

# President's Page

## New President's Initiatives

As you may have heard by now, our annual meeting in San Diego in May was very successful. The science, working meetings and the social events were fantastic, attendance neared recent record highs (1369), and good financial revenue will help keep us solvent. My theme on this page throughout the year will be "Make a Difference in Aerospace Medicine with AsMA." To do that, we need to have a strong and effective organization in place to serve its members in that goal. In order to allow this, I would like to iterate some initiatives to perform with your help.

The first initiative is to increase membership. As an international leader, AsMA speaks with authority and its positions and resolutions are highly regarded. However, we have an issue with declining membership. While we should not strive to have quantity over quality, a very low membership could seriously hinder our inherent activities as an authoritative leader such as in producing a quality journal, our extensive committee work, and strong advocacy. I propose to appeal to certain groups that may wish to consider AsMA membership, such as aviation nurses, dentists, medevac coast guard units, and aeromedical examiners. I would like to explore discounted joint membership between our sister organizations such as ACOEM, AMA, ACP and Flying Physicians, for example. We could each gain in our rosters by members interested in both organizations. I'd like to encourage an increase in our AMSRO chapters, our student organizations, and encourage attendance at our annual meeting by offering free attendance for one day to any medical student or resident not a member. There are several health related schools in close proximity to our Orlando meeting next year that may take advantage of such an offer.

The second initiative is to increase the value of AsMA membership. In recent surveys, for various reasons, members have reported an increasing difficulty to prove AsMA provides enough value to justify its costs and involvement as a member. I believe our organization needs to answer that concern and clearly demonstrate value to every member. I think there is room to improve member services, communications, representation and advocacy. For example, I will continue to increase the utility of our website, expand web-based training and provide continuing educational credits, resources for research, searchable member demographics, committee discussion boards, and convenient consolidated AsMA/Constituent dues collections. I would encourage the formation of a Space Medicine Committee within the AsMA structure to regularly address space medicine issues. I would like to task our members to identify aerospace medicine knowledge gaps and research needs, so AsMA maintains its authoritative voice in constructing our specialty's roadmap for the future. I would like to make our processes more transparent and encourage involvement. For this I will begin by requesting our nominations committee to widely announce the beginning of their nominations process for officer selection and announce the ballot of candidates when it is ready in advance of the annual meeting. I have requested and set up an ad hoc committee on Social Media activities and it has already established our first



Philip J. Scarpa, Jr., M.D., M.S.

Wikipedia, Facebook, and Twitter accounts, key to marketing and branding our organization and key to reaching younger Aerospace Medicine specialists.

The third initiative is to strengthen our finances. Unfortunately, AsMA lives too close to the break-even point each year. If we continue unaltered, the organization will not be able to weather a cancelled annual meeting, a few poorly attended meetings, make needed improvements to our organization, or even have enough capital to provide basic services to its members. We need to set a financial self-sustainment goal to provide financial security to our organization. While continuing to keep our expenses in check, we need to increase our income and manage our investments for greater but reasonable growth. Our income should be more diversified from streams other than our annual meeting, promote greater corporate involvement, and increase participation from our own AsMA Foundation.

The fourth initiative is to improve service to our members who are not from the United States. AsMA is the premier organization for Aerospace Medicine in the world, yet only about a third of our members reside outside the United States. To truly represent the field as a world authority and world voice, we need to strive to increase our global involvement, global membership and enfranchisement of our global members. To help this, I would encourage AsMA to co-sponsor and/or attend other Aerospace Medicine regional and non-US meetings, consider providing discounts to members who travel great distances to attend our meetings, regularly publish international activities on the web and in the journal, revive the international column in the journal, and perhaps expand attendance of the newly established Surgeon's General gathering to Surgeon Generals from outside the United States.

These initiatives will be integrated into our new strategic plan. However, these are just plans and may not come to anything without your help and precious time. If you haven't already, I encourage you to join a committee or constituent organization or simply stay an active member, as this is your organization here to help you make a difference in our field.

Ideas? Please send them to [President@asma.org](mailto:President@asma.org), [Tweet @Aero\\_Med](https://twitter.com/Aero_Med), Facebook Aerospace Medical Association, Web [www.asma.org](http://www.asma.org).

# Association News

## FAA's First Postmortem Aviation Toxicology Colloquium Held

The Federal Aviation Administration's (FAA's) Civil Aerospace Medical Institute (CAMI) held its first three-day (April 1-3, 2014) colloquium on Postmortem Forensic Toxicology in Aviation. Those attending were aerospace medicine scientists, accident investigators, educators, medical examiners, forensic toxicologists, and students. Included were representatives from the Department of Justice, National Aeronautics and Space Administration, National Transportation Safety Board, CAMI, and the private sector. Geographically, they came from Brazil, Canada, Spain, Turkey, and a cross-section of America.

Topics covered included sample processing; importance of chain of custody samples; analyses of samples for combustion gases, ethanol, and drugs; analytical results interpretation; significance of quality control/quality assurance; new exponential technologies in forensics; and litigation and expert testimony issues. Two panel discussion sessions highlighted the conference's important focal points, which were on "Interpretation of Analytical Results and Interesting Cases" and "Litigation and Expert Court Testimony." In these sessions, the participants actively shared their deep interests and expertise in these highly technical subjects.

The Civil Aerospace Medical Institute plans to host a similar colloquium in 2017 and will offer Continuing Medical Education (CME) credit through its Aerospace Medical Education Division.

The contact person for this colloquium was Arvind K. Chaturvedi, PhD, Biochemistry Research Team Coordinator in CAMI's Aerospace Medical Research Division. CAMI is located at the Mike Monroney Aeronautical Center in Oklahoma City, Oklahoma.

## Future AsMA Annual Scientific Meetings

May 10-14, 2015  
Walt Disney World  
Swan & Dolphin Resort  
Orlando, FL

April 24-28, 2016  
Harrah's Resort  
Atlantic City, NJ

April 29 - May 4, 2017  
Sheraton Denver Downtown  
Hotel Denver, CO

May 6-10, 2018  
Hilton Anatole Hotel  
Dallas, TX

## NASA, NSBRI Select 26 Proposals to Support Crew Health on Deep Space Missions

NASA's Human Research Program (HRP) and the National Space Biomedical Research Institute (NSBRI) will fund 26 proposals to help investigate questions about astronaut health and performance on future deep space exploration missions. This research may help protect astronauts as they venture farther into the solar system than ever before to explore an asteroid and, eventually, Mars.

The selected proposals are from 16 institutions in eight states and will receive a total of about \$17 million during a one- to three-year

period. The 26 projects were selected from 123 proposals received in response to the research announcement "Research and Technology Development to Support Crew Health and Performance in Space Exploration Missions." Science and technology experts from academia and government reviewed the proposals. NASA will manage 21 of the projects and NSBRI will manage five.

The selected proposals will investigate the impact of the space environment on various aspects of astronaut health, including visual impairment, behavioral health, bone loss, cardiovascular alterations, human factors and performance, neurobehavioral and psychosocial factors, sensorimotor adaptation and the development and application of smart medical systems and technology.

HRP and NSBRI research provides knowledge and technologies that may improve human health and performance during space exploration. They also develop potential countermeasures for problems experienced during space travel. The organizations' goals are to help astronauts complete their challenging missions successfully and preserve their long-term health.

HRP quantifies crew health and performance risks during spaceflight and develops strategies that mission planners and system developers can use to monitor and mitigate the risks. These studies often lead to advancements in understanding and treating illnesses in patients on Earth.

NSBRI is a NASA-funded consortium of institutions studying health risks related to long-duration spaceflight. The Institute's science, technology and education projects take place at approximately 60 institutions across the United States.

For a complete list of the selected principal investigators, organizations and proposals, visit: <http://go.nasa.gov/1nWW3qw>. For information about NASA's Human Research Program, visit: <http://www.nasa.gov/exploration/humanresearch/>. For information about NSBRI's science, technology and education programs, visit: <http://www.nsbri.org>.

Note: This release was issued jointly by NSBRI and NASA. A list of NSBRI's project award recipients is available at [www.nsbri.org/NNJ13ZSA002N-NSBRI-Awards/RELEASE:14-122](http://www.nsbri.org/NNJ13ZSA002N-NSBRI-Awards/RELEASE:14-122). It was provided by Graham Scott [Graham.Scott@bcm.edu](mailto:Graham.Scott@bcm.edu).

## Meetings Calendar

**June 23-27, 2013; Flying Physicians Association 2013 Annual Meeting; Hyatt Milwaukee Hotel; Milwaukee, WI.** Please visit [www.fpadrs.org](http://www.fpadrs.org) for details and registration information.

**August 25-28, 2014; The 9th Asia Pacific Congress of Aerospace of Medicine** in conjunction with the 10th Chinese Conference of Aerospace Medicine; Beijing, China. For more information, please contact Prof. Wang Zhixiang or visit <http://www.apfama.org/2014>

**September 11-4, 2013; XXVI National Congress of AIMAS, held jointly with the European Low Gravity Research Association's (ELGRA's) biennial symposium; Vatican City, Italy.** For more information, please contact Maj. Paola Verde or visit [www.aimas.it](http://www.aimas.it) or [www.elgra.org](http://www.elgra.org).

**September 19-22, 2013; Flying Physicians Association Northeast Chapter meeting; Radisson Hotel, Corning, NY.** Please visit [www.fpadrs.org](http://www.fpadrs.org) for details and registration information.

**October 6-10, 2013; 61st International Congress of Aviation and Space Medicine (ICASM); Jerusalem, Israel.** For more information, please visit <http://www.icasm2013.org/>.

**October 10-13, 2013; Flying Physicians Association Great Lakes Chapter Fall Meeting; Morris Inn, University of Notre Dame, South Bend, IN.** Please visit [www.fpadrs.org](http://www.fpadrs.org) for details and registration information.

**October 17-20, 2013; Flying Physicians Association Dixie Chapter Fall Meeting; Perdido Beach Hotel, Orange Beach, AL.** Please visit [www.fpadrs.org](http://www.fpadrs.org) for details and registration information.

**October 31 - November 3, 2013; Flying Physicians Association Western/Southwest Chapters Joint Fall Meeting (tentative); Fort Worth, TX.** Please visit [www.fpadrs.org](http://www.fpadrs.org) for details and registration information.

## Mark your calendars!

The Call for Papers for AsMA's 86th Annual Scientific Meeting, May 10-14, 2015, will be posted soon.

The abstract submission site will go live on or around September 1, 2014. The deadline will be October 31, 2014. Start thinking about your submissions now!

# 2014 Award Winners of the Aerospace Medical Association

Honors Night Ceremonies of the 85th Annual Scientific Meeting of the Aerospace Medical Association were held May 15, 2014, at the Hilton San Diego Bayfront, San Diego, CA. Nineteen awards for outstanding contributions in aviation and space medicine were presented. The presentations were made by James T. Webb, Ph.D., President of the Aerospace Medical Association. The winners were recommended by the Awards Committee, chaired by Dr. Cheryl Lowry, and approved by the Executive Committee of the Aerospace Medical Association.



## LOUIS H. BAUER FOUNDERS AWARD

**James M. Vanderploeg, M.D., M.P.H.**

*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.*

James M. Vanderploeg, M.D., M.P.H., was the 2014 winner of the Louis H. Bauer Founders Award. He received the award for his role in establishing medical, operational, and research expertise in commercial spaceflight. During his distinguished career, he has instituted medical operations, human design, passenger acceptance criteria, training, and emergency response for Virgin Galactic. He is a principal investigator for multiple tasks with the FAA's Commercial Space Transportation Center of Excellence. His research on acceleration impact on medically limited individuals is critical for commercial spaceflight. He also has a lifetime of accomplishments in aviation and space medicine. He selects, mentors, and educates future aerospace medicine specialists at University of Texas Medical Branch. At the FAA, he engages residents in operations and research projects, and multiple residents have published their findings in Aviation, Space, and Environmental Medicine. His most recent work exposing individuals with medical problems to launch/re-entry profiles on a centrifuge is a breakthrough to help provide medical informed consent for individuals considering suborbital spaceflight.

Born in Upland, CA, Dr. Vanderploeg earned a B.S. in Letters and Medicine at Calvin College, Grand Rapids, MI, in 1972. He then earned an M.D. at the University of Iowa College of Medicine, Iowa City, IA, in 1975 and an M.P.H. at the University of Texas School of Public Health, Houston, TX, in 1980. From 1975-1976, he served a surgical internship at the University of California at San Diego's University and Veterans Administration Hospitals in San Diego, CA. Between 1976 and 1978, Dr. Vanderploeg served as General Medical Officer in the U.S. Navy in Keflavik, Iceland. He was a Resident in Otolaryngology at the University of Iowa Hospitals and Clinics, Iowa City, IA, from 1978 to 1979 and a Resident in Occupational Medicine at the University of Texas School of Public Health in Houston, TX, from 1980 to 1981.

In 1981, he became Chief of the Flight Medicine Clinic, Medical Operations Branch, Medical Sciences

Division, at NASA Johnson Space Center. Then, in 1982, he took the position of Chief of the Medical Operations Branch, Medical Sciences Division, Space and Life Sciences Directorate, also at NASA Johnson Space Center. In 1984, he became the Director of the NASA Space Biomedical Research Institute, Space and Life Sciences Directorate. In 1986, he became Chairman of the Occupational and Preventive Medicine Department at Kelsey-Seybold Clinic in Houston, TX, until 1989, when he took the position of Executive Vice President and General Manager of KRUG Life Sciences Inc. in Houston. In 1995, he became President of the Center for Aerospace and Occupational Medicine, also in Houston. In the same year, he accepted a position as Medical Director of Interactive Medical Connections, Inc., which he still holds. Between 1998 and 2010, he served as Executive Director of the American Board of Preventive Medicine in Chicago, IL, and from 2005-2007, he was Chief Medical Officer and Program Manager at Wyle Laboratories Life Sciences Group in Houston. In 2006, he took his current position as Chief Medical Officer of Virgin Galactic. Since 2011 he has served as Medical Director at Wyle Science, Technology and Engineering Group and since 2007 as Associate Professor, Preventive Medicine and Community Health, at the University of Texas Medical Branch.

Dr. Vanderploeg is Board Certified in Occupational Medicine and in Aerospace Medicine by the American Board of Preventive Medicine and is also certified by the Medical Review Officer Certification Council. He is a Past President and of the Aerospace Medical Association and current Chair of the Fellows Group. In addition, he is a member of the American Astronautical Society, where he was Secretary/Treasurer (1990), Vice Chairman (1991), and Chairman (1992); a member of the American Board of Medical Specialties, a member of their Board of Directors and chair of several committees; a member of the American Board of Preventive Medicine, where he served as a Trustee, Secretary Treasurer, Secretary, and Executive Director; and a Fellow of the American College of Preventive Medicine. He is an FAA Senior Aviation Medical Examiner, serves on the Selectors Committee of the International Academy of Aviation and Space Medicine, was Secretary Treasurer and a Past President of the Society of NASA Flight Surgeons, and was Secretary-Treasurer and a Past President of the Space Medicine Association. He serves on the Editorial Board of *New Space* and is a journal reviewer for *Aviation, Space, and Environmental Medicine*. He has been honored with the NASA Space Shuttle Medical Operations Team Group Achievement Award and the NASA Outstanding Performance Award.



**BOOTHBY-EDWARDS AWARD**  
**David M. C. Powell, M.B., Ch.B.,**  
**D.Av.Med., D.Occ.Med**

*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.*

David M. C. Powell, M.B., Ch.B., D.Av.Med., D.Occ.Med. received the 2014 Aerospace Medical Association's Boothby-Edwards Award on May 15, 2014, during Honors Night Ceremonies at the Hilton San Diego Bayfront, San Diego, CA, in recognition of his many accomplishments in the promotion of health and prevention of disease in professional airline pilots during his aviation medicine career with the Royal New Zealand Air Force and throughout his many years with Air New Zealand. He has become a worldwide recognized expert in fatigue risk management within the airline environment and is highly regarded and respected among his peers. He also has earned respect from pilots while working in the highly sensitive areas of alcohol and drug abuse and fatigue management. His accomplishments have had a profound sustained impact on pilots' health and overall aviation safety in his home country and worldwide.

A native of New Zealand, Dr. Powell earned an M.B., Ch.B. at the University of Auckland in 1986. He holds Diplomas in Aviation Medicine from Otago University and the Royal College Physicians London and a Diploma in Occupational Medicine from the University of Auckland. He is a Fellow of the Royal New Zealand College of General Practitioners and the Australasian Faculty of Occupational and Environmental Medicine.

From 1985-1987, Dr. Powell served as House Officer in Medicine, Orthopaedics, Emergency, Surgery, and Anaesthetics for the Waikato Hospital Board and was in general practice. At the end of 1987 he became the Medical Officer for Royal New Zealand Air Force (RNZAF) Base Auckland in the Defence Environmental Medicine Unit. In 1991 he took a position as Anaesthetics Registrar for the Auckland Area Health Board at Auckland/Middlemore Hospitals and was also in general practice. In 1993 he became Officer Commanding the Aviation Medicine Unit for the RNZAF. He was responsible for providing altitude chamber and aviation medicine training, and was an adviser to commanders in aviation medical matters. In 1995 and part-time in 1996, he also was Emergency Department Registrar at Auckland Hospital and a part-time Medical Officer at a Travellers Health and Vaccination Center. From late 1996 to 1997, he was Medical Officer for Auckland Rescue Helicopter Trust and then, in 1997, he became Chief Medical Officer at Air New Zealand Limited. In that capacity Dr. Powell was the primary physician responsible for occupational health aspects for pilots, as well as other crewmembers

and ground staff. During this period he continued his activity in aviation medicine training and education for the pilot population. He chaired the Crew Alertness Study Group. From 2009-2013, he also was a part-time Aviation Medicine Specialist and a part-time private consultant in aviation medicine and airline fatigue management. He expanded his reach internationally, becoming a contributor to ICAO's Task Force on Fatigue Risk Management, as well as an Advisory Board Member for U.S. "HIMS" Alcohol Rehabilitation Program for U.S. Pilots.

An AsMA Fellow, Dr. Powell is currently a Clinical Senior Lecturer in Aviation Medicine at Otago University and a consultant in aviation medicine for flyingmedicine.com Ltd. He is a member of the Airlines Medical Directors Association and the Australia and NZ Society of Occupational Medicine, a Past President of the Aviation Medicine Society of Australia and New Zealand, a Fellow of the Australasian College of Aerospace Medicine and the Royal Aeronautical Society, an elected member of the International Academy of Aviation and Space Medicine, and an invited member of the International Air Transport Association Medical Advisor Group. His awards include the President's Prize for the top student in Diploma in Aviation Medicine, a Technical Cooperation Programme Achievement Award from the Subcommittee on Non-Atomic Military Research and Development, the Arnold Tuttle Award from AsMA, the George Kidera Award from the Airlines Medical Directors Association, and a Masters Award for the New Zealand Region from the Guild of Air Pilots and Air Navigators.



**JOHN ERNSTING AWARD**  
**Richard D. Vann, 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 longstanding exceptional performance in the education, development, and administration of Aerospace Medicine and related specialties.*

Richard D. Vann, Ph.D., was the 2014 recipient of the John Ernsting Award for his extensive research in support of safer pressure exposures for diving, mountaineering, and microgravity. He has worked to define and solve safety problems on behalf of the U.S. Navy, Divers Alert Network, and the U.S. National Aeronautics and Space Administration (NASA). As a prolific author and educator, Dr. Vann contributed measurably to the improvement of safety and efficiency of the U.S. Navy, commercial, and sport diving activities and NASA extravehicular activity (EVA) procedures. His first-author refereed papers in Aviation, Space, and Environmental Medicine included discussion of theoretical methods for selecting spacecraft and spacesuit atmospheres, of severity and resolution of decompression sickness, of strategies to mitigate and

*See VANN, p. 779.*

VANN, from p. 778.

manage decompression sickness with diving, flying after diving and microgravity exposure, and of decompression study design. He recognized the beneficial and detrimental effects of physical activity on decompression risk and helped to develop and show the effectiveness of exercising during oxygen breathing prior to decompression to spacesuit pressure to accelerate nitrogen elimination, reducing the risk of decompression sickness. He has also given generously of his time to mentor and support the efforts of developing professionals.

Dr. Vann earned a B.A. in 1964 and then a B.S. in 1965 at Columbia University. He then attended Duke University, where he graduated with a Ph.D. in Biomedical Engineering in 1976. He served in the U.S. Navy from 1967 to 1971 and in the U.S. Naval Reserve from 1972-1997. During his career in the military, he served in a variety of positions, including 1st Division Office on the USS Annapolis (AGMR-1), Class Leader of the Basic Underwater Demolition/SEAL Class 51, Platoon Commander and Diving Department Head of Underwater Demolition Team 12, Commanding Officer of NR Research Command 6-6, Diving Officer of the NR UDT/SEAL 106 and then the NR Naval Special Warfare Task Group Bravo 206, Commanding Officer of NR Underwater Emergency Response Team 107 and then NR SEAL Team Four, Chief of Staff of NR Naval Special Warfare Group Two Det 106, and Commanding Officer of both NR Naval Special Warfare Group Two Det 106 and then NR Special Operations Command Atlantic 606. He retired from the Navy as a Captain in 1997.

From 1965-1966, Dr. Vann was a Diving Engineer at Ocean Systems, Inc. He became a Research Assistant at F.G. Hall Environmental Research Laboratory, Duke Medical Center, in 1971 after he left active duty in the Navy. From 1976-2010, he was Assistant Professor in the Anesthesia Department of Duke Medical Center, where he still serves as Engineering Safety Officer in the F.G. Hall Laboratory since 1981 and as Chairman of the Operations and Safety Committee in the F.G. Hall Hyperbaric Center since 1985. In 1990, he accepted positions as Director of Applied Research at F.G. Hall Hypo/Hyperbaric Center and Vice President for Research at the Divers Alert Network (DAN), which he held until 2010. In 1999, he established the DAN Research Summer Internship. In 2010, he became Assistant Professor Emeritus, Anesthesia Department, Duke Medical Center.

Dr. Vann has been honored by the Undersea and Hyperbaric Medical Society with the Oceaneering International, Inc. Award for outstanding scientific contributions to the advancement of commercial diving activities. He also holds a U.S. Navy Commendation Medal, the Life Sciences and Biomedical Engineering Branch 2003 Research and Development Award, the 2003 Craig Hoffman Memorial Award for contributions to diving safety from the Undersea and Hyperbaric Medical Society, the 2007 Diver of the Year for Science from Beneath the Sea, the 2010 DAN Asia-Pacific Contribution to Dive Safety Award, and, in 2012, he was honored with the STS134/VLF6 In-Suit Light Exercise Team NASA JSC Group Achievement Award and the Behnke Award from the Undersea and Hyperbaric Medical Society. He is a member of the Undersea and Hyperbaric Medical

Society, where he has served in a variety of positions, the Institute of Diving, the UDT/SEAL Association, and the Aerospace Medical Association, where he was an Associate Editor for Aviation, Space, and Environmental Medicine from 2003-2005, and has been a member of a number of other groups.



**KENT K. GILLINGHAM AWARD**  
**Derek Knight, M.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.*

Derek Knight, M.D., received the Kent K. Gillingham Award in recognition of his substantial contributions to spatial disorientation (SD) countermeasures research and training. As both a pilot and physician he was well qualified to tackle the problem of SD in flight. He developed SD in-flight training tools for students, including a successful program that demonstrated that SD could be experienced in a ground-based flight simulator and that countermeasures could be learned and applied to reduce the adverse effects of SD on pilot performance. This work spurred the decision to procure advanced SD trainers for U.S. Air Force pilots, reversing the trend of previous years in which the U.S. Air Force had abandoned SD trainers in favor of the Barany Chair (which offered no direct experience of the link between flight conditions and profiles and SD, and no way of practicing countermeasures). Dr. Knight was also instrumental in enhancing in-flight SD illusions for demonstration and training, which has proven to be very effective in demonstrating how easy it is to become disoriented if one has no visual cues and relies solely on tactile and vestibular orientation cues.

Dr. Knight earned a B.A. in Sociology at the University of Nevada in Las Vegas in 1985. He then attended California State University in San Bernardino, where he earned an M.S. in Natural Sciences in 1995. He received his M.D. in 1998 from the University of California, Davis, School of Medicine in 1998 and served a Transitional Internship at Wilford Hall Medical Center in San Antonio, TX, from 1998-1999. He then served an Emergency Medicine Residency at San Antonio Uniformed Services Health Education Consortium from 1999-2002, where from 2001-2002, he was Chief Resident of Emergency Medicine. From 1987-1991, he served as an F-4E/G Pilot and Flight Lead for the U.S. Air Force both at Spangdahlem Air Base, Germany, and at George AFB, CA. In 1998, he became a Pilot-Physician and Emergency Physician/Flight Surgeon. In 2002, he served as Emergency Medicine Physician/Research Director at Wilford Hall Medical Center in San Antonio, and in 2005

*See KNIGHT, p. 780.*

*KNIGHT, from p. 779.*

as Air Education and Training Command MAJCOM Pilot/Physician and Chief of the Aeromedical Flying Training Branch/Undergraduate Flying Training Division at Randolph AFB, TX. In 2008, he became Senior Medical Officer-Pilot/USAF Exchange Officer at the RAF Centre of Aviation Medicine, RAF Henlow, UK. In 2011, he became Director of the Human Performance Integration Directorate and the U.S. Air Force Pilot-Physician Program and served as an Emergency Medicine Physician at Wright-Patterson AFB, OH.

Dr. Knight retired from the U.S. Air Force as a Colonel in 2012, when he accepted a position as an Emergency Physician at both San Antonio Military Medical Center and at Baptist Emergency Hospital. He is also a Pilot-Physician Consultant. He is certified by the American Board of Emergency Medicine and holds certifications from the American Heart Association and in medical acupuncture from the Helms Medical Institute, and is certified in advanced trauma life support. His awards include the Distinguished Flying Cross, the University of California Davis Morton Leavitt Medical Student Research Award, the SAEM Excellence in Emergency Medicine Award, a Resident Research Award, and Field Grade Officer of the Year, Air Force Element-Medical from the Department of Defense.



**WALTER AND SYLVIA  
GOLDENRATH AWARD**  
Harry L. Gibbons, M.D., M.P.H.

*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.*

Harry L. Gibbons, M.D., M.P.H., was the 2014 recipient of the Walter & Sylvia Goldenrath Award in recognition of his contributions to pilot education and safety. He initiated a program with the U.S. Air Force and Flying Magazine which has resulted in thousands of civilian pilots receiving physiological training in U.S. Air Force altitude chambers. He has made significant contributions to aircraft accident investigation by thoroughly and meticulously searching the wreckage of a chartered airline accident, discovering a critical piece of evidence, and doggedly insuring that an autopsy was accomplished that same night. This helped establish the probable cause of the accident and ultimately led to the FAA improving evaluation of the cardiovascular status of airmen. He has personally investigated and reported on over 300 fatal aircraft accidents. His paper on the hazards and problems associated with civil air ambulance services based on their yellow pages' advertisements led to the establishment of air ambulance safety regulations in his home state of Utah. He has also assisted five other states in developing similar regulations and has helped in forming national regulations to increase the safety of air ambulance

operations. He personally organized and taught numerous classes on many topics of aviation safety that included nearly 30,000 pilots and led to the organization of the FAA Accident Prevention Program.

Dr. Gibbons received his M.D. degree from the University of Utah in 1958 and an M.P.H. from Harvard University in 1963. He served in the U.S. Army as a Flight Surgeon at Fort Bragg, NC, from 1959-1961, after which he was a Federal Aviation Administration (FAA) Regional Flight Surgeon for the Southwest Region for the next 4 years. He attended the Advanced Course in Aerospace Medicine at Brooks Air Force Base, TX, and obtained board certification in aerospace medicine from the American Board of Preventive Medicine in 1966. In 1966, he was named Chief of the Aeromedical Research Branch at the FAA's Civil Aeromedical Institute in Oklahoma City, OK. In 1971, he became Executive Director of Health for Salt Lake City-Salt Lake County, UT. He retired from that position in 1993 and later was appointed Chief of Aerospace Medicine and Business Health at the Salt Lake Clinic. He additionally served as an instructor for the Southern California Safety Institute for six years, teaching at Kirtland AFB, NM.

Dr. Gibbons honors and awards include honorary membership in the Engineering Society, Order of St. Patrick and of the Utah Dental Association, the John A. Tamisiea and Harry G. Moseley Awards from the Aerospace Medical Association (AsMA), an award from the Utah Lung Association for initiative and leadership in implementation of the Utah Indoor Clean Air Act, lifetime honorary membership in the Experimental Aircraft Association, the Theodore B. Beatty Award from the Utah Public Health Association, the E. Arnold Isaacson Award for services to public health in Utah by the Utah Association of Local Health Officers, and a Life Saver Award from the American Red Cross. He is a lifetime member of the Society of U.S. Army Flight Surgeons and a Fellow of AsMA and of the International Academy of Aviation and Space Medicine. He was the first Chair of AsMA's Aviation Safety Committee and of AsMA's Air Ambulance Subcommittee, and has published extensively in *Aviation, Space, and Environmental Medicine*.



**WON CHUEL KAY AWARD**  
Melchor J. Antuñano, M.D., M.S.,

*Established 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. The award was established and is sponsored by the Korean Aerospace Medical Association.*

Melchor J. Antuñano, M.D., M.S., was the recipient of the 2014 Won Chuel Kay Award for his accomplishments in the promotion of international education and

*See ANTUÑANO p. 781.*

collaboration in aerospace medicine. He has supported numerous governmental and non-governmental organizations worldwide, as well as thousands of professionals, including aerospace medicine specialists, flight surgeons, aviation medical examiners, flight nurses, physiologists, psychologists, aerospace human factors specialists, pilots, flight attendants, and aviation safety inspectors. For example, in 1994, he implemented the first International Visitor Program at the FAA Civil Aerospace Medical Institute (CAMI), which continues to provide post-graduate education opportunities for foreign aviation medicine personnel, familiarizes them with FAA's aviation medicine policies and programs, allows their active participation in day-to-day activities with CAMI scientists and experts, and supports the establishment of cooperative international efforts. Foreign participants in this program have come from Australia, Brazil, Canada, Chile, China, Colombia, Ecuador, Egypt, France, Germany, Iraq, Israel, Japan, Mexico, New Zealand, Nigeria, Panama, Saudi Arabia, South Africa, Turkey, and UK.

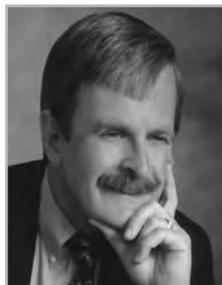
Dr. Antuñano has contributed to the official recognition of the specialty of Aerospace Medicine in several countries. He has been a leader and/or key contributor in international initiatives related to aerospace medicine, including: 1) Development of an International Study Group Report on Medical Safety and Liability Issues for Short-Duration Commercial Orbital Space Flights through the International Academy of Astronautics; and 2) Development of Flight Crew and Spaceflight Participant Medical and Training Standards & Guidelines for Suborbital Flight through the International Association for the Advancement of Space Safety.

Dr. Antuñano was born in Mexico City and graduated from the National Autonomous University of Mexico School of Medicine with an M.D. in 1985. He completed the Residency Program in Aerospace Medicine at Wright State University in Dayton, OH, in 1988. He was awarded a post-doctoral research associateship by the U.S. National Research Council of the National Academy of Sciences at the USAF School of Aerospace Medicine in San Antonio, TX, in 1988. In 1990, he became a Research Physician in Aerospace Medicine at KRUG Life Sciences in San Antonio working at the Armstrong Laboratory/CFTO at Brooks Air Force Base, where he was until 1992, when he became Manager of the Aerospace Medical Education Division at the Federal Aviation Administration's (FAA's) Civil Aerospace Medical Association in Oklahoma City, OK. In 1996, he took the position of Acting Division Manager at the Aerospace Medical Certification Division at the FAA Civil Aerospace Medical Institute and then returned to the position of Manager of the Aerospace Medical Division in 1997. He is currently the Director of the U.S. FAA Civil Aerospace Medical Institute and a faculty member at Wright State University School of Medicine, the University of Texas Medical Branch in Galveston, and the National University of Colombia School of Medicine.

Through his significant aerospace medicine activities in support of international aerospace organizations and personnel, Dr. Antuñano has clearly demonstrated outstanding contributions to international aerospace medicine. He is credited with 642 professional presentations and invited lectures at national and international

conferences in aerospace medicine in 38 countries, and with 58 scientific publications covering a variety of aerospace medicine topics.

He is a Past-President of the Aerospace Medical Association, the Space Medicine Association, and the Iberoamerican Association of Aerospace Medicine and is a Fellow of the Aerospace Human Factors Association. He is Chancellor of the International Academy of Aviation and Space Medicine and member of the International Academy of Astronautics. He is Honorary Member of the Austrian, Brazilian, Colombian, Greek, Mexican, Peruvian, Slovenian, and Turkish Societies of Aviation/Aerospace Medicine. His numerous awards and honors include the "Dr. Melchor Antunano Memorial Lecture in Space Medicine" established by the Mexican Association of Aviation Medicine in 2012, a Special Recognition Trophy from the President of the Iberoamerican Association of Aerospace Medicine in 2011, an AsMA Fellows Star from the Chair of the AsMA Fellows in 2011, a President's Citation from the President of AsMA in 2010, AsMA's Louis H. Bauer Founders Award in 2010, an Employee of the Year Award in the Supervisory/Managerial category from the Oklahoma Federal Executive Board in 2008, a Recognition Trophy for outstanding collaboration in the International Seminar on Operation Health and Safety Chile in 2006, AsMA's Eric Liljenkrantz Award in 2003, and the 1999 Mission Support Award from the Office of Aerospace Medicine and the "You Make a Difference" Award from the FAA Mike Monroney Aeronautical Center, both in 2000.



**JOE KERWIN AWARD**  
**Mark Campbell, M.D.**

*Established and sponsored by Wyle 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.*

Mark Campbell, M.D., was the 2014 recipient of the Joe Kerwin Award for his international leadership in developing microgravity surgical techniques for exploration class missions. He has worked tirelessly to adapt Earth-based surgical techniques, diagnostic modalities, and advanced life support techniques for spaceflight by performing surgery in zero-gravity analogue environments. His innovations in the practice of space medicine have advanced the understanding of human physiology in space.

Dr. Campbell graduated with a B.S. in Pre-Medical Biology from the University of Texas at Arlington in 1976 and then earned his M.D. at the University of Texas Medical School in Houston in 1979. He then served a Surgical Residency at St. Joseph's Hospital in Houston and at Brackenridge Hospital in Austin from 1979-1984. He has been a private pilot since 1984 and

*See CAMPBELL, p. 782.*

CAMPBELL, from p. 781.

received his Air Force Flight Surgeon wings in 1994. From 1984-1994, he was a General Surgeon in Clifton, TX, at the Clifton Medical and Surgical Clinic. In 1990, he became a Consultant to KRUG Life Sciences, and in 1994 served as the Shuttle Mission Support Physician for KRUG Life Sciences at NASA Johnson Space Center. He became a NASA Flight Surgeon in 1994 and served at Johnson Space Center (JSC) in Houston and the Gagarin Cosmonaut Training Center in Star City, Russia, supporting the Shuttle-Mir program in 1995. He became a General Surgeon in Paris, TX, in solo practice in 1995, a post he still holds today. In 1996, he served as a Consultant to NASA for KRUG/Wyle Life Sciences, a position he held until 2002. He currently serves as a member of the FAA Commercial Space Transportation Advisory Committee (COMSTAC).

Dr. Campbell is a board certified general surgeon and a Fellow of the American College of Surgery and the Texas Surgical Society. He has been a member the Aerospace Medical Association (AsMA) since 1989 and was elected as an AsMA Fellow in 2009. He was the President of the Space Medicine Association in 2007-2008 and was a Vice-President of the AsMA from 2010-2013. He was the co-chairman of the AsMA Commercial Space Flight Working Group, which produced a position paper on "Medical Issues for Suborbital Commercial Space Flight Crewmembers." He has authored or co-authored 33 published papers concerning surgical care during spaceflight and surgical techniques in weightlessness. He was the author of the chapter on "Surgical Care in Space" in the textbook, "Principles of Clinical Medicine for Space Flight." He is also the author of a historical biography, "Hubertus Strughold, Life and Work in the Field of Space Medicine."



**MARY T. KLINKER AWARD**  
**Randall T. Rodgers, B.A., M.A.**

*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 Impact Instrumentation.*

Randall T. Rodgers, B.A., M.A., received the 2014 Mary T. Klinker Award in recognition of his dedication to supporting aeromedical evacuation and en route care. His efforts directly improved the lives of injured/ill soldiers, sailors, airmen, and marines. He led the Aeromedical Evacuation/En Route Care System into the 21st century, creating new and innovative processes to serve the injured or ill. He was the driving force behind the system adopting advanced negative pressure wound therapy, which decreased the morbidity of patients' wounds. He spearheaded procurement

of the most advanced ventilator on the market, ensuring the ability to move and improve care outcomes for patients with devastating injuries. He facilitated research on countless equipment studies and tests to ensure that the system had the safest, most efficient equipment and he has been a key member on several Lean/Six Sigma events to chart the future course for worldwide aeromedical evacuation. He led the modernization effort for the Tactical Critical Care Evacuation Team, providing the capability for improved resuscitation, lifesaving interventions, and critical care during pre-hospital evacuation.

Mr. Rodgers graduated from Wayland Baptist University in Plainview, TX, with a B.A. in Business Administration in 1984. He then earned an M.A. in Procurement and Acquisition from Webster University at Scott AFB, IL, in 2007. From 2001-2003, he was a Program Analyst assigned to the Patient Movement Item (PMI) program in the Department of Defense (DOD). In this position he assisted with the management and tracking of the budget and equipment assigned to the PMI program. He also assisted with the management of aeromedical evacuation and ground-based material allowance standards. In 2003, he became Med Readiness Logistics/Manpower Equip Force Package (MEFPAK) Manager for the Air Mobility Command (AMC) Surgeon General, a position he held until 2008. In that position, he conducted studies and evaluated the mission effectiveness of the medical readiness logistics program for the AMC. He was also a Senior Advisor for the Command Surgeon, U.S. Transportation Command, the Army, Navy, and Marine Corps, and coalition staff in planning, organizing, and overseeing the activities of global aeromedical evacuation operations. In 2008, he became Deputy Chief of the MEFPAK Management Branch/Med Readiness Log, where he currently serves. In this position, he evaluates mission effectiveness of the readiness logistics program for the AMC, develops and implements transition plans for adoption of new technology, and is a Senior Advisor for the Command Surgeon, the U.S. Transportation Command, the Army, Navy, and Marine Corps, and coalition country staff.

Mr. Rodgers' specialized training includes Medical Material Specialist, the Medical Material Supervisor Course, Facility Management, Disaster Medical Action Planning, Contract Negotiation Techniques, and Air Force Smart Operations Training. His awards include the Headquarters AMC Mobility Medic Award of Excellence, the Military Outstanding Volunteer Medal, the Air Force Meritorious Service Medal with four olive leaf clusters, and the Air Mobility Command CAT III Civilian of the Year Award. He is a member of the American Legion, the American Hospital Association, and the Aerospace Medical Association. He is also a Headquarters AMC Surgeon General faculty member, a member and Past President of the Air Force Sergeants Association, and a member of the AFSA Skyhigh Club.

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**ERIC LILJENCRANTZ AWARD**  
**Nicholas Green, M.B.B.S., Ph.D.,**  
**D.Av.Med., MRAeS, RAF**

*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 the Aerospace Medical PLC.*

Wg. Cdr. Nicholas Green, M.B.B.S., Ph.D., D.Av.Med., MRAeS, RAF, was the recipient of the 2014 Eric Liljencrantz Award. He was honored for his role as a one of the United Kingdom's leading authorities in acceleration and G protection. He has been at the forefront of acceleration research for the past 2 decades, initially at Farnborough and now at the RAF Centre of Aviation Medicine. He has focused his life's work providing advanced solutions for G protection and his research on full coverage anti-G trousers and chest counterpressure garments is now widely accepted as the standard for sustained high-G protection across fast jet platforms. Wg Cdr Green is solely responsible for training over 2,500 medical and aviation students in acceleration physiology and has personally logged more than 3,000 centrifuge spins. Wg Cdr Green is the UK's lead for policy on tri-service G protection and has provided centrifuge training for over 800 aircrew. Wg Cdr Green has also provided highly regarded specialist advice in other areas such as altitude, life support systems, and accident investigations to Front Line Commands as well as to UK industry.

Wg Cdr Green has recently been recognized by an accident investigation board of inquiry for his invaluable evidence in support of a fatal GLOC involving one of the RAF's Red Arrow display pilots. His profound commitment and dedication to flight safety over many years has undoubtedly saved countless lives.

Wg. Cdr. Green earned a B.Sc. in Physiology at the University of London in 1985 and an M.B.B.S. at Charing Cross and Westminster Medical School, University of London, in 1988. He received his D.Av.Med. in 1993 from the Royal College of Physicians and graduated with a Ph.D. in Physiology from the University of Birmingham in 2007. From 1988-1989, he served in a variety of positions as either a House Surgeon or a House Physician. In 1989, he became Senior House Officer in Accident and Emergency Medicine at Wycombe General Hospital in High Wycombe. He joined the Royal Air Force (RAF) in 1990, was commissioned as a Flight Lieutenant, and took the initial Medical Officers Course. From 1990-1991, he served as Unit Medical Officer at RAF St. Mawgan in Cornwall and then was detached on aeromedical evacuation duties during the first Gulf War. In late 1991, he became an RAF Specialist in Aviation Medicine in the Biodynamics Division of the RAF Institute of Aviation Medicine in Farnborough.

In 1998, Wg. Cdr. Green served as Senior House Officer to the Surgeon Commander and Surgeon Captain in Renal and Respiratory Medicine in the Department of Medicine at the Royal Hospital Haslar in Gosport. Later in 1998, he became a Specialist Registrar in Radiology at University College Hospital in London. In 2001, he transferred to the RAF Centre of Aviation Medicine in Henlow and in 2007 became a Consultant in Aviation Medicine and Officer Commanding in the Aviation Physiology Section of the RAF Centre of Aviation Medicine, a position he still holds. He is also currently a Coalition Validating Flight Surgeon at the Joint Patient Movement Requirements Center on deployed duty.

Wg. Cdr. Green is a member of the British Medical Association, the Royal Aeronautical Society, and the Physiological Society. He is a Fellow of AsMA and his honors include the Gordon P. Olley Prize from the Royal Aeronautical Society and a Gulf War Medal. His Ph.D. thesis, entitled "An Investigation of High G Related Arm Pain," examined forearm blood flow and pain related to sustained acceleration exposures to understand the underlying physiological changes and whether changes to the anti-G system schedule would reduce the level of pain experienced. He has contributed multiple papers to the scientific literature, authored chapters on acceleration in Ernsting's textbook of "Aviation Medicine," and has provided presentations to national and international audiences at the Aerospace Medical Association (AsMA), the Royal College of Physicians, NATO, and the Royal Aeronautical Society.



**SIDNEY D. LEVERETT, JR.**  
**ENVIRONMENTAL SCIENCE**  
**AWARD**  
**Su-Jiang Xie, Ph.D., M.D.**

*Established in memory of Sidney D. Leverett, Jr., Ph.D., this Environmental Science Award is presented annually to an individual who has made a significant contribution in the field of environmental medicine through a publication in Aviation, Space and Environmental Medicine, or by activities conducted in support of aerospace systems operation. Sponsored by Environmental Tectonics Corporation.*

Su-Jiang Xie, Ph.D., M.D., received the 2014 Sidney D. Leverett, Jr., Environmental Science Award for his role as lead author of the article "Ocular vestibular-evoked myogenic potentials in healthy pilots and student pilots" (*Aviat Space Environ Med* 2011; 82:729-734). The authors sought to establish preliminary normative data for ocular vestibular-evoked myogenic potentials (oVEMP) in pilots in order to evaluate utricular function and, thus, spatial orientation. The experimental set-up used binaural air-conducted sound stimulation while oVEMP was recorded bilaterally. The effects of gender and age were also investigated. The authors found that oVEMP should be interpreted with the asymmetry ratio rather than with the raw amplitude and noted that each institution should determine its own normative values. Dr. Xie was also the

*See , XIE, p. 784.*

XIE, from p. 783.

lead author of "Ocular vestibular evoked myogenic potentials and motion sickness susceptibility" (*Aviat Space Environ Med* 2012; 83:14-18), which investigated the relationship between oVEMP and motion sickness. His efforts in investigating the methods and standards of otolith function tests in military pilots have led to the application of oVEMP test in military aviation medicine and have provided a promising parameter for predicting motion sickness susceptibility.

Dr. Xie earned a B.S. in 1997 and then a Master's degree in 2001 from the Fourth Military Medicine University in Xi'an, Shangxi Province, in the People's Republic of China. He graduated from the PLA Postgraduate Medical School in Beijing in 2007 with an M.D. and a Ph.D. He has been first an Assistant Researcher, then an Associate Researcher and Vice-Director of the Vestibular Laboratory at the Institute of Aviation Medicine since 1997. He is a member of the Chinese Ergonomics Society and the Chinese Aerospace Medicine Association. He is also communication editor for the *Journal of Otology*, administrative editor for the *Chinese Scientific Journal of Hearing and Speech Rehabilitation*, and a validated reviewer for both *Ear and Hearing* and the *Chinese Journal of the Clinical Physician*. He has been the Principal Investigator on six vestibular research studies and a co-investigator on one vestibular physiology study. He has published over 35 articles.



**RAYMOND F. LONGACRE AWARD**  
Col. Kent D. McDonald, USAF, MC

*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.*

Col. Kent D. McDonald, USAF, MC, FS, was the 2014 recipient of the Raymond F. Longacre Award. He was honored for fostering a collaborative, highly effective operational research-oriented environment in his current position as Chief, Neuropsychiatry Branch, at the Aeromedical Consultation Service, U.S. Air Force School of Aerospace Medicine, Wright-Patterson AFB, OH. His approach has advanced the understanding of the aviator personality, the unique environmental stressors of flight, and their impact on optimal performance. His team's innovative research has led to new personnel/operations policy and has addressed selection methods, incorporating both personality and cognitive factors as selection variables. His work in initiating Air Force wide unit level occupational consultations and recurrent surveys has re-established the role of work hours and shift work on mental health among aircrew of remotely piloted aircraft, resulting in changes to mission allocation policy that have improved aviator mental health.

Col. McDonald graduated from Indiana University in Bloomington in 1987. He then earned a Bachelor's in

General Studies in 1988 at the Indiana University-Purdue University at Indianapolis. He graduated from the Uniformed Services University of the Health Sciences with a medical degree in 1993. From 1993-1994, he served an internship at Malcolm Grow Medical Center, Andrews AFB, MD, and then a Pathology Residency at Wilford Hall Medical Center, Lackland AFB, TX, from 1994-1995. He completed the Aerospace Medicine Primary Course in 1996 and the NASA Space Shuttle Support Course in 1997. He also completed the Helicopter Underwater Escape Course in 1997. In 1999, he became a Psychiatry Resident at Wright State University, Dayton, OH, and became Chief Resident in 2001. He took the Medical Review Officer Course in 2006 and Air War College in 2007.

From 1996-1999, Col. McDonald served in a variety of positions at Holloman AFB and then became Staff Psychiatrist at Sheppard Air Force Base, TX, in 2002, also serving as Deputy Chief of Staff and Medical Director of the Inpatient Unit, Partial Hospitalization Program, and ADAPT Program and MH Clinic. In 2005, he became Staff Psychiatrist at Barksdale Air Force Base, LA, where he was also Deputy Chief of Medical Staff and Medical Director of Mental Health Flight. In 2006, he accepted the position of Chief of the Medical Standards Branch at Headquarters Air Force Personnel Center at Randolph Air Force Base, TX. He took his current position in 2009.

Col. McDonald is Board Certified in General Psychiatry and his awards include the Meritorious Service Medal with three oak leaf clusters, the Commendation Medal with two oak leaf clusters, the Humanitarian Service Medal, the Marksmanship Medal, several campaign, unit, and longevity medals, and Certificates of Appreciation from the U.S. Army Aircraft Safety Board, the Initial Aircraft Safety Board for an F117 mishap, and two Aircraft Mishap Investigations. He is a member of the Aerospace Medical Association and holds two academic appointments, one as Clinical Faculty in Aerospace Medicine at the U.S. Air Force School of Aerospace Medicine and one as Assistant Professor in Psychiatry at Wright State University's Department of Psychiatry. He has been an author or co-author on 17 papers and 8 abstracts, and given 13 presentations and 14 course lectures.



**THEODORE C. LYSTER AWARD**  
Frederick E. Tilton, M.D., M.P.H.

*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. Sponsored by Eagle Applied Sciences.*

Frederick E. Tilton, M.D., M.P.H., received the 2014 Theodore C. Lyster Award. He was honored for his

See TILTON, p. 785.

TILTON, from p. 784.

role in building the Federal Aviation Administration's (FAA's) Office of Aerospace Medicine into a nationally and internationally recognized leader of Aerospace Medicine. He has elevated the reputation of FAA aerospace medicine within both the medical and pilot communities of the United States and has dedicated over 30 years to the field. His high-caliber leadership experience and expertise in the aviation and medical fields resulted in many FAA accomplishments, including a paperless medical certification application form, a new policy for medical certification of airmen taking SSRIs, expanding medical conditions for which AMEs could issue regular certifications that had once required Special Issuance Medical Certification, a first-of-its-kind reduced oxygen training device, and a portable spatial disorientation training device for helicopter pilots.

Dr. Tilton retired earlier this year from the Office of Aerospace Medicine after 14 years, 8 of which were spent as Federal Air Surgeon. He had previously served 6 years as Deputy Federal Air Surgeon. Prior to joining the FAA in 1999, he was the Regional Medical Director in Wichita, KS, and then the Corporate Medical Director in Seattle for The Boeing Company. Under his leadership, his department received the American College of Occupational Medicine's prestigious Corporate Health Achievement Award as one of the best industrial medicine programs in the nation.

During a 26-year career with the U.S. Air Force, Dr. Tilton logged 4,000 hours as a command pilot flying trainers, transports, reconnaissance aircraft, and fighters. He flew a wide variety of aircraft, including the F-15, T-38, RB-57F, C-141, and the B-47. He spent 11 years in the medical corps where he commanded a clinic, was an F-15 physician-pilot and technical consultant, and held key positions such as Chief of the Aeromedical Service at Langley AFB, Chief of Aerospace Medicine at Andrews AFB, and Chief of Flight Medicine in the Surgeon General's Office in Washington, DC. He retired from the Air Force in 1988 with the rank of colonel.

A graduate of the U.S. Military Academy, Dr. Tilton received both an M.S. in 1973 and an M.D. degree in 1977 from the University of New Mexico in Albuquerque and an M.P.H. from the University of Texas School of Public Health in Houston in 1979. He served a Rotating Internship at the USAF Hospital, Wright-Patterson AFB, and was an Aerospace Medicine Resident at the University of Texas School of Public Health and Brooks AFB, TX, between 1977 and 1980.

Dr. Tilton is board-certified by the American Board of Preventive Medicine in both Aerospace and Occupational Medicine. He is a member of the American College of Occupational and Environmental Medicine, the Association of Graduates of the U.S. Military Academy, the Air Force Association, and the Order of Daedalians. He is also a Fellow of the Aerospace Medical Association (AsMA), the American College of Preventive Medicine, and the Civil Aviation Medical Association. In the AsMA, he has also served on the Constitution and Bylaws Committee, the Corporate and Sustaining Membership Committee, and the Aviation Safety Committee, and also served as the Publicity Chair for the Annual Meeting for one year.



**MARIE MARVINGT AWARD**  
Lawrence Steinkraus, M.D., M.P.H.

*Established and sponsored by the French Aerospace Medical Association 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.*

Lawrence Steinkraus, M.D., M.P.H., was the 2014 recipient of the Marie Marvingt Award. He was honored for his leadership in research and training for validating flight surgeons with the U.S. Air Force and for being the driving force for the development and accreditation of Mayo Clinic's first fellowship training program in Aerospace Medicine. He has developed the curriculum and organized the faculty at Mayo Clinic's Section of Aerospace Medicine in Rochester, MN, and secured permission for residents from the U.S. Air Force, Army, and Navy to attend clinical rotations at Mayo Clinic. His research has focused on answering clinical questions regarding cognitive decline of aging pilots, aeromedical certification issues, and the future of aerospace medicine.

Dr. Steinkraus earned a B.A. in Biology in 1978 at Cornell College in Mt. Vernon, IA, and an M.D. in 1982 at the Medical College of Virginia in Richmond, VA. He served a Family Practice Residency at the University of Iowa Hospitals and Clinics in the Department of Family Practice from 1982-1985.

From 1985-1987, he served as Staff Physician, then Director of Emergency Services at the U.S. Public Health Service Indian Hospital in Whiteriver, AZ. From 1987-1990, he became Assistant Professor and then Associate Residency Director in the Department of Family Practice at the College of Medicine, University of Iowa Hospitals and Clinics. He was an Emergency Physician at Covenant Hospital in Waterloo, IA, from 1990-1995, then became Clinic Chief, Family Medicine Residency, at the USAF Hospital and then Chief of Flight Medicine, 55th Aerospace Medicine Squadron, at Offutt Air Force Base, NE, between 1995 and 2000. He earned an M.P.H. in 2001 from the College of Public Health at the University of Iowa in Iowa City, IA, and then served in Aerospace Medicine and Occupational Medicine Residencies at the U.S. Air Force School of Aerospace Medicine at Brooks City-Base, TX, from 2000-2003.

In 2003, Dr. Steinkraus became Commander of the 12th Aeronautical Dental Squadron at Randolph Air Force Base, TX. From 2005-2008, he served in Okinawa, Japan, as first Commander of the 18th Aerospace Medical Squadron at Kadena Air Base and then as Senior Public Health Emergency Officer for U.S. Forces. In 2007, he was also a Theater Validating Surgeon at USCENTCOM in Al Udeid, Qatar.

After separating from the Air Force, he joined the Mayo Clinic Rochester in Minnesota and from 2008-2014

*See STEINKRAUS, p. 786.*

STEINKRAUS, from p. 785.

he served at as a Senior Associate Consultant, Program Director of the Aerospace Medicine Fellowship, Assistant Professor in the Department of Medicine, and Education Chair in the Division of Preventive Medicine. In 2010, he also became a USAF Reservist and in 2011 a Consultant for the Division of Preventive Medicine at Mayo Clinic Rochester. He is also the Chief of the Aerospace Medicine Section, Division of Preventive Medicine, at Mayo Clinic Rochester.

Dr. Steinkraus is a Diplomate of the National Board of Medical Examiners, the American Board of Family Medicine, the American Board of Preventive Medicine, and is an FAA Senior Aviation Medical Examiner. He is a Fellow of the American Academy of Family Physicians, an Associate Fellow of the Aerospace Medical Association (AsMA), and a member of the American College of Environmental and Occupational Medicine, the American College of Preventive Medicine, the Civil Aviation Medical Association, the American Medical Association, and the Undersea and Hyperbaric Society. His awards include a Family Practice Residents Teacher of the Year Award, a Special Recognition Award from the USPHS Commissioned Corps for Ready Reserve service, and Instructor of the Year in Preventive Medicine, Field Instructor of the Year, and RAM Teacher of the Year from the USAF School of Aerospace Medicine.



**JOHN PAUL STAPP AWARD**  
**David G. Newman, M.B., B.S.,**  
**D.Av.Med., M.B.A., Ph.D., FRAeS,**  
**FAsMA, FACAsM, FAICD, FAIM**

*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.*

David G. Newman, M.B., B.S., D.Av.Med., M.B.A., Ph.D., FRAeS, FAsMA, FACAsM, FAICD, FAIM, ., was honored with the 2014 John Paul Stapp Award for his significant and ongoing contributions to aerospace biomechanics over more than 20 years. His extensive research has focused on the biodynamic and physiological problems associated with high-performance aircraft flight, particularly in terms of ejection outcomes, neck injuries, and G tolerance. His research has focused on protecting the safety of military aviators' necks and spines, and his papers are widely referenced and the information used in developing safety equipment and procedures. His expertise in aerospace biodynamics has been called upon in relation to a number of aircraft accident investigations in Australia and by other agencies. His publications have led to a greater understanding of pilots' physiological and cognitive performance in their operational environments and have been acknowledged by several national and international awards.

Dr. Newman began his military career in 1987 as an undergraduate medical officer in the Royal Australian Air Force (RAAF). He graduated from the Faculty of Medicine at Monash University in 1989 and, after 2 years as a public hospital intern and surgical resident, he entered full-time service with the RAAF. His first posting was to RAAF Base Point Cook, where he served as the Flight Medicine Officer for No. 1 Flying Training School. This was followed by a tour as Senior Medical Officer at No. 6 RAAF Hospital. In 1994 he was posted to RAAF Base Williamtown for 3 years as a medical officer and then later as the Senior Medical Officer on promotion to Squadron Leader. He was the Flight Medicine Officer for 76 Squadron and, during his time at Williamtown, he completed the USAF Aerospace Medicine Primary Course at Brooks AFB, TX, in 1995.

In 1997 Dr. Newman was posted to the Royal Air Force School of Aviation Medicine in Farnborough, UK, where he graduated with a Diploma in Aviation Medicine from the Royal College of Physicians of London, and won the Stewart Memorial Prize for the best student. He then spent 7 months as the RAAF Instructor at the Royal Air Force Aviation Medicine Training Centre at RAF North Luffenham. On returning to Australia, he served for 2 years as the Chief Instructor at the RAAF Institute of Aviation Medicine, RAAF Base Edinburgh, South Australia. He left the RAAF in February 2000 and in the same year completed his Ph.D. in aviation physiology.

Since leaving the RAAF Associate Professor David Newman has held a number of academic appointments and acted as an aerospace medicine consultant. He is Head of the Aviation Medicine Unit in the School of Public Health and Preventive Medicine at Monash University in Melbourne, Australia, and holds an MBA from Deakin University. He is also the Head of Research in the Department of Aviation, Faculty of Science, Engineering and Technology at Swinburne University, Melbourne, Australia.

During his career he has received numerous awards, including the Weary Dunlop Prize of the Australian Military Medicine Association in 1993 and again in 1998. In 2000 he received the Arnold D. Tuttle award from the Aerospace Medical Association (AsMA) and also received the Royal Aeronautical Society's 2000 Buchanon-Barbour Award. He received the President's Prize from the Australasian Society of Aerospace Medicine and the A. Howard Hasbrook Award from the Life Sciences and Biomedical Engineering Branch of AsMA, both in 2012. He is a Fellow of the AsMA, where he has also been a member of the Science and Technology Committee since 2002, the Royal Aeronautical Society, and the Australasian College of Aerospace Medicine. He is currently serving as a member of the Board of Associate Editors of the international peer-reviewed journal *Aviation, Space, and Environmental Medicine*, is a reviewer for seven international scientific journals, and is a consultant in aviation medicine, physiology, and human factors to the Australian Transport Safety Bureau and the Civil Aviation Safety Authority of Australia. He has also been a frequent contributor to the Civil Aviation Safety Authority's magazine *Flight Safety Australia*. His textbook on the human factors and performance limitations of flying fast jets is due to be published this year.



**HARRY G. MOSELEY AWARD**  
**Thomas E. Nesthus, Ph.D.**

*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 Lockheed-Martin Corporation.*

Thomas E. Nesthus, Ph.D., was the 2014 recipient of the Harry G. Moseley Award in recognition of his many years of outstanding dedication to the promotion of global aviation safety through world-class scientific research in aviation human factors. His significant research contributions in the areas of human performance assessment of aviation personnel, analysis of occupational fatigue in aviation personnel, and development of fatigue assessment tools and countermeasures have resulted in enhanced safety in aviation operations. He has provided outstanding leadership in response to U.S. airline applications to conduct long duration flights in excess of 16 hours and has provided expertise in fatigue management to the FAA Flight Standards Service, supporting the development of FAA OpSpec A332 for ultra-long range flights, enabling regulatory compliance and enhanced flight safety.

Dr. Nesthus earned a B.S. in Psychology in 1977 and an M.A. in Psychology (Human Factors) in 1984 from the University of South Dakota in Vermillion, SD. He graduated in 1986 from that same university with a Ph.D. in Psychology (Human Factors). He worked for KRUG Life Sciences under contract with the USAF Crew Technology Division, Brooks AFB, TX, from 1986-1992. He supervised staff members involved in diverse aerospace medical research projects and was principally responsible for providing human factors performance research support to the Sustained Operations Branch, Flight Motion Effects Branch, Cockpit and Equipment Integration Lab, and High Altitude Protection Function of the USAF Armstrong Research Laboratory. He was hired by the FAA in 1992 and is currently with the Aerospace Human Factors Research Division. Focal research activities include studies evaluating performance and fatigue associated with flight and cabin crewmembers, ATCSs, TechOps, and aviation maintenance technicians. He participates on performance and fatigue-related DOT and interagency working groups and has chaired the Aerospace Medical Association's (AsMA's) Human Factors Committee for 11 years and the DOD Human Factors Engineering, Sustained and Continuous Operations Technical Advisory Group for 12 yr. He provides consultation and assistance as requested by the National Transportation Safety Board and the Department of Justice. He testified on fatigue factors associated with the crash of Colgan Air Flight 3407 during the NTSB's public hearing and is currently assisting the FAA Air Transportation Division (AFS-200) with 14 CFR Parts 117 & 121 Flightcrew Member Duty and Rest Requirements.

Dr. Nesthus is a Fellow of AsMA, a member of the Human Factors and Ergonomics Society, the International Congress of Occupational Health, and the International Society of Air Safety Investigators. He is also an Affiliate Member of the American Psychological Association. Additionally, he is an Adjunct Psychology Professor at Incarnate World College in San Antonio, TX. He has served as Chair of a Scheduled Operations Working Group for the MITRE Aviation Fatigue Roadmap and been a Department of Transportation (DOT) Federal Motor Carrier Safety Administration Interagency Advisor, and has been on the DOT Pipeline Safety Technical Advisory Committee and the DOT Operator Fatigue Management Team. He has also served on the Department of Defense's (DOD's) Human Factors Engineering Technical Advisory Group Operating Board as Co-Chair of the Sustained Operations SubTAG and on the DOD's Cognitive Performance Steering Committee. He has published numerous articles, reports, and presentations.



**JOHN A. TAMISIEA AWARD**  
**Pooshan Navathe, M.B.B.S., M.D., B.Ed., M.B.A., Ph.D.**

*This award was established and sponsored by the Civil Aviation Medical Association in memory of John A. Tamisiea, 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.*

Pooshan Navathe, M.B.B.S., M.D., B.Ed., M.B.A., Ph.D., was the 2014 recipient of the John A. Tamisiea Award in recognition of his leadership in creating a set of medical standards and a process for certification of recreational pilots with limited privileges (only light-weight, single-engine aircraft may be flown under visual flight rules or below 10,000 ft with no more than one passenger) at a low cost without compromising safety. The process enables pilots to be examined by general practitioners against a modified driver's license standard. This has allowed many aviators to keep flying without the cost and complications of a Class 2 medical certificate, as originally required. This is a significant contribution to the art and science of aviation medicine in its application to the general aviation field.

Dr. Navathe is an Adjunct Associate Professor at the Australian National University College of Medicine and the Principal Medical Officer at the Civil Aviation Safety Authority (CASA). He is also a Clinical Senior Lecturer in Aviation Medicine at the University of Otago, Wellington, New Zealand. He earned an M.B.B.S. from Pune

*See NAVATHE, p. 788.*

NAVATHE, from p. 787.

University in 1979 and an M.D. in Aerospace Medicine from the Institute of Aerospace Medicine in Bangalore University in 1988. He went on to earn a B.Ed. at Annamalai University in 1991 and a Ph.D. in high altitude physiology from the University of Delhi in 2000. He graduated from the Advanced Aerospace Medicine for International Medical Officers course at the U.S. Air Force School of Aerospace Medicine at Brooks AFB, TX, in 1992 and received a Diploma in Occupational Medicine from the University of Auckland in 2003 and a Diploma in Aviation Safety Regulation from Swinburne University in 2011. He later earned an MBA at the Australian National University in 2013.

In the past, Dr. Navathe served 22 years as a medical officer with the Indian Air Force, where he served in a variety of positions, including Medical Officer, Senior Medical Officer, and Squadron Medical Officer. During that time period, he also became an Associate Professor in Aviation Medicine at the Institute of Aviation Medicine in Bangalore. From 1988-1990, he served as Registrar in Aviation Medicine at the Institute of Aviation Medicine. In 1990, he became a Consultant in Aerospace Medicine, Training and Administration Officer, at the Aeromedical Training Center. He then became a Consultant in Aerospace Medicine, Training Officer, and later Head of the Department of Aviation Safety and Crew Performance, Human Factors Division, in 1993 at the Institute of Aerospace Medicine. In 1997, he took the position of Consultant in Aerospace Medicine, Squadron One Medical Officer, at Pune and then Consultant in Aerospace Medicine, Deputy Principal Medical Officer, at Headquarters Eastern Air Command Air Force. After he left the Indian Air Force in 2001, he became a Senior Medical Officer in Aviation Health at CASA until 2008, when he took his current position.

Dr. Navathe is a Fellow of the Aerospace Medical Association (AsMA), where he serves on AsMA's Air Transport Medicine and Aerospace Safety Committees. He is also a member of the International Academy of Aviation and Space Medicine and a Fellow of the Royal Aeronautical Society. Additionally, he is a Fellow of the Faculty of Occupational and Environmental Medicine of the Royal Australasian College of Physicians and the Royal Australasian College of Medical Administrators, and a Foundation Fellow of the Australasian College of Aerospace Medicine. He has published and lectured extensively and internationally on spatial disorientation and other medical topics.

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**THOMAS J. AND MARGARET D. TREDICI AWARD**  
John Gooch, M.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.*

John Gooch, M.D., was the 2014 Thomas J. and Margaret D. Tredici Award recipient. He was recognized for his expertise in aerospace ophthalmology. His accomplishments are vast, but setting up a one-of-a-kind Operationally Based Vision Assessment lab for the U.S. Air Force stands out as a crowning achievement. The standards he helped to develop and refine have been adopted in many countries and have helped assure good vision in aviators of all ages and specialties. His name is instantly recognized as synonymous with excellence in aviation medicine and aviation ophthalmology. From 2006-14, he managed the Air Force refractory surgery program, which led to a streamlined waiver process for all Air Force aviators and helped to refine all policy related to refractive surgery. He has worked tirelessly with national and international refractive surgery experts in an effort to share U.S. Air Force experiences. His work in color vision, depth perception, laser vision effects, vision testing, intraocular lens selection for aircrew after cataract surgery, aircrew vision correction, and the development of vision standards in new airframes, including unmanned platforms, has been noteworthy.

Dr. Gooch earned a B.S. in General Biological Sciences at the University of Maryland, College Park, MD, in 1988 and then graduated from the University of Louisville School of Medicine in Louisville, KY, with an M.D. in 1992. He took the Aerospace Medicine Primary Course at Brooks City-Base, TX, in 1991. He served a Transitional Program Internship at Malcolm Grow USAF Medical Center at Andrews AFB, MD, from 1992-1993 and an Ophthalmology Residency at Wilford Hall USAF Medical Center from 1998-2001, where he was Chief Resident in 2001. From June 2001 to February 2014, he served at the Aeromedical Consultation Service at Brooks City-Base, TX, first as Aerospace Ophthalmology Branch Staff Flight Surgeon and Ophthalmologist until 2006 and then as Chief of the Aerospace Ophthalmology Branch both at Brooks and at Wright-Patterson AFB, OH. From 2009-2014, during his military career, he was also serving as Chief Consultant to the U.S. Air Force Surgeon General for Aerospace Ophthalmology.

Dr. Gooch retired from active military duty in February 2014 with the rank of Colonel. He is currently a part-time Ophthalmology and Vision Standards Consultant for Innova Systems Inc. in Burr Ridge, IL, and will be starting a new position as Staff Ophthalmologist at St. Elizabeth Physicians in Florence, KY, later in 2014.

See GOOCH, p. 789.

GOOCH, from p. 788.

He is a Fellow of the Aerospace Medical Association, and a member of the American Academy of Ophthalmology, the American Society of Cataract and Refractive Surgery, and the Society of Air Force Clinical Surgeons. His awards and honors include the Air Force Achievement Medal, the Air Force Commendation Medal with first oak leaf cluster, the Air Force Achievement Medal with first oak leaf cluster, the Air Force Meritorious Service Medal, the Air Force Achievement Medal with second oak leaf cluster, the Air Force Meritorious Service Medal with first oak leaf cluster, the Howard R. Unger Aeromedical Research Award from the Society of U.S. Air Force Flight Surgeons, and the Federal Laboratory Consortium Annual Technology Transition Award.



**ARNOLD D. TUTTLE AWARD**  
**R. Andy McKinley, Ph.D.**

*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 Aviation, Space, and Environmental Medicine. Sponsored by Wyle Laboratories.*

R. Andy McKinley, Ph.D., was the 2014 recipient of the Arnold D. Tuttle Award for his role as leading author of "Computational Model of Sustained Acceleration Effects on Human Cognitive Performance" (*Aviat Space Environ Med* 2013; 84:780-788). The article presented a model aimed at predicting human cognitive performance under acceleration stress. The authors started with a proportional control cardiovascular model that produced predictions of hemodynamic parameters and derived an algorithm to relate changes in rSO<sub>2</sub> within specific brain structures to performance on cognitive tasks that require different areas of the brain. They used data from a precision timing experiment to validate the model. They found that the evidence suggested the model is capable of accurately predicting cognitive performance of simplistic tasks under high acceleration stress.

Dr. McKinley is the leader of the Non-Invasive Brain Stimulation (NIBS) Team in the Cognitive Performance Optimization Section, Applied Neuroscience Branch, Warfighter Interface Division, Human Effectiveness Directorate at Wright-Patterson AFB, OH. He earned a B.S. in Biomedical Engineering in 2002 and then a Ph.D. in Engineering in 2009 from Wright State University. From 2002-2004, he was an Engineer at Veridian Engineering/General Dynamics working as a contractor at Wright-Patterson AFB. In 2004, he became Principle Investigator and Biomedical Engineer at the Biobehavioral Performance Branch at Wright-Patterson AFB. In 2008, he accepted the position he currently holds as Principal Investigator and Biomedical Engineer for the Cognitive Performance Optimization Section. His

research focuses on developing and evaluating different non-invasive brain stimulation techniques and paradigms to enhance cognitive performance in Air Force environments. His previous work has shown significant improvements in training times for image analysts and large increases in sustained attention, a skill important for many Air Force careers including air traffic control, image analysis, and remotely piloted aircraft operations. He is also investigating the effects of transcranial direct current stimulation (tDCS) on procedural learning which has important implications for skill training.

Dr. McKinley is a member of the Order of the Engineer, the Aerospace Human Factors Association, and the Society for Neuroscience. He is a Past President of SAFE Wright Brothers Chapter, Past Secretary/Treasurer of the Life Sciences and Biomedical Engineering Branch, and a member of the Aerospace Medical Association (AsMA), where he has served on the Scientific Program Committee. His awards include Best Human Factors Presentation Award at DCAS Symposium 2007, two Civilian of the Quarter Awards from the Air Force Research Laboratory, the Outstanding Engineer Award from the SAFE Association Wright Brothers Chapter and an Individual Achievement Award from the National SAFE Association, the Grover E. Bell Award from the American Helicopter Society, the Alfred Gessow Forum Best Paper Award, the 2011 Moseley Award from AsMA, the 2012 William E. Collins Award from the Human Factors Association, and a Research and Development Award from the Life Sciences and Bioengineering Branch.



**JULIAN E. WARD MEMORIAL AWARD**  
**Rebecca Blue, 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.*

Rebecca Blue, M.D., M.P.H., received the 2014 Julian Ward Award in recognition of her accomplishments during her aerospace medicine residency. She conducted research in commercial spaceflight and served as project physician for the Red Bull Stratos Project. She provided leadership for Wings Over Houston and the Houston Marathon, supported NASA at Star City, Russia, and remained current in emergency medicine. Her contributions to the literature, which included 18 accepted abstracts (15 with the Aerospace Medical Association), aerospace medicine grand rounds, and NASA Johnson Space Center research, during a 2-year residency are unprecedented. She is one of many out-

*See BLUE, p. 790.*

BLUE, from p. 789.

standing residents at UTMB, but few can match her energy, productivity, and scientific accomplishments.

Dr. Blue received a baccalaureate degree in Biological Sciences with minors in Chemistry and Mathematics from Truman State University and a Doctorate of Medicine from Georgetown School of Medicine. She was named a Fulbright Scholar in Ireland in 2005-2006 and during that time she received a Higher Diploma in Social Policy from the University College of Dublin, Ireland, for study in Comparative Health Policy. After receiving her medical degree, Dr. Blue underwent training in Emergency Medicine at Orlando Regional Medical Center in Orlando, FL. While there, she began working with the Biological Research Laboratory at Kennedy Space Center and had the opportunity to work with the medical team supporting the NASA Space Shuttle launch and landing operations. After completion of her Emergency Medicine training, she was accepted into the Aerospace Medicine Residency at the University of Texas Medical Branch and completed this training, as well as a Masters in Public Health, while practicing as an emergency physician in Houston, TX. Following her aerospace medical training, she began working in the commercial spaceflight industry as a flight surgeon for Virgin Galactic.

Dr. Blue is a contributor to many areas of research including: sleep deprivation and fatigue in extreme environments, development and analysis of hemodynamic monitoring systems for operational environments, and evaluation of commercial spaceflight passenger tolerance of acceleration forces in prepara-

tion for suborbital flight. She was also a member of the medical team for the Red Bull Stratos project as the field medical response team leader, providing crew recovery and ground support and contributing to the development and analysis of the physiological monitoring system to be utilized for the record breaking jump.

Dr. Blue is a member of the Aerospace Medical Association (AsMA), the American College of Emergency Physicians, the American Medical Association, and the Aerospace Medicine Resident and Student Organization. Her awards and honors include an Orlando Health Emergency Medicine Scholarly Activity Award, an Orlando Health Graduate Medical Education Resident Research Award, the Ross McFarland Award from the Life Sciences and Biomedical Engineering Branch of AsMA, the Young Investigator Award from AsMA, the William K. Douglas Aerospace Resident Award, and an AsMA Fellows Scholarship for her presentation and publication in Aviation, Space, and Environmental Medicine of "Commercial Spaceflight Participant G-Force Tolerance During Centrifuge-Simulated Suborbital Flight" (Aviat Space Environ Med 2012; 83:929-934).

#### Nominate a Colleague for an AsMA Award!

The nomination form and rules are on our website at: [www.asma.org](http://www.asma.org), under "About AsMA" under Informational Documents. For more information, you can contact the Chair, at: [awards@asma.org](mailto:awards@asma.org)

Deadline for submissions is January 15. For all but the Leverett Award, the nominee MUST be an AsMA member.

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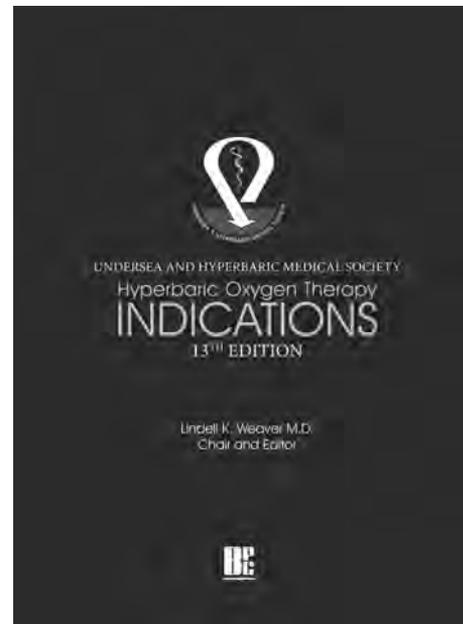


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## NEWS OF CORPORATE MEMBERS

### ALPA Responds to DOT Regarding Airfare Transparency

The Air Line Pilots Association, Int'l (ALPA) issued a statement in response to the Department of Transportation's (DOT's) May 21 announcement about its notice of proposed rulemaking regarding airfare advertisements:

"The DOT released a 118-page proposed rule yesterday that claims to benefit the traveling public. In ALPA's view, on the surface, the proposed rule sounds consumer-focused, but the regulatory burden may potentially increase airfare costs for consumers and/or reduce air service. Both would be negative outcomes for customers, airlines, and airline employees, including 51,000 ALPA pilots. In a pricing environment that is highly volatile and subject to competitive response and public outcry, raising fares is often not possible, which means airlines could have to swallow the regulatory burden or cut service if forced to adhere to the new proposed rule, which appears potentially costly and burdensome without providing a real benefit to consumers."

—The full statement is at [http://www.alpa.org/Portals/Alpa/PressRoom/PressReleases/2014/5-22-14\\_14.40.htm](http://www.alpa.org/Portals/Alpa/PressRoom/PressReleases/2014/5-22-14_14.40.htm).

### NIOSH Presents 2014 Awards for Significant Scientific Contributions

Recently, the National Institute for Occupational Safety and Health (NIOSH) awarded several NIOSH researchers and their partners for their significant contributions made to the fields of occupational safety and health over the past year. The annual awards are an opportunity for NIOSH to honor researchers for excellence in science. The awards presented include the Alice Hamilton Award, for scientific excellence of technical and instructional materials by NIOSH scientists and engineers; the James P. Keogh Award, for outstanding service by an individual in the occupational safety and health field; and the Bullard-Sherwood Research-to-Practice Award, for exceptional efforts by NIOSH researchers and partners in applying occupational safety and health research to the prevention of workplace fatalities, illnesses, or injuries. In addition, the Director's Award for Extraordinary Intramural Science was also presented. For more information, including winners and nominees for all categories, go to <http://www.cdc.gov/niosh/awards/>.

—Excerpted from <http://www.cdc.gov/niosh/updates/upd-05-01-14-b.html>.

### Cobham Introduces New Class of Safety System

Cobham Life Support introduced its new maritime safety system, Survivor+, at OTC 2014 in early May in Houston, TX. The Survivor+ Personal Overboard Survival System, a new class of 'wearable' personal flotation device, incorporates both a SOLAS approved inflatable life jacket and a personal life raft into a single system worn as a compact vest for maximum readiness and

survivability. The company's experience has been instrumental in the development of Survivor+, an innovative solution that can initiate a step-change in the offshore and maritime sector's approach to personal safety. The Survivor+ concept is based on survival gear developed by Cobham that has been in use by the military for over 20 years.

—For more, see <http://www.cobham.com/about-cobham/mission-systems/about-us/life-support/media/news/cobham-unveils-innovative-new-class-of-maritime-safety-system.aspx> (pdf file).

### HeartSine Wins Two Management Awards

HeartSine, a leader in personal and public access defibrillators, has won two prestigious British Private Equity & Venture Capital Association Management Team Awards for the Northern Ireland region: the Private Equity-backed Management Team of the Year (Mid Market) Award and the International Impact Management Team of the Year Award. Open to management teams of mid-market private equity-backed companies, the Private Equity-backed Management Team of the Year (Mid Market) award recognizes a management team's outstanding contribution to the growth of the company. The International Impact Management Team of the Year award acknowledges the leadership and achievement of portfolio company management teams in unlocking value and contributing to the development and success of their businesses on an international scale. HeartSine's rapid growth across the globe, especially in emerging markets, has led to an expansion of the company's Belfast facility, which is home to HeartSine's R&D, quality, and manufacturing teams.

—Please see <http://heartsine.com/2014/05/heart-sine-wins-two-prestigious-management-awards-for-its-success-in-expanding-global-business/>.

### United Wins Sustainability Outstanding Achievement Award

United Airlines was recently honored with a Sustainability Outstanding Achievement Award as a travel supplier by the GBTA Foundation and Project ICARUS. The Foundation recognized United for outstanding leadership, innovation, and commitment to delivering industry-leading sustainability programs, products, and services. The GBTA Foundation is the education and research foundation of the Global Business Travel Association, the world's premier business travel and corporate meetings organization. Project ICARUS is a GBTA Foundation initiative and is the most widely recognized and respected Corporate Sustainability and Corporate Social Responsibility program within the global business travel and meeting industry. United Airlines has demonstrated leadership in environmental initiatives by establishing ambitious, leading-edge programs.

—For more, see <http://newsroom.unitedcontinentalholdings.com/2014-05-15-United-Airlines-Wins-Sustainability-Outstanding-Achievement-Award>.

### Piedmont Partners with WellStreet to Launch Urgent Care

Piedmont of Atlanta, GA, and WellStreet have partnered to expand fast access to quality care by launching Piedmont Urgent Care by WellStreet. At seven renamed facilities located in Buckhead, Sandy Springs, Dunwoody, Alpharetta, Austell, and Virginia Highlands, WellStreet will be the exclusive provider of urgent care for Piedmont. Urgent care centers provide walk-in treatment for non-life-threatening illness and injury 7 days a week, 12 hours a day, and are an excellent alternative to busy emergency departments better suited for life-threatening situations and when traditional primary care offices are not open. This partnership will expand access to urgent care and help eliminate gaps in care in the Atlanta area.

—Taken from <http://www.piedmont.org/phc/news-new/piedmont-and-wellstreet-partner-to-launch-piedmont-1662.aspx>.

### Corporate News Bites

**AOPA:** More than 2500 people attended the Aircraft Owners and Pilots Association's (AOPA's) first Fly-In in San Marcos. There were exhibits, all kinds of aircraft on display, food, and chances to mingle with fellow aviation enthusiasts. For more, please see AOPA's blog: <http://blog.aopa.org/aopanow/?p=1477>.

**ETC:** Environmental Tectonics Corporation (ETC) recently announced the awards of several new contracts for their Sterilization Systems Group (SSG). The contracts combined include a control system and software upgrade for an existing customer, a large sectional autoclave for a biomedical research firm, and four ethylene oxide sterilizers for medical device sterilization. To read more, please see <https://www.etcusa.com/etcs-sterilization-systems-group-receives-over-2-5-million-in-new-contracts/>.

**InoMedic Health Applications:** InoMedic presented the United Way "Superstar Award" at their Florida company picnic. To see the photo, please visit their Facebook page at <https://www.facebook.com/IHAMedical>.

**Spectrum Aeromed:** Spectrum Aeromed was recently featured in an article written by Catherine Clifford entitled "What Gets These 30 Entrepreneurs Out Of Bed Everyday." Spectrum Aeromed's CEO Dean Atchison is number 13. To see the article, please visit <http://m.entrepreneur.com/article/233874>.

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# NEWS OF MEMBERS

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## In Memoriam: Alice M. Stoll

Alice M. Stoll, B.S., M.S., passed away in March 2014. She was a pioneer in aerospace medicine, conducting work on the effects of high G forces that resulted in many publications discussing the "Stoll Curve," which describes human tolerance to high G. Her work was a milestone in the efforts to understand how and when g-protective techniques should be applied. While at the NADC, she invented equipment and a method of analyzing heat transfer by flame contact. This provided knowledge about thermal burns, making it possible to rate different materials for their ability to protect humans, and led directly to the development of the first protective clothing for Navy personnel that was inherently fire resistant. These results spread to other military services and to fire departments throughout the world. She was recognized internationally as an influential scientific researcher in the field of thermal protection.

A native of Long Island, NY, Stoll graduated from Hunter College in New York City in



1938 with a B.S. in chemistry and physics. From 1938-1943, she worked as a Research Assistant at New York Hospital and Cornell University Medical College before enlisting in the Navy and serving as an active duty officer until 1946, when she entered the Naval Reserve. She retired from the Naval Reserve in 1966 with the rank of Commander. She attended Cornell University Graduate School at the Medical College and received an M.S. in physiology and biophysics in 1948. She stayed at the Medical College as a Research Associate until 1953, when she became a Research Physiologist at the Naval Air Development Center (NADC) in Warminster. She retired in 1980.

Stoll was named an Honorary Member of the Wing in 1980 for her work in protection from thermal injury. Her other honors include being named Federal Civil Service Employee of the Year in 1965, an Achievement Award from the Society of Women Engineers in 1969, numerous incentive awards from the NADC for her scientific publications and two invention patents, and the Paul Bert Award from the Aerospace Physiology Society in 1972. She served as Chairman of the Committee on Heat Transfer in Biotechnology of the American Society of Mechanical Engineers from 1967-1970 and was Chairman of its technical sessions and technical reviewer of its publica-

tions. Between 1970 and 1971, she was the Chairman of the Achievement Award Committee of the Society of Women Engineers and was one of five judges for the Achievement Award in 1972.

Stoll was a member of the American Physiological Society, the Biophysical Society, the American Society of Mechanical Engineers, the Society of Women Engineers, and the Information Council on Fabric Flammability. She was a Fellow of the American Association for Advancement of Science and the Aerospace Medical Association (AsMA). Within AsMA, she served as Chairman of the Associate Fellows, Chairman/Co-Chairman of AsMA's scientific sessions at its Annual Scientific Meetings, and a member of AsMA's Environmental Safety Committee. She had over 50 publications in professional journals, books, and symposia volumes.

Stoll was a member of the American Physiological Society, the Biophysical Society, the American Society of Mechanical Engineers, the Society of Women Engineers, and the Information Council on Fabric Flammability. She was a Fellow of the American Association for Advancement of Science and the Aerospace Medical Association (AsMA). Within AsMA, she served as Chairman of the Associate Fellows, Chairman/Co-Chairman of AsMA's scientific sessions at its Annual Scientific Meetings, and a member of AsMA's Environmental Safety Committee. She had over 50 publications in professional journals, books, and symposia volumes.

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## New Members

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| Briley, Denver, Horn Lake, MD                           | Oei, Ing, M.D., M.Sc., Oegstgeest, Netherlands         |
| Cho, Timothy H., MAJ, USA, Enterprise, AL               | Olutoye, Olufemi, Air Cde, Nigerian AF, Abuja, Nigeria |
| Copley, Lawson A., Lt. Col., USAF, M.D., Dallas, TX     | Opperman, Anthony, Cleveland, OH                       |
| Fosmire, Steven T., Capt., USAF, D.O., Offutt AFB, NE   | Pacheco, Raechel, Dr., Kapolei, HI                     |
| Guest, M. Teju, Lt. Col., USAF, Eielson AFB, AK         | Smith, Robert B., LCDR, USN, Coronado, CA              |
| Javitch, Ronald A., Dr., Montreal, Quebec, Canada       | Yuya, Hiromichi, Dr., Shiranuka, Hokkaido, Japan       |
| Keigley, Quinton J., Capt., USAF, M.D., Columbus, MS    |  |

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### Updated News of Members Link Online!

A link is available on the Members Only page and on the Members News page so you can update your fellow Members on what you're up to. Send us news of awards, promotions, and anything else that might be of interest to your fellow Members. Please remember to send us your e-mail address!



## European School of Aviation Medicine

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| <b>AME class 2</b>        | <b>6-14 September 2014</b> |
| <b>Basic course 24</b>    | <b>- waiting list -</b>    |
| <b>AME class 1</b>        | <b>29 November -</b>       |
| <b>Advanced course 24</b> | <b>7 December 2014</b>     |

**Venue: Lufthansa Aeromedical Center  
Frankfurt Airport**

- |   |                          |
|---|--------------------------|
| <b>International Aviation Medical Examiners Seminar</b> | <b>21-24 August 2014</b> |
|---|--------------------------|

**Venue: Novotel München City**

**Application forms and further details under  
[www.flugmed.org](http://www.flugmed.org) or [www.eusam.org](http://www.eusam.org)**