Aerospace Medicine at 100 Years!

- *1917: U.S. Army Lt. Col. Theodore C. Lyster (1875–1933) serves as first Chief Surgeon of the Army Signal Corps as America enters World War I. That December he observed medical support of aviation units at the front lines.*
- *19 Jan. 1918: The U.S. Army Air Service establishes its "Medical Research Laboratory and School for Flight Surgeons" at Hazelhurst Field, Long Island, NY.*
- *11 Mar. 1918: The term "flight surgeon" is officially adopted by the U.S. Army Air Service Medical Research Laboratory.*
- *8 May 1918: Capt. Robert J. Hunter, M.D., and three other physicians are ordered to report to an aviation school. Capt. Hunter reported to duty on 13 May 1918, 2 days before his colleagues. He was the first American flight surgeon.*

The history of Aerospace Medicine closely follows the development of aviation and space operations. From the beginnings of aviation via balloons to aviation experimenters Hiram Maxim, Clément Ader, Karl Jatho, Augustus Moore Herring, Alberto Santos-Dumont, Gustave Whitehead, and, of course, the Wright Brothers, to modern aviation and eventually to space, human physiology has presented significant limitations. Aviation and space operations expose human beings to a variety of environmental situations that the human body has little to no natural ability to counter. In this way, as aeronautical science and engineering slowly evolved, an understanding of human physiological response and the development of life support equipment to counter human physiology limitations remained one small step behind. The specialty of Aerospace Medicine developed a few years following the Wright Brothers' success in North Carolina and has developed into a highly specialized and fascinating medical discipline that ensures the health, safety, and performance of those engaged in aviation and space operations.

The Father of Aviation Medicine

Paul Bert was a French physiologist with doctorates in medicine and science, acquired in the 1860s. Dr. Bert was very interested in the effects of altitude on human physiology and conducted hundreds of experiments to research his hypotheses. Not content with experimenting solely with balloonists, he developed the first hypobaric chamber, which was able to simulate altitudes up to 36,000 ft. He experimented with animals to determine the minimum required partial pressure of oxygen in circulating blood. Using the results from these experiments, he came to the conclusion that the use of supplemental oxygen in high altitude balloon travel was necessary, and fervently urged operators to do so. He also discovered oxygen toxicity. His research entered vast amounts of scientific information into the new field of flight physiology. Ultimately, Dr. Bert compiled all of his research into a simple book titled "La Pression Barometrique" ("Barometric Pressure"), which was published in 1878. This book would form much of the early foundation for the new discipline of Aviation Medicine, resulting in his designation as the "Father of Aviation Medicine."

Paul Bert (1833–1886)

Pilots & Fitness to Fly

It wasn't long after the first manned powered airplane flight at Kitty Hawk in December 1903 that the U.S. War Department (predecessor to the U.S. Department of Defense) became interested in aviation for purposes of national security and military operations. As infantry soldiers and sailors transformed themselves into pilots of flying machines, European militaries led the way in setting medical standards for aircrew. The Germans were the first to develop a minimal set of aeromedical standards in 1910, which were soon imitated by the Italians, the British, and the French. The United States followed this trend, publishing instructions for aviation physical examinations in 1912 and then actual aeromedical standards in 1916. Much of the medical operations in early military aviation was guided by then Lt. Col. (later ret. Brig. Gen.) Theodore Lyster. The book "Air Service Medical" published by the War Department in 1919 was likely written by Dr. Lyster and his colleagues Dr. Isaac H. Jones and Dr. Eugene R. Lewis. This book served as the earliest military aviation medicine textbook.

Theodore Lyster (1875–1933)

In addition to his efforts behind "Air Service Medical," Dr. Lyster served as Chief Surgeon of the Army's Aviation Section during World War I, emphasized the importance of medical standards for pilots as a significant factor affecting flight safety, and created the role of flight surgeon in military flying units. Although he may not have been the first to coin the term "flight surgeon," it was Lyster who really developed the concept. He assigned these military physicians to individual flying units and deployed them with their units rather than the larger medical teams. Brig. Gen. Lyster also established the Air Service Medical Research Laboratory on Long Island, NY. This facility allowed the military to considerably increase medical research studies in pilots, which were later catalogued in "Air Service Medical." Later, after retiring to civilian life, Dr. Lyster would serve as the medical examiner for the Federal Aviation Administration's predecessor, the U.S. Department of Commerce. In this role, he also organized the first issuing of licenses to civilian commercial aviators.

Dr. Lyster chose otologists Isaac H. Jones and Eugene R. Lewis to assist in the expansion of aviation medicine and the opening of medical examination centers for pilots. Both doctors were adamant that these new aviation medical specialists

See 'Celebrating 100 Years', p. N6

From 'Celebrating 100 Years', p. N5

fly regularly to better understand the physiological consequences of flight. Jones was an especially strong advocate of the mission of the flight surgeon in keeping pilots fit to continue flying duties. He constantly campaigned against the commonly held belief among pilots at that time that flight surgeons only wished to take their wings.

The First Flight Surgeon

It is uncertain who first created the term "flight surgeon." Less contentious among military historians is who was the first flight surgeon. Capt. Robert J. Hunter, M.D., was ordered, along with three other physicians, to report to an aviation school on 8 May 1918. Their orders did not originally contain the words "flight surgeon," but were later revised to include verbiage stating "amended so as to have the officers report in person to the Commanding Officers at the places specified for duties as Flight Surgeons." In this role, these four physicians were tasked to ensure that military personnel selected as aircrew maintained fitness to fly. As they developed the roles and responsibilities of the flight surgeon, they also provided early insights into accident prevention, safety improvements, and investigated aircraft crashes. Capt. Hunter reported to duty on 13 May 1918, 2 days before his colleagues. He was the first American flight surgeon.

Celebrating 100 Years of Aerospace Medicine

The Aerospace Medical Association has a unique opportunity during our upcoming 89th Annual Scientific Meeting in Dallas, TX, to celebrate the first 100 years of Aerospace Medicine as a medical discipline. We are planning an evening reception to celebrate 100 years of Aerospace Medicine that will include entertainment, food, and fun. The "Reception to Celebrate 100 Years of Aerospace Medicine" is scheduled for 8 May 2018 … 100 years to the day that the U.S. Army ordered the first four physicians to an aviation school to become the first U.S. flight surgeons!

Tickets for this reception event can be purchased during your meeting registration. Tickets for the reception are priced at $10 per person and will help defray some of the costs for the reception. I encourage all planning to attend the 89th Annual Scientific Meeting to consider spending Tuesday evening with us to celebrate Aerospace Medicine at 100 Years.

Jeffrey C. Sventek, M.S., CAsP, FAsMA, FRAeS
Executive Director, Aerospace Medical Association

New Members

AsMA welcomes 28 new members in February.

- Abdul, Eric; Enterprise, AL, United States
- Aebi, Mathias; Zurich, Switzerland
- Aughenbaugh, Kelli; De Smet, SD, United States
- Barnes, Matthew; London, OH, United States
- Bell, Maria; Sioux Falls, SD, United States
- Bohn, Bradley; Owatonna, MN, United States
- Clements, Paul; Kerikeri, New Zealand
- Everett, Kimberly; Pensacola, FL, United States
- Gilje, Geir; Sandnes, Norway
- Jeffery, Nick; Poole, Dorset, United Kingdom
- Kantirat, Taweesak; Laksi, Thailand
- Kotran, Samuel; Bradenton, FL, United States
- Kuwada, Naruo; Fuchu-Shi, Japan
- Lacy, Aaron; Iowa City, IA, United States
- Lefrancois, Valentin; Cambes-En-Plaine, France
- McNamara, Maureen; Denver, CO, United States
- Mejia Delgado, Alexandra; Prattville, AL, United States
- Mormann, Benjamin; Boston, MA, United States
- Nowak, Elizabeth; Lakewood, OH, United States
- Palmer, Lisa; Bolling AFB, Washington, DC, United States
- Reynolds, Robert; Vancouver, WA, United States
- Roy, Steven; Thunder Bay, Ontario, Canada
- Schmidt, Michael; Boulder, CO, United States
- Street, Patrick; Miami, FL, United States
- Tan, Hui; Wembley, Western Australia, Australia
- Taylor, Amanda; Oklahoma City, OK, United States
- Thorgrimson, Joelle; Kenora, Ontario, Canada
- Tulloch, James; Colorado Springs, CO, United States

Please contact rtrigg@asma.org with any corrections.

Visit Us on Social Media!

Connect with AsMA online via any of the accounts below:
Twitter: https://twitter.com/aero_med
FB: www.facebook.com/AerospaceMedicalAssociation
LinkedIn: https://www.linkedin.com/company/2718542?trk=tyah&trkInfo=tarId:1404740611720,tas:Aerospace Medical,idx:1-1-1

Save the Date!

The Civil Aviation Medical Association (CAMA) will be holding its 2018 Annual Scientific Meeting September 27-29, 2018, at the Captain Cook Hotel in Anchorage, AK. The theme will be "Aviation Medicine Under Extreme Conditions." The meeting has been approved for FAA recertification credit and rated for CME and MOC credit. Registration will open in early May 2018. For more information, see the Schedule of Events or contact CAMA at at civilavmed@aol.com or by telephone at 770-487-0100.

Read Current News Online!

The News pages are updated regularly. Members: check the Job Fair: new jobs are posted monthly!

Want more info on the annual meeting?

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

Upcoming FAA AME Seminars

Dates	Location	Seminar Type
Feb. 9-11, 2018	Atlanta, GA	Refresher
March 19-23, 2018	Oklahoma City, OK	Basic
May 7-10, 2018	Dallas, TX	AsMA

PLEASE NOTE: The only FAA seminar AsMA takes registrations for is the one held in conjunction with our annual meeting in May. For all others, please contact the FAA.

Visit: http://www.faa.gov/other_visit/aviation_industry/designees_delegations/designee_types/ame/seminar_schedule/ to learn more.

News of Corporate Members

ALPA Holds Conference on Pilot Fatigue

The Air Line Pilots Association, Int'l (ALPA) spearheaded a conference in January to help address problems related to pilot fatigue. U.S. regulators, airline management, and pilots from around the world gathered to discuss and resolve concerns and best practices surrounding the 2014 implementation of revised flight and duty-time limits for passenger airline pilots contained in Federal Aviation Regulation Part 117. Throughout the 2-day conference, participants engaged in discussions ranging from factors that affect sleep quality and the ways airline pilots can mitigate these risks to the effects of irregular operations and reschedules on pilots.

—Please visit http://www.alpa.org/news-and-events/news-room/2018-01-17-alpa-brings-together-aviation-stakeholders-pilot-fatigue-issues for more on this.

Mayo Clinic to Hold Third Career Immersion Program

Mayo Clinic School of Health Sciences is hosting its third Career Immersion Program June 24–29 for Minnesota high school sophomores and juniors. The program will expose participants to varied health science career paths, including imaging professions (e.g., nuclear medicine, radiography and sonography). Qualified students should be sophomores or juniors during the 2017–2018 school year, have GPAs of 2.75 or higher, and are interested in health science professions. Mayo Clinic School of Health Sciences also has 16 health sciences certificate programs that welcome qualified undergraduate students.

—Please see https://newsnetwork.mayoclinic.org/discussion/minnesota-high-schoolers-invited-to-participate-in-2018-mayo-clinic-school-of-health-sciences-career-immersion-program/ to read more about this.

AOPA Enters Strategic Alliance with SiriusXM

The Aircraft Owners and Pilots Association (AOPA) and SiriusXM are offering a free 1-year AOPA membership to pilots who purchase any eligible new SiriusXM aviation receiver between January 1 and March 31. SiriusXM offers pilots and their passengers aviation weather and information services. Delivered to the cockpit by satellite, SiriusXM weather has no altitude or line-of-sight restrictions and is available throughout the continental United States as well as many parts of Canada. This strategic alliance also will support AOPA Air Safety Institute programs and feature SiriusXM Aviation services in the AOPA "You Can Fly" Ambassador Program that educates and engages pilots. To redeem the free 1-year membership, pilots need to complete and postmark the official free AOPA membership form by May 31.

—Please see https://www.aopa.org/news-and-media/all-news/2018/january/11/aopa-siriusxm-enter-strategic-relationship to read more about this.

Want to see your company's news here?

Become a Corporate and Sustaining Member!
Visit www.asma.org/for-corporations to learn more or request information from the Home Office.

NIOSH Engineer Wins Award for Video Series

A National Institute for Occupational Safety and Health (NIOSH) safety engineer, James Green, received a merit award this month from the Health Information Resource Center for his 7-part video series on ambulance crash test methods. This award is the fourth received for work that aims to help emergency medical services workers stay safe during a crash. The research, including production of the videos, was jointly funded by the Department of Homeland Security's (DHS) Science and Technology Directorate under a pair of Interagency Agreements between NIOSH and DHS. The Digital Health Awards were created by the Health Information Resource Center, a national clearinghouse for professionals who work in consumer health fields, in order to recognize digital health resources and entries that are web-based, mobile, wearable devices, media publications, or social media. The video series, which was released in 2017, highlights NIOSH research that contributed to new crash test methods, demos of crash-tested products, and improvements to the design of the ambulance patient compartment.

—Please see https://www.cdc.gov/niosh/updates/upd-12-20-17.html to read more on this.

SAA Supports Racing Team at the Dakar Rally 2018

South African Airways Cargo (SAA Cargo) is proud to be the air freight partner of the Toyota Gazoo Racing South Africa Team for the 2018 Dakar Rally, which took place from 6 to 20 January in Peru, Bolivia, and Argentina. The partnership has been in place since 2012 and involves transportation of the racing vehicles to São Paulo, Brazil, en route to Lima, Peru, for the start. The shipment consists of three vehicles and spares, weighing about 7,941 kg. It takes about 16 hours for the shipment to reach its destination with 11 hours spent on the aircraft. The 40th edition of the Dakar Rally started in Lima, Peru, proceeded to La Paz, Bolivia, and ended in Cordoba, Argentina, on 20 January 2018.

—Please visit https://www.flysaa.com/about-us/leading-carrier/media-center/media-releases/newsroom# for more on this.

See 'Corporate News', p. N8

Corporate News Bites

MedAire: MedAire has rejoined AsMA as a Corporate and Sustaining Member. Back in November 2017, MedAire's customer service was honored with a Laureate Award from *Aviation Week* and in October 2017, MedAire's founder was honored with a Meritorious Service Award from NBAA. *For more on these, please visit http://medaire.com/about/news/2017/11/29/aviation-week-laureates-awards-medaire-customer-service or http://medaire.com/about/news/2017/10/30/medaire-founder-honored-with-meritorious-service-award.*

David Clark: David Clark's product manager was interviewed by Maritime TV. They discussed maritime communications, highlighting the Digital Communication System. *Please see http://www.davidclarkcompany.com/news.php?newsid=96 to read more on this.*

From 'Corporate News,' p. N7

Human Solutions Offers Digital Fashionboard

With its Digital Fashionboard, Human Solutions offers a new tool for displaying fashion in the different life phases of a garment, which helps to optimally present a digital garment from the beginning of the design process all the way to the store. The Human Solutions Group has developed two different application scenarios for the Digital Fashionboard and presented them at the Munich Fabric Start, which was held from January 30–February 1. The Digital Fashionboard replaces the analog Moodboard in the design phase, enabling thematic blocks with pictures, sketches, or existing designs to be sent quickly through the Internet. At the point of sale, the Digital Fashionboard can be used as an extended arm of the store counter, where a customer can generate a personal avatar, scan the QR code in the booth, and see himself or herself on the Digital Fashionboard in all the garment variants, including styling options, accessories – and a size and fit recommendation.

—Please visit http://www.human-solutions.com/group/front_content.php?idcat=107&idart=5004&lang=2 for more on this.

Future AsMA Annual Scientific Meetings

May 6-10, 2018: Hilton Anatole Hotel; Dallas, TX
May 5-9, 2019: Rio All Suites Hotel; Las Vegas, NV
May 17-21, 2020: Hyatt Regency Atlanta; Atlanta, GA
May 23-27, 2021; Peppermill Resort Hotel; Reno, NV

MEETINGS CALENDAR

March 26-28, 2018; 4th Annual Singapore Aviation Safety Seminar; Singapore. For more information, please visit https://flightsafety.org/event/4th-annual-singapore-aviation-seminar-sass/.

May 18-23, 2018; American Thoracic Society International Conference (ATS 2018); San Diego, CA. For more info, please visit http://conference.thoracic.org/.

May 23-26, 2018; Preventive Medicine 2018: Annual Meeting of ACPM; Chicago, IL. For more information, please see http://www.preventivemedicine2018.org/.

June 20-22, 2018; 7th International Conference of Neurology and Neuromuscular Diseases (ICNND 2018); Warsaw, Poland. For more information, please visit http://neuromuscular.cmesociety.com/.

June 28-30, 2018; UHMS Annual Scientific Meeting; Disney's Coronado Springs Resort, Lake Buena Vista, FL. For more information, please visit https://www.uhms.org/asm-new.html.

July 5-7, 2018; Immunology 2018; Vienna, Austria. The EuroSciCon is holding its CPD accredited for Immunology conference. The theme of this year's meeting is "Spreading the new trends in Immunology." Please visit http://immunology.euroscicon.com/ for more.

Sept. 20-23, 2018; 6th European Congress of Aerospace Medicine; Prague, Czech Republic. The theme will be "Trust and Care in Aviation Safety." For more, please visit https://www.asma.org/scientific-meetings/prague-czech-republic-6th-european-congress-of-aer.

ACF E-NEWS
Volume 1 Issue 2
January 2018

President Message

AsMA Corporate Members:

As your 2017-2018 President, I would like to share with you some exciting news from the AsMA Corporate Forum. After several years of declining membership, several companies have re-joined the association as corporate members, bringing our total number of companies to 26. Several prominent members, including United Airlines, the Air Line Pilots Association, and the International Federation of Air Line Pilots' Associations, have either re-joined or expressed interest in re-joining as corporate members. Given this momentum, we want to ensure that all corporate members continue to derive value from their membership. The ACF exists to support you so please let me know if you have any questions.

Please check out the article on the 2017 Bellagio Summit, which was a great success. This summit was an ACF-sponsored event so you should feel proud of your contribution towards making it a success. Also, please make plans to send at least one representative from your company to the AsMA Corporate Forum Luncheon, which will take place on **Monday, May 7** at the AsMA meeting in Dallas. This meeting is an opportunity for us to discuss important business, hear from an engaging speaker, and provide you with a forum to ask questions. I look forward to meeting you.

Lastly, if you have not already done so, please participate in the tiered membership survey at https://www.surveymonkey.com/r/7MMXBYC. This new membership structure was proposed last year and AsMA is looking for feedback. We will vote on this proposal during the ACF meeting at AsMA.

As was done last year, I will leave you with the purpose, objectives, and mission of the ACF.

Purpose

The purpose of ACF is to enhance and promote the goals of the Aerospace Medical Association by attainment and retention of support from industry leaders in aerospace medicine, allied health, and aviation operations, through corporate membership.

Objectives

ACF member organizations and individuals will:

1. Work toward improved safety in commercial, military, and general aviation, and in space missions.

2. Advance environmental health and medicine.
3. Facilitate the exchange of information about issues of aeromedical interest.
4. Reward outstanding achievements in the field.

Mission

The Corporate forum's mission is to represent the corporate members' interests to the Aerospace Medical Association. The benefits of being a corporate member of AsMA remain the same and are summarized here as a reminder.

ADVOCACY

Partnerships to address commercial challenges in the dynamic aerospace industry.

MARKETING

Value through preferred rates for advertising in our publications and exhibiting at our scientific meetings.

EDUCATION

Opportunities to promote currency with cutting-edge advances in the aeromedical and related technical sciences.

NETWORKING

Connections to esteemed aeromedical experts to anticipate business trends, facilitate problem solving, and support business growth.

RESEARCH

Credibility through research development and sponsorship to promote health and safety for those involved in air, sea, and space activities.

RECRUITMENT

Access to our talented aeromedical professionals with unique skill sets to strengthen your organization.

LEADERSHIP

Visibility through representation of commercial interests within AsMA and to the global aeromedical community.

Respectfully,

Charles H. Mathers, MD, MPH, FAsMA
President, ACF
cmathers.md@gmail.com

Corporate News

AsMA Corporate Forum Sponsors Bellagio Summit 2017

The Bellagio ll International Scientific Summit was held in Moltrasio, Italy, from September 5-8, 2017. The Bellagio team analyzed five decades of space medicine research and created a pathway to bring science from space to earth.

Under the leadership of Dr. Marian B Sides, past president of AsMA, a team of 35 scientists, representing 13 countries, came to work together. Inspired by his keynote address, NASA Medical Officer and Flight Surgeon, Dr. Smith L. Johnston, set the tone for participants with his delivery of Space Medicine: Terrestrial Applications for Human Health Performance and Longevity. Using the NASA and National Institutes of Health (NIH) translation science models, participants searched for mature research and operational lessons learned that demonstrated a level of readiness, for translation of evidence based medical science for mitigating risks of astronauts in space, to promoting health and wellness for people on earth.

Eleven members of the Aerospace Medicine Student and Resident Organization (AMSRO) played a key role in the four-day intense think tank, assessing the state of the science, participating in group discussions, preparing and refining abstracts. This process began shaping a scientific pathway for translation of science from space to planet earth, bringing medical practice to the bedside in clinical protocols from operational space medicine. When best practice models, from space, are deployed to earth, services will be delivered by comprehensive health care teams of doctors, nurses and allied health professionals, in clinics and wellness centers, throughout our global communities.

Translation science was categorized in five conceptual domains, which included Genetics, Occupational Environment (e.g., noise, particulates), Cardiovascular and Musculoskeletal Fitness, Nutrition and Behavioral Health. Four panels addressed the translation science from these categories, and were recently approved at the scientific program committee review in Alexandria, Virginia, and will be presented at the annual scientific meeting of AsMA in Dallas, Texas in May 2018.

The Bellagio team will continue its outreach initiatives in 2018 and beyond, to bring health care lessons learned from space to earth. A scientific manuscript is being written for health care

professionals. A nonmedical book is being designed for the general lay community to educate and bring awareness of self-care practices to improve health and longevity for our valued citizens.

We welcome our corporate members and individual members to join our Aerospace and Preventive Medicine endeavor, as we continue our outreach to society. If you are reading this message, you are one of our valued extended family. Thank you for your interest.

ESSEX™
INDUSTRIES

Essex Industries has been in the cryogenics market since 1963, providing liquid oxygen (LOX) converters designed to store gaseous oxygen as a liquid, and then expand it into clean, breathable oxygen for life support and medical applications. Essex is a leading supplier of LOX equipment, having delivered over 100,000 systems for commercial and military applications.

Essex LOX converters for air medical transport are available in 5, 7 and 10-liter sizes. Essex also offers the Ready to Install (RTI) LOX system. The RTI consists of a 10-liter LOX converter with a heat exchanger and regulator mounted inside a sheet metal enclosure. This configuration allows installation of the equipment on aircraft without the expense of a costly retrofit. The 10-Liter LOX Converter supplies up to 8,600 gaseous liters of oxygen and weighs approximately 75 pounds when full.

Liquid oxygen systems provide several advantages over gaseous systems in air medical applications. Liquid oxygen increases in volume 860 times as it converts from a liquid to a gas. That means a smaller amount of LOX will produce a large volume of gas, eliminating heavy gas storage cylinders. This saves both weight and space on the aircraft and results in portable units that are easier to carry without sacrificing capability. LOX systems also have low operating pressures, less than 100 psi, which increase their safety factor in the event of an accident.

In addition to supplying new equipment, Essex offers customers complete maintenance, repair and overhaul services.

For more information, visit www.essexindustries.com

Indonesia Association of Aerospace Medicine

The Indonesia Association of Aerospace Medicine (IIAM) was started 1991 in Jakarta, Indonesia when a group of officers from the Indonesian Air Force who were Mastering (Studying) Aerospace Medicine in Eastern Europe and the USAF School of Aerospace Medicine (USAF SAM) made an association. The objective of our Association are:

1. Responsible to provide medical health services to those operating in the aviation environment in The Republic of Indonesia
2. Maintenance and Development of aerospace medicine services for all operators in our country
3. Conduct education and develop competencies in aviation health services and other objectives

Our Office is located in Jakarta, the Capital of The Republic of Indonesia, which consists of more than 1,700 islands in South East Asia.

Best Regards.

Soemardoko Tjokrowidigdo MD, AMS(C), Ophth.
3rd President of IIAM
c/o Indonesian Air Force Institute of Aerospace Medicine "Sarjanto
Jl. MT Hajono Kav 46, Jakarta 12770
Indonesia.

Monash University Aviation Medicine Unit

The Monash Aviation Medicine Unit in the School of Public Health and Preventive Medicine conducts a range of training and research activities in aviation medicine. The main emphasis of the Aviation Medicine Unit is on understanding the implications of exposure to the flight environment on human performance. As such, it is fundamentally concerned with health consequences in pilots, aircrew and aircraft passengers.

The Unit is responsible for teaching the highly successful short course, the Australian Certificate in Civil Aviation Medicine

(ACCAM), which is a prerequisite for medical practitioners who wish to register with the Civil Aviation Safety Authority of Australia (CASA) as Designated Aviation Medical Examiners. It also serves as an initial course in aviation medicine for interested health professionals, and attracts students from around the world. This two-week course is currently held three times a year in Melbourne at Monash University's St Kilda Road campus. The course includes flight simulator experience and a visit to Melbourne's Air Traffic Control centre.

The Unit also conducts a Basic Course in Aviation Medicine and an Advanced Course in Aviation Medicine. These are both 2-week full-time courses held in Doha, Qatar, in conjunction with Qatar Airways. The Basic Course is similar to ACCAM, but is designed to satisfy European Aviation Safety Agency (EASA) requirements for initial training in aviation medicine in order to become an Aviation Medical Examiner. The Advanced Course in Aviation Medicine is ideal preparation for an aviation medicine career requiring an advanced level of knowledge. The course includes presentations on advanced aviation physiology, space medicine, accident investigation, human factors, regulatory and clinical aviation medicine (in accordance with EASA standards). This course requires participants to have previously completed a basic or introductory aviation medicine course, such as the ACCAM.

The 3-day Advanced Practical Aviation Medicine course gives students the rare opportunity to fly a dedicated spatial disorientation simulator, experience high G training in a centrifuge, undergo night vision training, experience a hypobaric chamber run and ride an ejection seat trainer.

Further information on course offerings can be found here: http://www.med.monash.edu.au/sphpm/shortcourses/

To express your interest in any Aviation Medicine training offered by Monash University please email: shortcourses.depm@monash.edu +61 3 9903 0693

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NeuroStat Analytical Solutions, LLC is an innovative small business enterprise that specializes in helping clients achieve science-based empirical solutions for people-based challenges. We employ a collaborative team of professionals with expertise as operational subject matter experts, clinical psychologists, industrial/organizational psychologists, and predictive statistical analysts for evaluating criteria for success in high-risk/high-stress occupations. Our team is directed towards developing solutions for training improvement, effective job matching, and performance optimization in unique and demanding career fields. Our vision is to provide government and industry with decisive solutions to identify individuals who are most likely to succeed through the application of comprehensive neuropsychological analysis using the whole person concept. Our most recent efforts, in partnership with the US Air Force School of Aerospace Medicine, include work with the Battlefield Airman (BA), Remotely Piloted Aircraft (RPA), and special operations aviator communities. Our scientific projects for BA and RPA forces are focused on statistical and clinical analysis of personality factors and non-cognitive attributes indicative of successful performance in these unique and rigorous occupations. The objective of these efforts is to leverage scientific research to improve training programs and operational performance and sustainability in these high-demand forces. NeuroStat's on-going work with the special operations flying community is targeted toward occupation health and performance enhancement. Our seasoned staff provides cognitive and non-cognitive testing and analysis to bolster operational capacity and provide preventative engagement. This is a key factor to mitigate organizational and individual stressors associated with nearly two decades of continuous and incredibly demanding combat operations.

Meet the ACF Officers

Charles Mathers – President

Dr. Charles Mathers received a Bachelor of Arts degree from Rice University in 2002 and a Medical Doctorate with Honors from the University of Texas Medical Branch School of Medicine in 2007. He is a graduate of the UTMB/NASA Internal Medicine/Aerospace Medicine residency program and served as Chief Medical Resident from 2010-2011. Dr. Mathers is board-certified in Internal Medicine and Aerospace Medicine. From 2013 until 2017, Dr. Mathers served as Assistant Professor and Associate Program Director for the UTMB/NASA Aerospace Medicine Residency Program where his duties included working as an FAA HIMS Senior Aviation Medical Examiner and Medical Director for UTMB's Aerospace Medicine Center. Dr. Mathers also served as Assistant Chief Medical Officer for UTMB's Center for Polar Medical Operations, which supports medical operations for the United States Antarctic Program. Dr. Mathers recently joined the Aerospace Medical Certification Division as a Medical Officer for the Federal Aviation Administration's Office of Aerospace Medicine.

William Knight – President-Elect

William F. Knight currently holds the position of Director of Federal Markets at Carestream Health, innovators of digital capture for Radiology and industrial applications, headquartered in Rochester, New York (www.carestream.com).

Mr. Knight's healthcare career began with his postgraduate medical device background at Harvard Medical School and Massachusetts General Hospital and spans more than four decades of involvement with mission critical research and development combined with multiple senior level management responsibilities in a wide variety of healthcare industry applications including product development, marketing, sales and global OEM business initiatives. Mr. Knight has been a licensed Private Pilot since 1973.

Sean Daigre – Treasurer

Marian Sides – Executive Manager

Dick Leland – Chairman, AsMA Corporate and Sustaining Membership Committee

Richard A. (Dick) Leland is Vice President, Special Projects at Environmental Tectonics Corporation (ETC) headquarters in Southampton, PA. He works major training equipment projects domestically and internationally. He is a retired USAF pilot with over 3100 flight hours and was the USAF Aerospace Physiology Officer of the Year in 1993. He holds a Master's degree in Human Resources Development and is a Fellow in aerospace medicine.

Johnene Vardiman-Ditmanson – Historian

Ing Oei – Chair, Nominations Committee

Ing received a Master's in Aerospace Engineering from the Delft Technical University in 1995 and a Medical Doctor degree from the Erasmus Medical School, Rotterdam in the Netherlands in 1999. After having worked in Occupational Medicine until 2002, Ing has since worked as a Payload Integration Manager for the European International Space Station Program, mainly in the field of human physiology payloads.

Michael Gallagher – Chair, Membership Subcommittee

ACF Members

Adams Advanced Aero Technology
AEROSPACE MEDICAL, PLC
Aerospace Medicine Residency Program/UTMB
AIR LINE PILOTS ASSOCIATION
AIRCRAFT OWNERS & PILOTS ASSN.
ARMED FORCES BENEFIT ASSOCIATION (AFBA)
Aviation Medicine Advisory Service
CDC / NIOSH
DAVID CLARK CO., INC.
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To submit an article, you have two options for submissions:

1. You can submit a brief company profile or company announcement. Company profiles and announcements should be 250 words or less. Please do not submit pictures with the brief company profiles.
2. You can submit a one-page article. These can include pictures. One-page articles can be about company achievements or milestones, business perspectives, etc.