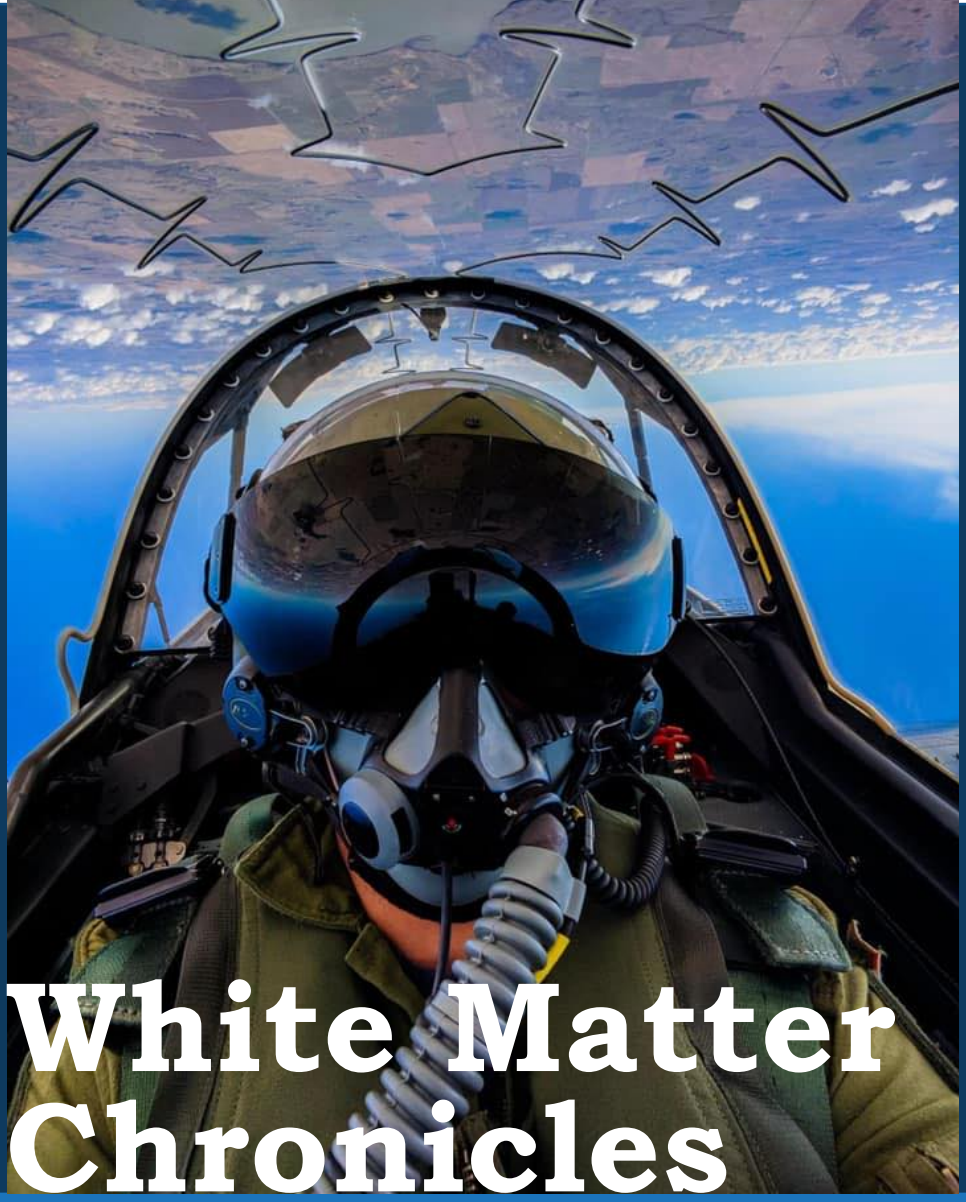

White Matter Chronicles

Edition 18 | Fall 2021 | Publication of the Aerospace Physiology Society (AsPS)
A constituent organization of the Aerospace Medical Association (AsMA)

"Intellectual growth should commence at birth and cease only at death."

-Albert Einstein

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Inside This Issue

AsPS President 2021-2022
Maj Andrew "Metal Cow" Metelko

What a year it has been! The world has changed in significant and small ways affecting us all personally and professionally. I am truly grateful for family, friends, colleagues and Zoom.

The upcoming 91st Annual Aerospace Medical Association (AsMA) Scientific meeting and associated Aerospace Physiology Society (AsPS) events offer a truly exciting opportunity to come together and share in our areas of expertise. At our conference in Denver, CO, six individuals will test for board certification in Aerospace Physiology. AsPS will recognize an educator in the Denver area with our Partnership in Education Award and visit with that educator's students to demonstrate career opportunities in science. AsPS is sponsoring the panel, "Hypoxia Research from the Past to the Future; Serving Aerospace Medical Needs" being presented Tuesday, August 31st and chaired by Dr. John French and Co-chaired by Dr. Karen Gaines. The speaker for the Smith W. Ames Memorial Lecture at our luncheon on Wednesday, September 1st is Dr. Jay Dean. The title of his speech is, "Fred A. Hitchcock (1889-1980): explosive decompression pioneer, co-translator of Paul Bert's La Pression Baromètrique, and namesake of the AsPS Award for excellence in aerospace physiology research or operational aerospace physiology."

Also, at our luncheon we will recognize scientific achievement with presentation of the Fred A. Hitchcock Award for Excellence in Aerospace Physiology, Paul Bert Award for Physiological Research, and Wiley Post Award for Operational Physiology. Award winners from 2020 and 2021 will be recognized and are featured in this newsletter. Wednesday evening will be the combined AsPS and Life Sciences Biomedical Engineering Branch Social at Wings Over the Rockies Air & Space Museum.

Thank you AsPS members, sponsors and leaders who make these many events possible. For those unable to attend in Denver this year, your absence will not go unnoticed. I hope to see you at a future meeting.

I want to especially thank past president's Amanda Lippert and Deb White for navigating AsPS over the past 24 months.

AsPS Sponsored Events at AsMA 91st Annual Scientific Meeting in Denver
Sheraton Denver, Downtown Hotel

Sun, 29 Aug, 8:00 am – 3:00 pm: Aerospace Physiology Certification Exam, Room is Plaza Court 1.

Tue, 31 Aug, 4:00 pm: Panel: Hypoxia Research from the Past to the Future; Serving Aerospace Medical Needs. Room is Governor's Square 14.

Wed, 1 Sept, 12:00 pm – 2:00 pm: AsPS Luncheon sponsored by Environics, Room is Governor's Square 10.

Wed, 1 Sept, 6:00 pm – 10:00 pm: AsPS / LSBEB Combined Social, Wings Over the Rockies Air & Space Museum. For more info to include obtaining tickets see page 6.

Thu, 2 Sept, 10:00 am – 12:00 pm: AsPS Business Meeting, Room is Tower Court B.

Fred A. Hitchcock Award, sponsored by International ATMO, INC.

The Fred A. Hitchcock Award recognizes career contributions of senior aerospace physiologists for excellence in either operational aerospace physiology or aerospace physiology research. The award was established in 1972 and is named in honor of Fred A. Hitchcock, Ph.D., co-translator of Paul Bert's classic work, "Barometric Pressure." International ATMO of San Antonio, TX, sponsors the Fred A. Hitchcock Award with an honorarium, a plaque, and an edition of Paul Bert's classic work, "Barometric Pressure."

2020: Col Daniel Roberts

"JD" is a well-recognized aerospace physiology expert and mentor. He has served in multiple human performance, human factors, safety, aerospace physiology and command roles during the past 21 years. Dan currently serves as the Military Consultant to the Surgeon General, and Chief of Aerospace Physiology at the Air Force Medical Readiness Agency, Defense Health Headquarters, Falls Church, Virginia. He is responsible for the functional oversight of 400 aerospace physiology personnel, policy, and requirements.

2021: Jayashri Sharma, MB.,BS. MD.

Dr. Sharma is a renowned M.D., glider pilot, researcher and instructor with numerous contributions with regard to medical physiology and finding the limits of human performance in extreme environments. Dr. Sharma was one of the pioneering women cadets of the Armed Forces Medical College. As the Senior Scientific Officer with the Defense Institute of Physiology and Allied Sciences for the Ministry of Defense, India she and her team derived the Rebreathing Cardiac Output Standards for Fitness for Army personnel. She was the first female medical officer to accompany these subjects to high altitude at the Ladakh Command. Her research into the biochemical and immunological parameters of soldiers at sea-level, to long-term border patrols and permanent residence at high altitude led to research and teaching in Neuroimmunomodulation which received international acclaim. Dr. Sharma was a faculty member for 30 years at Jawaharlal Nehru University's School of Environmental Sciences in New Delhi where she guided PhD research.

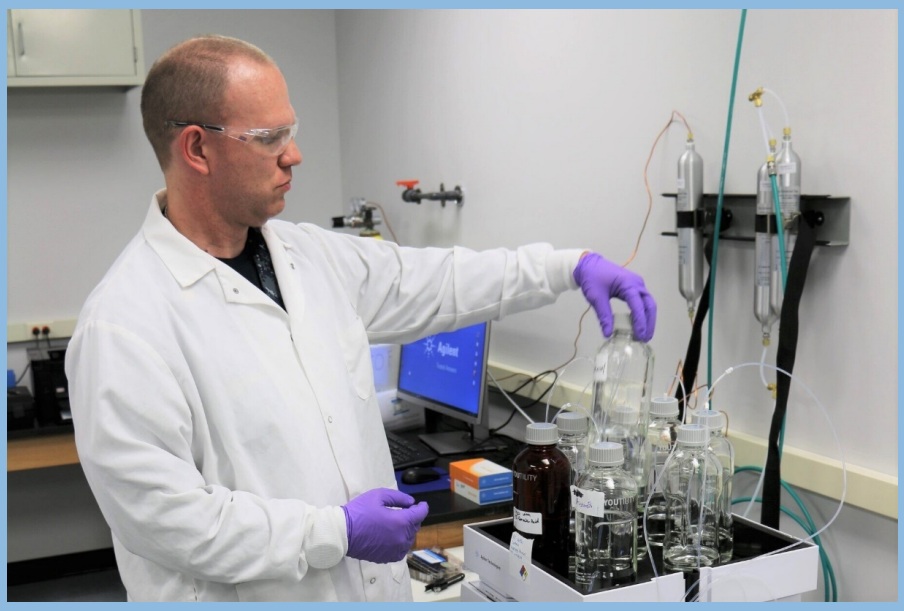
Dr. Sharma has shared her passion for physiology, flying and gliding at conferences around the world to include those of the Aerospace Medical Association, International Congress of Aviation, Space, and Medicine, European Society of Aerospace Medicine, as well as the Aviation Medical Society of New Zealand.

Paul Bert Award, sponsored by KBR

The Paul Bert Award recognizes outstanding research contributions in aerospace physiology. This award was established in 1969 and was originally given for achievement in operational physiology. It is named in honor of the famous French physiologist, Paul Bert, the "Father of Pressure Physiology."

2020: LCDR Matt Shipman

For outstanding contributions conducting and supporting research efforts in the Environmental Health Effects Laboratory at Naval Medical Research Unit Dayton from September 2017 to present. He currently leads 52 personnel in support of research efforts including decompression illness, impacts from pressure cycling, and impacts of combined factors on susceptibility to OBOGS contaminants. Additionally he led a multi-million dollar expansion of EHEL's research capabilities, and helped increase scientific collaboration between the U.S. Navy and the German Air Forces.



2021: LCDR Cheryl Griswold

Commander Griswold was board-selected to serve as a Research Fellow at Massachusetts Institute of Technology (MIT) Lincoln Laboratory in May 2018 – May 2019. While there, her team secured a grant from the Office of the Undersecretary of Defense to study wearable cutting-edge electrooculography (EoG) eye-tracking technology to inform physiological and cognitive status in operational environments. Upon completion of her Fellowship, she began working at Naval Aerospace Medical Research Laboratory (NAMRL), where she currently serves as the Deputy Director, IRB Chair, and PI for seven studies.

Wiley Post Award, sponsored by GENTEX Corporation

The Wiley Post Award recognizes outstanding contributions in direct operational physiology and aeromedical training and education. In 1972, the Wiley Post Award replaced the Paul Bert Award for Operational Physiology. It is named in honor of the aviation pioneer Wiley Post and is presented for exceptional service and achievement in operational physiology, including education and physiological support of Dept. of Defense, FAA, NASA, or civilian aircrew.

2020: Karen F. Gaines, PhD.

Dr. Gaines was the driving force and chief architect in the development and realization of the Bachelor of Science degree in Aerospace Physiology at Embry--Riddle Aeronautical University. In establishing this one-of-a-kind major, Dr. Gaines has provided a direct pathway for undergraduates to access aerospace physiology careers in the civilian, government, and military sectors. She represents the best in aerospace physiology training and has done so with grace and determination and by embracing the entire community of aerospace physiology.

2021: LT Chad Milam

LT Milam was the principal designer and motivating force behind developing and fielding a scientifically substantiated cognitive loading application for the United States Navy's normobaric hypoxia trainers. This application incorporates principles from psychology, ludology, and aerospace physiology to enhance altitude threat training fidelity for aircrew, increasing their ability to recognize and respond to aviation breathing threats. His innovation and multidisciplinary methods in advancing aerospace and operational physiology training embrace the aerospace physiology community's principles and objectives.

AsPS Board of Governors and Committee Chairs

2020 – 2021 Board of Governors

President:	Deborah White
President-Elect:	Andrew Metelko
Immediate Past President:	Amanda Lippert
Second Past President:	Tom Massa
Secretary:	Constance Ramsburg
Treasurer:	Andrew Metelko
Bibliographer:	Rowena Christiansen
At-Large Member:	Wes Davis (2020)
At-Large Member:	Bruce Wright (2021)
At-Large Member:	Andrew Woodrow (2022)
At-Large Member:	Nathan Martaens (2023)

2021 – 2022 Board of Governors

President:	Andrew Metelko
President-Elect:	Mari Metzler
Immediate Past President:	Deborah White
Second Past President:	Amanda Lippert
Secretary:	Constance Ramsburg
Treasurer:	Cherie Richards
Bibliographer:	Rowena Christiansen
At-Large Member:	Bruce Wright (2021)
At-Large Member:	Andrew Woodrow (2022)
At-Large Member:	Nathan Martaens (2023)
At-Large Member:	John Harrell (2024)

Nominations Committee	Troy Faaborg
Awards Committee Chair	Nereyda Sevilla
Membership Committee Chair	Andrew Metelko
Education & Training Chair	John French
P.I.E. Committee Chair	Constance Ramsburg
Social Committee	Deb White
Luncheon Committee	Deb White
AsMA Council Rep	Amanda Lippert
Board Certification Committee	Darci Hook

Life Sciences and Biomedical Engineering Branch & Aerospace Physiology Society Social

Wings Over the Rockies Air & Space Museum

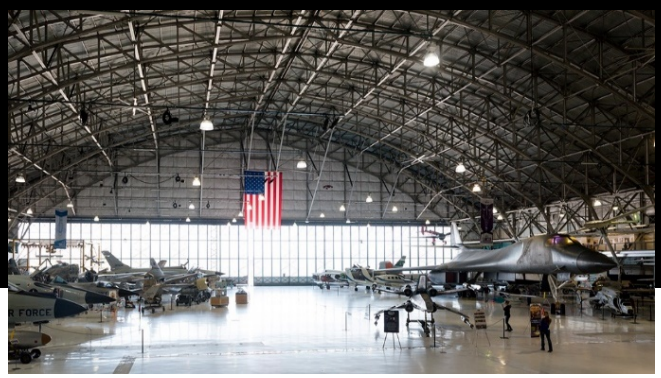
Wednesday, September 1st, 2021

6:00 -10:00 pm

Appetizers, Cash Bar!

Tickets $20.00 per person via Zelle to 317-448-3826 Or $25.00 per person at the AsPS Booth

Wings Over the Rockies Air & Space Museum
7711 East Academy Boulevard
Denver, CO 80230-6929



Thank you to our AsPS Sponsors!

INTERNATIONAL ATMO, Inc: Sponsor of the Fred A Hitchcock Award

International ATMO has provided education, management, and consulting services in wound care and hyperbaric medicine since 1979. Their Hyperbaric Medicine Team Training course has introduced over 14,000 health professionals, from over 20 countries, to the field of hyperbaric medicine. Further, their team has expertise in all areas of wound care operations, including: reimbursement, hyperbaric equipment, policy and procedures development, facility accreditation, and education. International ATMO also publishes books and DVDs with their best sellers including the Certified Hyperbaric Technologist (CHT) and Certified Hyperbaric Registered Nurse (CHRN) Certification Exam Practice Book used around the world by exam applicants.

Fred A. Hitchcock Award
Sponsored by
INTERNATIONAL ATMO, INC.

Wiley Post Award
Sponsored by
GENTEX CORPORATION

GENTEX: Sponsor of the Wiley Post Award

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DAVID CLARK: Sponsor of the Smith W Ames Memorial Lecture

David Clark Company has pioneered air and space crew protective equipment design, development and manufacture since 1941, with products ranging from anti-G suits to space suits. David Clark Company's tradition of providing crew protective equipment for leading edge, manned aerospace programs continues into the future, as their designers apply their expertise to passenger and crew protection in the commercial space flight market. The demanding specifications to which their products must conform originate from some equally demanding sources: NASA, USAF, DOD, FAA, OSHA, FDA, RTCA and EC (CE). Their operations utilize the very latest manufacturing equipment, incorporating advanced computer technology to guarantee exact tolerances. This, of course, demands that they have a quality assurance system of the highest level.

Smith W. Ames Memorial Lecture
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KBR: Sponsor of the Paul Bert Award

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Environics: Sponsor of the AsPS Annual Luncheon

Environics, Inc. is a world leader in computerized gas flow instrumentation, with headquarters for design, manufacturing, sales and service in Tolland, Connecticut. Founded in 1986, Environics, Inc. currently employs 21 employees. Environics is a Women Owned business, certified through the Woman Owned Small Business Program run by the United States Small Business Administration. Utilizing Environics innovative technologies, their gas mixing systems offers an exceptionally high level of accuracy and repeatability. Thousands of Environics' systems are currently in the field. In addition to uses in standard applications, the company has developed an extensive library of custom designed systems and solutions to meet customers' needs. Additional information can be found at http://www.environics.com.

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