Physicians in 1997. He graduated from the Birmingham University Institute of Occupational Health with an M.Sc. (Distinction) in 2000. He is a member of the Faculty of Occupational Medicine and is currently a Consultant Advisor in Aviation Medicine to the British Army.

Dr. Curry began his career in 1988 as a House Surgeon and Physician at the Derby Royal Infirmary and Cambridge Military Hospital. In 1989 he became Senior House Officer of Accident and Emergency at Nottingham and Derby Hospitals in the UK Trauma Residency program. From 1990-2018, he served in a variety of positions, including Regimental Medical Officer and Trauma Resident in Belfast and Hong Kong, Trainee Specialist in Aviation Medicine in Hampshire, Gazelle Helicopter Pilot Commander in Germany, Canada, Kenya, Belize, and the former Yugoslavia, Specialist Registrar in the UK and Germany, Research Registrar at the DERA Centre for Human Sciences in Farnborough, Theatre Consultant in Iraq, British Exchange Research Flight Surgeon at Ft. Rucker, AL, Aviation Medical Advisor to the UK Joint Helicopter Command, and Research Division Director and Task Area Manager as an exchange research pilot/physician at the U.S. Army Aeromedical Research Laboratory.

Dr. Curry's awards include two Joseph L. Haley Awards for best paper published on rotary wing aviation medicine, a SAFE Association Team Achievement Award, a U.S. Army Innovation Award, and a Director of Army Aviation Commendation for Meritorious Service. He is a Fellow of the Aerospace Medical Association and holds Honorary Membership in the U.S. Army Medical Department Regiment. There are over 30 publications with his name as either lead or co-author and over 25 presentations. He is a member of the Society of Occupational Medicine, the Association of Aeromedical Examiners, the Royal Geographical Society, and the International Association of Military Flight Surgeon Pilots.

Julian E. Ward Memorial Award Moriah Thompson, M.D., M.P.H.

Established and sponsored by the Society of U.S. Air Force Flight Surgeons in memory of its first member to lose his life in an aircraft accident, and to honor all flight surgeons whose lives are lost in the pursuit of flying activities related to the practice of aerospace medicine. The award is given annually for superior performance and/or outstanding achievement in the art and science of aerospace medicine during residency training.

Moriah Thompson, M.D., M.P.H., received the 2019 Julian E. Ward Memorial Award in recognition of her superior performance as the chief resident of the Aerospace Medicine Residency Program at UTMB. She was appointed Chief Resident because of her organizational skills, her broad knowledge base, and her ability to inspire others. She was a key member of the winning team for the RAM Bowl 2018 and has been leading board study sessions for six other residents to prepare them for the RAM Bowl 2019. She also leads a monthly Journal Club for the residency, assigning topics

See 'Thompson,' p. N45

From 'Thompson,' p. N44

and facilitating group discussion. As class lead for UTMB's Masters-level course, "Principles of Aviation and Space Medicine", she lectured on "Hypobaric Hypoxia" to 22 aero-medical students from 7 countries. Additionally, she worked to determine normal levels of intracranial pressure in astronauts, contributing to the understanding of Spaceflight Associated Neuro-ocular Syndrome (SANS). She has also done work in the areas of hypobaric hypoxia and the establishment of shingles vaccination clinical practice guidelines and worked as a volunteer during Hurricane Harvey recovery.



Moriah Thompson (center), accepts the Ward Memorial award from Patricia MacSparran (right), representing the Society of U.S. Air Force Flight Surgeons, and AsMA President Vermeiren (left).

Dr. Thompson is originally from Houston, TX, and graduated from Texas A&M University with a bachelor's degree in biomedical engineering in 2009. She began her involvement in the space sector as a researcher at the Space Engineering Institute studying non-toxic pretreatment alternatives for use on the International Space Station. She subsequently earned her medical degree at UT Southwestern Medical School in Dallas in 2014. She completed a residency program in 2017 in Emergency Medicine at the Mayo Clinic, where she served as chief resident. She earned her M.P.H. at the University of Texas Medical Branch, Galveston, in 2018, and is currently in her final year of Aerospace Medicine Residency training there. She also serves part-time as an Emergency Medicine Physician at Clear Lake Regional Medical Center in Webster, TX. She has participated in the Pathways Internship program at NASA-Johnson Space Center since 2012, and has been involved in a number of research projects in the field of aerospace medicine ranging from hypobaric hypoxia exposure to spacesuit glove-related injury.

Dr. Thompson is a member of the American College of Emergency Physicians, the Society of Women Engineers, where she has been and Executive Secretary and then President of the Texas A&M University Section, and the Aerospace Medicine Student & Resident Organization, where she served as Outreach Committee Chair. Her awards and honors include Outstanding Pathways Intern Award from NASA-Johnson Space Center, Outstanding Student Award from the Society of NASA Flight Surgeons, Residency Service and Outstanding Resident Research Innovation Awards from Mayo Clinic Emergency Medicine, and the Jeffrey R. Davis Aerospace Medicine Endowed and Stanley R. Mohler Aerospace Medicine Endowed Scholarships from AsMA. She has also been a Texas A&M Terry Scholar, a NASA Student Ambassador, and is a Mayo Clinic Quality Academy Gold Quality Fellow.

Fellows Class of 2019



Michael Acromite, John Affleck, Paul Amoroso, Tina Bayuse, Alan Berg, Rebecca Blue, Eddie Davenport, Michael Drane, Sanjay Gogate, Peter Hodkinson, Munna Khan, Patricia MacSparran, Punita Masrani, Thomas Massa, Walter Matthews, Richard McKinley, Stuart Mitchell, Randall Moore, Shannan Moynihan, Eric Olins, Nicole Powell-Dunford, William Ed Powers, Joan Saary, Tarek Sardana, Adam Sirek, Leigh Speicher, Charles Tedder, Russell Turner, and Stephen Vander Ark were elected Fellows for 2019. Those present at the Honors Night Ceremony, May 9, at the Rio All Suites Hotel and Casino, Las Vegas, NV, are pictured here along with the Fellows Chair, Dr. Warren Silberman (standing far right), and AsMA President, Roland Vermeiren (far left).

Elvis Sighting!

During Honors Night, Elvis (as portrayed by Brian Pinkston) made an appearance and posed with many of the award winners. Below are just a few of those photos. For more, please visit the [Photo Gallery](#).



AsMA Members Helping Prepare for Mars Mission

The University of Colorado Anschutz Medical Campus has published an article on medical care in space and training first responders. The article is mainly about a new training program at the university called “Medicine in Space and Surface Environments” that aims to train aerospace engineering students in solving the complex problems arising from travel to and colonization of Mars, including medical emergencies and search and rescue. Four of AsMA’s members, Benjamin Easter, M.D., Dana Levin, M.D., Allison Anderson, Ph.D., and Rick Cole, M.D., are instructors in the collaborative, cross-discipline course and are mentioned in the article.

The idea behind the course is to create a bridge between engineers and physicians. Part of the curriculum is a simulation held at the Mars Desert Research Station in Utah where students become Martians and are challenged with a scenario that involves search and rescue, navigating the harsh environment, and solving cascading problems. Among the issues that will face explorers or colonists on Mars is that interventions that work on Earth will not necessarily work on Mars. For example, a medical provider will not be able to reach a patient’s skin if they are outside in a spacesuit. Additionally, supplies will be limited and evacuation to a hospital not possible. Therefore, explorers or colonists will need to come up with

solutions to solve these problems. To read the entire article and see the photos, please visit <https://www.cuanschutztoday.org/pushing-the-limits-of-aerospace-medicine-in-deep-space/>.

News of Members

Ahmed Shokry Abdelhamid Mohamed Baraka has been accepted into the Space Station Design Workshop in Stuttgart, Germany, to be held at the end of July. In this workshop, students learn about concurrent design and systems engineering, project management, team organization, and customer presentation. Additionally, Ahmed has submitted the paperwork to establish an Aerospace Medicine Student and Resident Organization (AMSRO) chapter at Alexandria University, where he attends classes. This chapter has been approved by AMSRO.

Want more info on the annual meeting?

Visit www.asma.org/scientific-meetings/asma-annual-scientific-meeting - links are in the left-hand column.

Vargas Earns MPA

AsMA is proud to announce that Gisselle Vargas, our Operations Manager, earned her Masters of Public



Administration from Strayer University. According to their website, the degree is designed to help "...manage all aspects of nonprofits, government organizations, and publicly engaged organizations — from people and assets to funding and public relations. This includes understanding the issues and limitations faced by nonprofits, which can differ significantly from those faced by for-profit organizations." Ms.

Vargas, whose experience in non-profits goes back over 20 years, came to AsMA in July 2006. She earned a Bachelors in Criminal Justice in 2015, also from Strayer University, and then went on to earn her MPA, all while working fulltime for AsMA. Congratulations, Gisselle!

New Members

AsMA welcomes 23 new members in July.

Andrews, Crestin; Carmel, IN, United States
Atwell, George; Pensacola, FL, United States
Berger, Jeremy; Jackssovillle, AR, United States
Burchfield, Aaron; Blacksburg, VA, United States
Christensen, Bryce; new Orleans, LA, United States
Feist, Holly; Calgary, Alberta, Canada
Gill, Sharoon; Garland, TX, United States
Giraldo, Johana; Bogota, Colombia
Hall, Christina; Columbus, MS, United States
Hamilton, Andrew; Indianapolis, IN, United States
Libonate, Gianfranco; Blacksburg, VA, United States
Mhayamaguru, Kubwimana; Tucson, AZ, United States
Millsap, Daniel; Houston, TX, United States
Morris, Corey; McMinnville, TN, United States
Moura, Claire; Kingston, Ontario, Canada
Nese, Lavanya; Buffalo Grove, IL, United States
Nguyen, Vinh-Son; San Antonio, TX, United States
Oaiya, Daniel; Torquay, Devon, United Kingdom
O'Toole, Kevin; Monroeville, PA, United States
Prakash, Karanvir; Henrico, VA, United States
Roche, Dwyer; Blacksburg, VA, United States
Schroeder, Gwendolyn; Lancaster, PA, United States
Toffolo, Dominic; Hull, East Riding of Yorkshire, United Kingdom

In Memoriam: J. Robert "Bob" Dille, M.D.

AsMA staff were saddened to hear of the death of John Robert "Bob" Dille, M.D., Past President and Fellow of the Aerospace Medical Association (AsMA). A native of Pennsylvania, Dr. Dille earned a B.S. from Waynesburg College in 1952, then his M.D. degree from the University of Pittsburgh in 1956. He graduated from the USAF Primary Course in Aviation Medicine at Randolph AFB, TX, in 1957. He spent the next 2 years as Chief of the Aviation Medicine Section at the USAF Hospital in Loring AFB, ME. From 1959–1961, he at-



tended Harvard University, where he earned an M.I.H. degree in 1960, and received training to become a USAF Flight Surgeon. He became Program Advisory Officer at the Civil Aeromedical Research Institute, OK, in 1961. Until 1965, he also served as Acting Chief of the Aero-medical Clinical Services Division, Acting Director of the Aeronautical Center Medical

Clinic, and Regional Flight Surgeon for the FAA's Western Region. He returned to Oklahoma City to become Manager of the Federal Aviation Administration's (FAA's) Civil Aeromedical Institute. He retired from the FAA in 1987.

Dr. Dille was commissioned in the U.S. Army National Guard in 1976 as a flight surgeon and served as State Surgeon from 1990–1991, retiring as a Colonel in 1991. He was Associate Professor at the University of Oklahoma from 1961–1998, Director of Residency in Aerospace Medicine from 1967–1972, Medical Director of the Oklahoma Department of Corrections from 1990–1993, a part-time clinician there from 1993–2002, a Physician at the Cleveland Co. Jail in Norman, OK, from 1994–2002, and a Surveyor for the National Commission on Correctional Health Care from 2000–2004.

Dr. Dille was Board Certified in Aviation Medicine by the American Board of Preventive Medicine, and his honors included the USAF Commendation Medal, the U.S. Army Meritorious Service Medal, the Oklahoma Distinguished Service Medal, the Army National Guard's Flight Surgeon of the Year award, and being named Master Flight Surgeon by the Army National Guard. He was a member of the International Academy of Aviation and Space Medicine and a Fellow of the American College of Preventive Medicine. He was awarded AsMA's 1978 Theodore C. Lyster Award, 1987 Harry G. Moseley Award, and 2008 Marie Marvingt Award, and had served as Chair of AsMA's History and Archives Committee, as President of AsMA (1992–1993), and gave the Harry G. Armstrong Lecture in 1997. He was also awarded the Society of U.S. Army Flight Surgeons Order of Aeromedical Merit.

Dr. Dille published over 225 papers, book chapters, and articles, including the history chapter in *Fundamentals of Aerospace Medicine*. For over two decades, he lectured regularly to airmen, flight instructors, accident investigators, and aviation medical examiners on the subjects of aircraft accident investigations, aviation toxicology, and aviation physiology. He was involved in establishing physiological training programs for civilian pilots at the FAA, U.S. Air Force, U.S. Army, U.S. Navy, and NASA, and had developed and built 85 portable Barany-type chairs and trained accident prevention specialists in their use. Additionally, he held a private pilot license and piloted hot air balloons.

CALL FOR PAPERS: 91st AsMA Annual Scientific Meeting

Abstract submission will open on or about Sept. 1, 2019. The deadline is Nov. 1, 2019. **NO EXCEPTIONS!** Visit the [abstract submission page](#) for directions and templates.

NEWS OF CORPORATE MEMBERS

CEMALYS Is Newest Corporate Member

CEMALYS Aeronautic Medical Center is the newest Corporate & Sustaining Member of the Aerospace Medical Association. The company was created in 2017 by professional pilots and medical professionals in order to offer the best medical care and monitoring for pilots. They are located in Colombier-Saugnieu, France, and have a medical center at Aeroport De Lyon Saint Exupery. They conduct a variety of examinations, including electrocardiogram, audiometry, spirometry, visual field tests, and blood analyses. Their site includes a description of pilot licenses and posts about various medical topics such as vision and examinations.

—Please visit <http://www.cemalys.com/> for more information on this company.

SAA Launches New Partnership

South African Airways (SAA), the national carrier of South Africa, and Alaska Airlines, the fifth largest airline in the United States, announced that they have established a new interline partnership which provides new flight options for both SAA and Alaska's customers traveling between North America and Africa. Customers are now able to purchase a single itinerary for travel on flights of both carriers in one simple transaction and enjoy connections via New York-John F. Kennedy International Airport and Washington-Dulles International Airport between Alaska Airlines' North American network and over 75 destinations in Africa served by SAA and its regional partners. SAA and Alaska Airlines now offer more options for travel between destinations throughout Africa and key markets on the west coast of the United States. Customers will be able to travel on one single electronic ticket and have interline baggage transfer upon check-in with either SAA or Alaska Airlines available in the United States or Africa.

—Please visit <https://www.flysaa.com/about-us/leading-carrier/media-center/media-releases/newsroom> to read more about this.

MEETINGS CALENDAR

Embry Riddle Aeronautical University (ERAU) Human Factors Analysis Classification System (HFACS) classes are being offered in Las Vegas, NV, on the following dates: July 16-17, 2019; Sept. 17-18, 2019; and Dec. 17-18, 2019; Please visit <https://proed.erau.edu/courses/hfacs> for more info.

Sept. 8-12, 2019; 67th International Congress of Aerospace Medicine (ICASM); Derecen, Hungary. For more information, please visit <https://www.icasm2019.com/>.

Sept. 9-13, 2019; 24th International Symposium on Shiftwork and Working Time; Couer D'Alene, ID, United States. For more information or to register, please visit www.shiftwork2019.com.

Sept. 17-18, 2019; Aircraft Cabin Air International Conference 2019; Imperial College London, Kensington, London, United Kingdom. For more info, please visit <https://www.aircraftcabinair.com/>.

Focus on Corporate Members: Pilot Medical Solutions

Pilot Medical Solutions originally joined the Aerospace Medical Association (AsMA) as a Corporate & Sustaining Member in 2010. The company is located in Oklahoma City, OK, near the Federal Aviation Administration (FAA). They provide information and assistance to pilots and aviation medical examiners (AMEs) regarding FAA policies, regulations, and practices.

Their focus is on helping pilots pass their FAA medical exam and they offer a variety of resources in order to accomplish that. Their website has resources on evaluations, medications, medical conditions, an exam checklist, and support for AMEs aimed at reducing workload and streamlining aeromedical certification. This includes organizing and pre-qualifying paperwork for special issuances, advice on growing an AME practice, FAA standards, and general information. There is also a blog that covers relevant current events and discusses various conditions. Their goal is to keep pilots flying.

—Please see <https://www.leftseat.com> to read more about this company.



LEFT SEAT

Monash Recognized with Queen's Birthday Honours

The extraordinary achievements of the Monash Medicine, Nursing and Health Sciences community were formally recognized with Queen's Birthday Honours this year. Awards were bestowed to staff, alumni and supporters by the Governor General of Australia on Monday 10 June 2019. Regarding the recipients, Monash noted: "We are extremely proud of their achievements and service to the community through research, education, clinical practice, and leadership." Among these was Dean of the Faculty of Medicine, Nursing and Health Sciences, Professor Christina Mitchell. Prof Mitchell was awarded the appointment Officer in the General Division (AO) in recognition for distinguished service to medicine.

—Please see <https://www.monash.edu/medicine/news/latest/2019-articles/monash-medicine,-nursing-and-health-sciences-celebrated-in-queens-birthday-honours> for more on this.

Mayo Clinic Again Ranked Among Best Children's Hospitals

Mayo Clinic Children's Center has again been ranked as one of the top-performing children's hospitals in Iowa, Minnesota, North Dakota, and South Dakota on *U.S. News & World Report's* 2019–2020 "Best Children's Hospitals" rankings. Rankings of 191 of the nation's pediatric centers identify the top 50 in each of 10 specialties. Only 84 children's hospitals were ranked in at least one pediatric specialty in 2019. Mayo Clinic Children's Center ranked as a top performing children's hospital in 6 of 10 pediatric specialties. Mayo Clinic's rankings by pediatric specialty are: Cardiology and Heart Surgery (No. 30); Diabetes and Endocrinology (No. 15);

See 'Corporates,' p. N49

From 'Corporates,' p. N48

Neurology and Neurosurgery (No. 32); Orthopedics (No. 24); Pediatric Gastroenterology and GI Surgery (No. 44); and Urology (No. 36).

—Please visit <https://newsnetwork.mayoclinic.org/discussion/mayo-once-again-ranked-among-best-childrens-hospitals-by-us-news-world-report/> to read more on this.

KBR Wins NASA Contract

KBR announced it has been awarded a contract by NASA to provide launch range operations support at the agency's Wallops Flight Facility in Wallops Island, VA. This is a new contract award for KBR. Under this 5-year contract, KBR will perform a broad range of work, such as radar, telemetry, logistics, tracking, and communications services for flight vehicles. These will include orbital and suborbital rockets, aircraft, satellites, balloons, and unmanned aerial systems. KBR will also test, modify, and install communications and electronic systems, and operate ground, spacecraft, and launch vehicle processing systems at launch facilities, launch control centers, and test facilities. It will also provide information and computer systems services and range technology sustainment engineering services. The company will carry out this work at Wallops Island and other locations around the United States and world. The contract begins in August and runs through August 2024.

—Please see <https://kbr.com/en/insights-events/press-release/kbr-wins-200m-nasa-contract-provide-launch-range-operations> for more on this.

ALPA Partners with U.S. Officials to Fight Human Trafficking

The Air Line Pilots Association, Int'l (ALPA), has announced a new partnership with the Department of Transportation (DOT), the Department of Homeland Security's (DHS) Blue Campaign, and U.S. Customs and Border Protection (CBP) to fight human trafficking through the Blue Lightning Initiative (BLI). Through an interactive training module, ALPA pilots can access the resources needed to help protect the basic right of freedom and bring those who exploit human lives to justice. The Blue Lightning Initiative trains aviation industry personnel to identify potential traffickers and human trafficking victims and to report their suspicions to federal law enforcement. To date, more than 100,000 aviation industry personnel have been trained through the BLI, and actionable tips continue to be reported to law enforcement.

—Please visit <http://www.alpa.org/news-and-events/news-room/2019-06-12-alpa-partners-with-us-officials-fight-human-trafficking> to read the complete press release.

CALL FOR NOMINATIONS

The National Institute for Occupational Safety and Health is accepting nominations for the 2020 Safe-in-Sound Excellence in Hearing Loss Prevention Award™ until July 15. Safe-in-Sound Awards honor those that have contributed to the prevention of noise-induced hearing loss and tinnitus through effective practices or innovations directed to those who are exposed to noise at work. For more on this, please visit <https://www.cdc.gov/niosh/updates/upd-06-17-19.html>.

Corporate News Bites

NKI: NeuroKinetics, Inc.'s (NKI's), I-PORTAL software was featured in a video discussion held between Army Lt. Col. Kara Schmid, Neurotrauma and Psychological Health Project Management Office's project manager, and the U.S. Army Medical Materiel Development Activity's public affairs team. Col. Schmid discussed the efforts of her team to develop medical advancements, including the detection and treatment of mild traumatic brain injuries. Please visit <https://neuro-kinetics.com/project/i-portal-software-video/>.

Martin-Baker: Martin-Baker marked the 70th anniversary of the first life saved by a Martin-Baker ejection seat in late May. A test pilot named Jo Lancaster became Ejectee #1 on May 30, 1949, successfully ejecting during the test flight of an Armstrong Whitworth AW.52 in a pre-Mk1 seat. Now, 70 years on, the 'lives saved' counter reads 7,605. 2019 is a special year not just because of the 70th anniversary of Ejectee #1, but also because it is the year that Jo celebrated his 100th birthday! Please see <http://martin-baker.com/2019/05/30/70th-anniversary-mb-ejectee-1/>.

APA: Allied Pilots Association's President, CA Dan Carey, became the union's first national officer to testify on Capitol Hill when he participated in the House Transportation Aviation Subcommittee's hearing on June 19 on the Boeing 737 MAX. The hearing was intended to gather aviation stakeholders' views regarding the Boeing 737 MAX crashes and discuss how to ensure the safety of the plane before it is returned to flight. To read more about this, please see <https://www.alliedpilots.org/News/ID/7031/An-APA-First-Union-President-to-Testify-on-Capitol-Hill>.

UTMB: The University of Texas Medical Branch held a ribbon-cutting ceremony for a new Biocontainment Care Unit in early May. The new unit is meant to provide care for patients with high-containment pathogens such as Ebola. The unit, located on the Galveston Campus, has six specially outfitted hospital rooms segregated from the rest of the patient treatment areas that feature special ventilation systems to prevent any pathogens from escaping via the airflow. Please visit <https://www.utmb.edu/internal-medicine/news-events/news-article/2019/05/10/utmb-s-new-biocontainment-care-unit> for more on this.

AOPA Announces Scholarship Winners

The Aircraft Owners and Pilots Association (AOPA) has announced the 80 high school students and 20 teachers who have won scholarships of \$10,000 each in the 2019 You Can Fly High School Flight Training Scholarship program. The scholarships, a benefit of AOPA membership, are a component of the AOPA You Can Fly program, a set of initiatives working toward getting and keeping more pilots flying by introducing youth to aviation, improving the flight training experience, supporting flying clubs, and helping lapsed pilots return to the cockpit. Scholarship recipients will be able to use the money for direct flight training expenses to pursue a primary pilot certificate. They must also complete a flight training milestone, achieving either solo or earning a primary pilot certificate, within one year of receiving a scholarship.

—Please see <https://www.aopa.org/news-and-media/all-news/2019/june/17/aopa-announces-2019-high-school-scholarship-winners> to read more and see the winners.