



The Official Newsletter of the
Corporate & Sustaining Affiliate of the Aerospace

Presidents Message:

"Exploring the Frontiers of Aerospace Medicine and Human Performance"

This is the theme of the Aerospace Medical Association's 2014 Annual Scientific Meeting to be held in San Diego, California. It will be a pleasure supporting this theme as your CSA President during the 2013 - 2014 year. Our affiliate companies and members of the Aerospace Medical Association (AsMA) are continuing to make tremendous strides in addressing the evolving environmental, aviation and space medicine challenges of the 21st Century.



The International Space Station is complete; our Space Shuttles are now in museums; the era of commercial space flight is in its infancy; space tourism is on the horizon; planning for human space flight beyond lower earth orbit is well underway; the exploration of distant planets and other celestial bodies by unmanned vehicles continues to enhance our knowledge of the universe and the transfer of technologies gained from these endeavors are being adopted to improve the quality of life on earth.

Developing medical and physical standards for humans engaged in long-duration space flight and for space tourism are major goals and objectives of individuals and organizations that practice the art and science of aerospace medicine discipline. The catalog of adverse physiological effects from prolonged exposure to microgravity and the environment of space is growing and will continue to expand as manned space flights increase in complexity and duration. While our engineers and scientists are pushing the envelope of space missions we have a concurrent and urgent need to develop countermeasures that can mitigate the adverse physiological effects of long-duration space

flights. Otherwise, the participation of humans will remain the rate limiting step for missions to the Moon, Mars and beyond.

CSA member companies, AsMA and our international partners are among those in the forefront of addressing these stimulating challenges. We highly encourage other companies with shared goals and objectives to join our ranks. As we embark on this journey the opportunities for collaboration, networking and information sharing will be numerous and rewarding.

*Leroy P. Gross MD, MPH
CEO InoMedic Health Applications Inc.*



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Meet CSA's new leadership



President- elect, Deborah Lickteig is a consultant and former Vice President of Operations of Eagle Applied Sciences, LLC. Deborah's career experience includes program and new business start-ups, designing and tracking marketing strategies to assist in the creation and growth of new concepts, along with proven professional sales regimens. She also has an in-depth understanding of human resource management and facility management, streamlining all necessary functions for maximum work efficiency. Deborah has the ability to toggle in a variety of areas for Eagle including technical writing on proposals, negotiating and attending all marketing and exhibit shows to maintain a public presence as well as assist in all business development efforts.



Secretary-Treasurer, Sean A. Daigre, Sr. is the Director of Claims Administration at Harvey W. Watt & Company in Atlanta, Georgia. Since 2003, Daigre supervises the claims staff and provides disability case management exclusively to commercial airline pilots through their employers or union/association. Prior to Harvey W. Watt and Company, he worked as a Claims Analysts for Beazer Homes, USA, Inc. and as a Senior Claims Representative on the Longshore Team at Louisiana Workers' Compensation Corporation in Baton Rouge, Louisiana. Sean Daigre earned a Bachelor of Liberal Arts in Print Journalism from Southern University and A&M College, Baton Rouge in 1988, where he graduated Magna Cum Laude and Grand Marshal of the College of Arts and Humanities.



Historian, William F. Knight is currently a Healthcare Enterprise Consultant and former Director of Federal Markets at Verathon Medical Corporation, headquartered in Bothell, Washington (www.verathon.com). Mr. Knight's healthcare career 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 development. Mr. Knight has been a licensed Private Pilot since 1973.

Supporting the Aerospace Mission at Kennedy Space Center



InoMedic continues to provide aerospace medicine, occupational health and environmental protection services for Federal customers. A synopsis of projects by our team at the NASA Kennedy Space Center during the past six months includes:

Providing health physics, radiation monitoring and industrial hygiene services to NASA in support of the MAVEN spacecraft - scheduled for launch in November 2013. The Mars Atmosphere and Volatile Evolution (MAVEN) will be launched on a multi-year orbit of Mars to study the reason why the Red Planet has lost its atmosphere.

Started the second phase of an innovative Climate Adaptation Study at the Kennedy Space Center. This research grant supports data mining of a vast repository of highly accurate terrestrial mapping and vegetation data that has been accumulated over the past 30 years at Kennedy Space Center. This data will be used to create a detailed assessment of the effects of global warming on the Center from rising sea levels and other ecological changes.

Awarded a follow-on phase contract to develop an advance Radio Frequency Impedance Interrogation (RFII) for non-contact and non-invasive measuring and tracking changes in cardiovascular function.

Awarded a contract by the Naval Underwater War-

fare Center to study the underwater impacts of US Navy acoustic emissions on coast marine life. The study will leverage the extensive acoustic marine life tracking facilities operated by InoMedic for NASA and the USAF in the coastal waters of Kennedy Space Center and Cape Canaveral Air Force Station.

Awarded a contract by the National Institute for Occupation Health, Office of Mine Safety and Health Research, in partnership with NASA, to develop technology and conduct physiological testing for an advanced cryogenic breathing apparatus. Human testing is expected to start in late 2013.

Awarded a 3 year contract to provide Industrial Hygiene support to Harris Corporations 1.2M sq. feet of Aerospace Industrial facilities in Palm Bay, FL.



Headquarters NASA awarded the NASA Exceptional Bravery Medal to Chris Cronwell, a valued InoMedic employee, for his response in providing on the scene emergency cardiopulmonary assistance to a bicyclist who was accidentally struck by an automobile on the Kennedy Space Center.

Corporate and Sustaining Affiliate Committee: The Long Range Planning Committee September 30, 2013

Update:

"Why should we
engage in long
range planning?"

The committee is in the process of defining a strategic direction for the CSA within the framework of the By-Laws, and in concert with the vision and mission of AsMA. Input from past and present senior leadership of the CSMC and CSA is being incorporated into the strategic thinking.

As one embarks on the long range and strategic planning process, one might ask, "Why should we engage in long range planning? How can long range and strategic planning contribute to organizational performance? "

The primary focus of its deliberations is to fashion a strategic vision for the future direction of the CSA. The development of effective long range plans will result in clearly defined corporate strategies which will represent CSA's long term direction.

Long range plans will provide a theme for the Affiliate, which will ensure alignment in formulating and evaluating objectives, policies and plans. Long range plans will provide parameters for decision making, and assist in the allocation of resources, future costs and returns from selected ventures and investments.

Long range planning will enable the Affiliate to effectively communicate and partner with outreach organizations and entities in the environment. Such Plans will incorporate the unique features of our organization that will differentiate us from others. Such branding communicates to the public an image of specific attributes of quality and style. Ultimately, it can make a difference in the attraction of future investors to the individual and/or collective membership of the CSA.

To this end, a long range planning process is being developed which will study, analyze and refine issues having long range implications for the research, science, and educational initiatives of the CSA. Strategies and work processes will flow from these pillars of planning.

Respectfully submitted,

Marian B Sides PhD Chair Long Range Planning Committee CSA

NASTAR Center, UTMB, and FAA COE Spaceflight Research Project

Concerns over the health effects and restrictions for upcoming commercial space travelers have prompted many questions. Who is "safe" for spaceflight and who is not?

Health standards for private space travel have not been determined yet. While plenty is known about the medically fit population of fighter pilots and highly trained astronauts, questions remain about the effects of space travel on an individual.

Space travel includes high G forces, spatial disorientations, vibrations, high altitude, and microgravity among other physiological and psychological effects. In order to better understand the health risk level of untrained commercial public spaceflight travelers with preexisting medical conditions such as high blood pressure, heart disease, diabetes, lung disease, or back or neck disease undergoing private space travel, more research needs to be conducted.

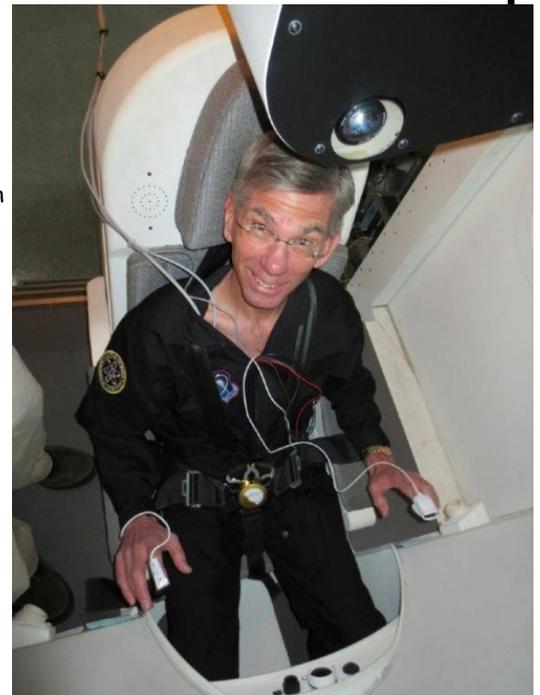
Researchers from the University of Texas Medical Branch (UTMB) are conducting a study at the Environmental Tectonics Corporation (ETC)'s National AeroSpace Training and Research Center, [NASTAR Center](#), to probe this important question through November 2013. As of October 2013, 73 research subjects have participated in the study, which is supported by the Federal Aviation Administration's Office of Commercial Space Transportation's Center of Excellence (FAA COE-CST). The study follows on preliminary data collected from 2007 in conjunction with Virgin Galactic at ETC's NASTAR Center, which suggested that individuals with well-controlled medical conditions were able to endure acceleration forces and reentry profiles of spacecrafts. Based on these preliminary finding, five health conditions were selected to be further addressed in the UTMB research protocol. These include (1) hypertension, (2) diabetes mellitus, (3) cardiac disease, (4) lung disease and (5) back or neck disease.

The UTMB researchers selected volunteer test subjects, including some future suborbital spaceflight participants, to take part in a 2-day space training program at NASTAR Center. Subjects train on the [PHOENIX Centrifuge](#) which is a high performance human centrifuge capable of recreating the physiological effects of space. The centrifuge simulates the high G -forces, including multi-axes accelerations that the subjects would encounter during launch and reentry of a suborbital flight.

Subjects complete a medical history questionnaire and undergo a physical exam by their primary care physician prior to the training study. Each subject participates in seven "flights" on the centrifuge. Each varies in acceleration G force and length of time, over the course of 48 hours.

Researchers collect subject's blood pressure, pulse oxymetry, continuous heart rate and electrocardiogram (EKG) before, during, and after each flight. A neurovestibular examination is conducted in addition after flights.

Currently, the UTMB research is underway and scheduled to complete in November 2013. ETC, FAA COE-CST, and UTMB would like to thank all of the research subjects who participated in this exciting research study.





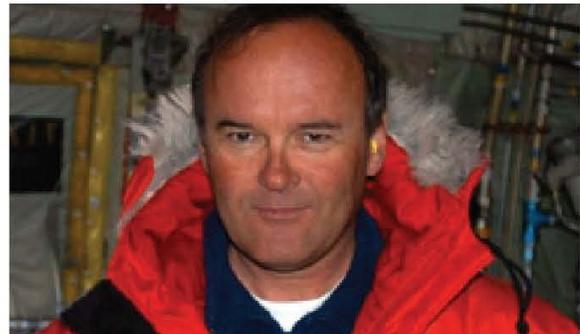
August, 2013

Dr. Michael A. Lang Appointed OxyHeal® Vice President of International Sales

OxyHeal Health Group® and affiliates for 44 years has demonstrated exceptional expertise in diving services, Hyperbaric Oxygen Therapy, manufacturing of Hyperbaric Medical Systems, University level training and Wound Healing/Hyperbaric Clinical Services in Hospitals and Clinics worldwide. OxyHeal®'s 24-7 critical care and Trauma level patient care in a Hyperbaric environment is unparalleled in a contracted turnkey setting.

“OxyHeal® is committed to excellence and expanding that record of achievement worldwide” said Ted Gurneé, Founder and Chairman of OxyHeal Health Group® of companies. *“Dr. Michael Lang’s appointment as Vice President, International Sales, will allow OxyHeal® to further expand its unique capabilities and platform services to new global partners worldwide. Michael’s focus will include Diving/Hyperbaric Intervention and medical turnkey services to the deep tunneling infrastructure projects; new opportunities in Wound Healing and Hyperbaric Clinic/Hospital projects; unique diving and marine science; and finally the advance of OxyHeal®’s University and training capabilities.”*

Dr. Michael A. Lang, called **“Master of the Deep”** by SMITHSONIAN, is a marine biologist, environmental physiologist, author, and international lecturer with experience as a scientific, recreational and commercial diver trainer. He is currently Senior Research Fellow at The Ocean Foundation, director for nonprofit organizations, including the American Academy of Underwater Sciences and Divers Alert Network, and served with the Undersea Hyperbaric Medical Society, Coral Reef Alliance, U.S.-Japan Natural Resources Council, and as expert consultant to the National



Science Foundation, U.S. Coast Guard, U.S. Geological Survey, The Nature Conservancy, and Conservation International.

Former Marine Collector/Curator at San Diego State University, Director of the Smithsonian Marine Science Network, Smithsonian Scientific Diving Officer, and National Science Foundation Polar Diving Safety Officer; Lang is a three-term President of the American Academy of Underwater Sciences. He holds a B.Sc. in Marine Biology from San Diego State University, and a D.Phil. in Environmental Physiology from the Norwegian University of Science and Technology in Trondheim. He is fluent in five languages, has published over 50 scientific papers and popular articles and presented over 300 seminars/papers on current marine science and diving topics.

Lang is the chair and chief editor of 22 international, interdisciplinary symposia and workshop proceedings. His research concerns marine science with special reference to the development and use of new technologies for working under water in extreme and remote environments.



Dr. Lang’s recent books include *Smithsonian at the Poles: Contributions to IPY Science*; *Smithsonian Marine Science*; *The Future of Diving: 100 Years of Haldane and Beyond*; *Science Diplomacy: Antarctica, Science and the Governance of International Spaces*; and, *Research and Discoveries: The Revolution of Science through Scuba*.

Honors include DAN/Rolux Diver of the Year, U.S. Antarctica Service Medal, NAUI Outstanding Instructor Award, Smithsonian Special Act Award, UHMS Craig Hoffmann Diving Award, AAUS Conrad Limbaugh Scientific Diving Leadership Award, DEMA Reaching Out Award, induction into Diving Hall of Fame, and the AUAS NOGI Award for Science.

In October 2012, Adam Sirek (at the time a fourth year medical student), attended the NASA Johnson Space Center Aerospace Medicine Clerkship where he had the opportunity to work with researchers at Wyle and the JSC. His project there was to assess the viability of ultrasound as a modality to assess intracranial pressure in microgravity. NASA has identified the visual impairment and intracranial pressure (VIIP) syndrome as a "hot" topic and one potential cause has been identified as elevated intracranial pressure in microgravity. His abstract entitled: Physiological Effects of Microgravity: Is There a

Role for Central Retinal Artery Doppler? was presented at the Aerospace Medical Association's 84th annual scientific meeting in Chicago, IL and was selected for the AsMRO scientific award. The Doppler technique evaluated in this study indicated that there were differences in intracranial pressure and that ultrasound was an effective modality to monitor those changes in real-time. This technique may lead to better protocols for mission operations and medical management for astronauts to identify and manage the VIIP syndrome. Furthermore, the use of Doppler ultrasound of the central retinal artery has great terrestrial potential where conventional

measurement of intracranial pressure (lumbar puncture or intra-ventricular probes) are contraindicated or not feasible but an ultrasound is readily available.

Adam Sirek is a resident in family medicine at St. John Hospital and Medical Center in Detroit, MI. Adam obtained his Bachelor's and Master's degrees at the University of Toronto where he was involved with diabetes research and molecular biology, prior to obtaining his Medical degree. Adam, his wife, and daughter currently live in Windsor, Ontario and commutes across the border into Detroit daily.

Committee Connection

This standing column is designed to introduce you to the many AsMA volunteers that help support the efforts of corporate members throughout the year.



Jeff Hovis, OD PhD

Jeff Hovis has been a member of Aerospace Medical Association and the Aerospace Human Factors Association for many years and has helped organize workshops and discussion panels on color vision at

the Association's annual scientific meetings. He joins the Corporate & Sustaining Membership Committee to help expand recruitment efforts and grow corporate membership within the Association, especially in Canada, as well as lend his expertise to the Committee's programming efforts.

Dr. Hovis received his Doctor of Optometry degree from The Ohio State University and his PhD degree in Physiological Optics from Indiana University before joining the University of Waterloo School of Optometry faculty where he has been a member for over 25 years. He has an active research program in developing performance-related vision standards for law enforcement,

aviation, maritime and railway industries. The main focus of this research has been to develop occupationally-relevant color vision standards and tests for the transportation industries. This work has led to the development of a lantern test and a color vision test for dispatchers used by the Canadian railways. He has been a member of several panels and research groups reviewing vision standards for civilian pilots in Canada. In addition to research on vision standards, Dr. Hovis has also been investigating visual performance and optical properties of ballistic protective eye wear for the Canada Land Forces.

The Corporate & Sustaining Affiliate (CSA)

is planning for its fourth annual *General Business Meeting and Luncheon* during the San Diego AsMA annual scientific meeting on Monday, May 12, 2014 at noon. All Primary & Alternate Representatives are welcome and encouraged to attend this exciting event! The meeting will provide background information on the Affiliate for new comers and unique opportunities for positioning, networking leadership, and contribution for all members. The CSA leadership team has selected a feature speaker for the luncheon now and considering a new format for the CSA Speakers Bureau. The Speakers Bureau has traditionally been an early evening program on the Tuesday of the annual scientific meeting week, an event designed to highlight the annual meeting host city's technical, commercial and/or aerospace achievements. This year CSA will pilot a consolidation of that program into their business luncheon to bolster attendance and capture more business attendees, before they leave with exhibit closure on Tuesday evening.

The new leadership team for CSA has plans to support connectivity and Networking, as well as augment the visibility of corporate members. They are re-designing the CSA website, consistent with messaging launched through the new CSA brochure, and considering a Facebook Page to promote connectivity between the organization members all year 'round. They welcome all to share their achievements, new ventures, and challenges through submissions to the CSA newsletter this spring and at the May CSA Business Luncheon. This team builds on the accomplishments of CSA's former officers, Guy Banta PhD (formerly Eagle Applied Sciences), David Hale (Pilot Medical Solutions), Dick Leland (ETC/NASTAR), Mary O'Connor (CDC/NIOSH), and Marian Sides PhD (Education Enterprises).

The **Affiliate Membership Committee (AMC)** focuses its efforts in support of the CSMC to welcome and acclimate new members, in generating the **CSA Courier**, and developing the Philanthropic & History Initiatives. CSA members are encouraged to submit materials to its standing column, *Corporate to Corporate*, offering brief descriptions (less than 250 words) highlighting new product launches, key personnel changes, awards and achievements, etc. by close of February, 2014 for the next issue. Additionally, members can develop for byline credit the standing column, *Business Bullets*, or submit material for a feature article. The **Philanthropic Initiative**, introduced by Marian Sides, PhD (Education Enterprises) explores appropriate venues for giving on behalf of the members, develops programming to stimulate giving on behalf of aerospace industry enthusiasts, and identifies the philanthropic activities of the members. Contact Dr. Sides at mbsides@sbcglobal.net to share your organization's stories of giving in our publications and online venues. The focus of the **History Initiative** has evolved over recent years to gathering the early accomplishments of CSA for its developing online platforms.

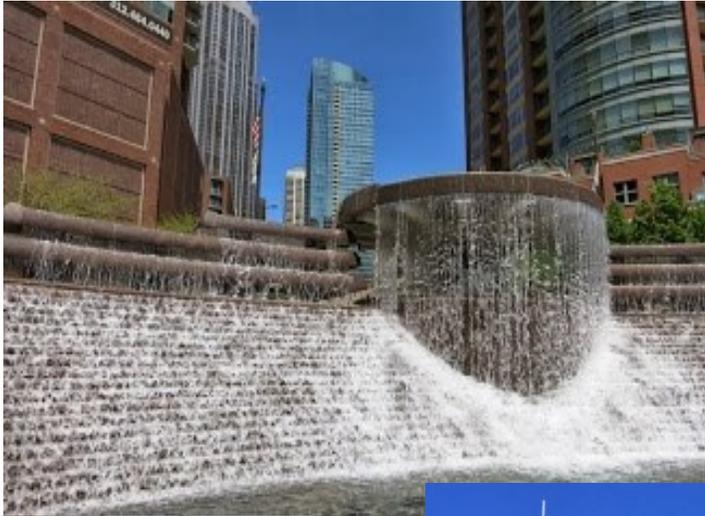
The **Affiliate Program Committee (APC)** enjoys support from the CSMC in developing scientific submissions for sponsorship during the San Diego meeting. CSA has sponsored panels exploring a variety of aeromedical issues from environmental medicine and toxicology to dentistry in space operations. Traditionally, topics for sponsorship have been chosen for their innovation, novel contribution to the scientific program, and/or their potential to create interest and support portions of the AsMA membership targeted for growth. Under the guidance of the APC, CSA is sponsoring and submitting one panel and one workshop for evaluation by the Scientific Program Committee planned this month. The panel discusses cardiovascular risk and management from an aeromedical perspective and the workshop updates the integration of hyperbaric oxygen therapy in wound care and related new third party payor trends.

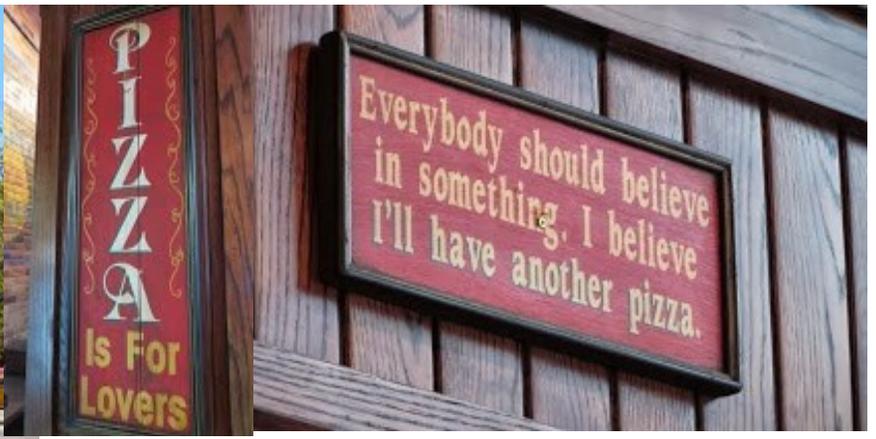
The Affiliate Nominating Committee (ANC) needs a Chairman! The ANC will be working in January to identify talented leaders amongst our corporate members for select Officer positions in CSA. Interested members should contact CSA President Leroy Gross, MD (lpgross@ihamedical.com) for details. The Nominating Committee has joined the Membership Committee, the History & Philanthropic Initiatives, the Speaker's Bureau, and the CSA Courier, all successfully moved from CSMC modeled management to CSA management through the Transition Program.

Marian Sides, PhD has launched CSA's fourth and last standing committee, the **Long Range Planning Committee (LRPC)**. From this post, she helps CSA align its efforts toward goals and projects requiring coordinated efforts including the next Bellagio conference. Members interested in participating this vital committee should contact CSA President Leroy Gross, MD (lpgross@ihamedical.com).

The AsMA Corporate & Sustaining Membership Committee (CSMC) is launching new training webconferences to help them recruit more effectively for the growth of CSA. The CSMC Chairman, Yvette DeBois MD and CSA President Leroy Gross, MD presented the work of the CSMC and CSA, respectively, as well as discussed pertinent issues of corporate interest to the AsMA Council during their November mid-year meeting. **The Corporate Forum Breakfast**, designed to apprise current corporate members of the benefits of affiliation and attract new members, will be held at 7:30am on Tuesday, May 13th. Over breakfast, speakers from the AsMA Family will present methods to Network, Market, Recruit, Research, Educate and offer an opportunity for the corporate members to involve the Association in issues affecting the aerospace marketplace. Col. Christopher Borchardt, Eilis Boudreau, MD PhD, Yvette DeBois MD, Peter Lee MD, and Margaret Matarese MD, greeted the exhibitors during the 2013 annual scientific meeting in Chicago, Illinois. Within the **Exhibitor's Program** they extended a personal message of gratitude to each exhibitor and identified organizations for future solicitation. The impact of annual meeting exhibiting on subsequent business functions is a focal interest to this workgroup, as well. So the 2013 Exhibitor's Survey was conducted and the summary finding presented to the Association leadership by Drs. Matarese & DeBois to enhance the AsMA exhibiting experience. The CSMC offers **Member Benefits Consultations** to the CSA members to privately help them optimize and customize the Benefits of Affiliation, as well. The CSMC supports CSA programming in the development of scientific forum for presentations and the CSA Primer, and serves as a liaison between CSA and the Aerospace Medicine Student & Resident Organization for processes associated with their Scientific Paper Award. The CSMC continues to innovate, grow, and brand the corporate membership package to enhance the corporate membership

CSA Conquers Chicago





Chicago presented its challenges, but the Corporate & Sustaining Affiliate (CSA) was successful in hosting networking venues for corporate members and exhibitors and sponsoring educational events and research during the AsMA annual scientific meeting, consistent with the new traditions piloted by its early leaders. The CSA Business Luncheon broadened our understanding of the Affordable Healthcare Act. The event's featured speaker, Ed Hughes, a physician with joint appointments in the Kellogg School of Management and the Feinberg School of Medicine at Northwestern University, discussed the structure of the law and its applications for healthcare providers and businesses.

Dick Leland (ETC), CSA President (2011 - 13), thanked his leadership team and acknowledged the contributions of David Hale (Pilot Medical Solutions) and Mary O'Connor (CDC/NIOSH), the first members to serve the full two-year terms for the Secretary-Treasurer and Historian posts, respectively. Mr. Hale launched and maintained the online presence for CSA during his tenure, while Ms. O'Connor worked toward gathering historical accomplishments and updating the bylaws for the membership. Mr. Leland provided formidable leadership for CSA, piloting through networking and finance challenges for the young affiliate, as well as assisting the CSMC with graphic support for new CSA brochure.

A series of timely panels and a unique educational workshop experience helped make this a banner year for CSA accomplishments. Jonathan Clark's Red Bull Stratos jump panel series offered insights into the biomedical findings and operational considerations for a space jump. The panels engaged the Association broadly, capturing the science and medicine of this extraordinary current event. Additionally, CSA co-sponsored an event to support nursing membership and related submissions to future annual scientific meetings. The workshop joined nurses in flight evacuation and readiness, occupational health, space operations, and hyperbaric oxygen therapy with student nurses to gain a better understanding the basic science and clinical issues important for their advancement. The Aerospace Nursing Careers & Research Opportunities Workshop featured a specialist, Nicole Close PhD from Empiristat, providing a foundation for scientific findings evaluation, research design, and biostatistics. The event was launched through a Facebook Page, CSA's lift off for social media integration, and garnered strong evaluations.

Mr. Leland introduced the incoming officer team at the luncheon's closure, including Leroy Gross, MD (Inomedic Health Applications), Bill Knight (Verathon), Sean Daigre (Harvey Watt Co.), and Deborah Lickteig (Eagle Applied Sciences, the 2013-14 CSA President, Historian, Secretary-Treasurer, and Vice President, respectively). Together they plan to work in synergy to enhance connectivity and visibility for the corporate members of the Aerospace Medical Association this year.



2014 CSA LUNCHEON SPEAKER



Honorable Robert L. Sumwalt, III
Member, National Transportation Safety Board

Robert Sumwalt was sworn in as the 37th Member of the National Transportation Safety Board in August 2006, whereupon President George W. Bush designated him as Vice Chairman of the Board for a two-year term. In November 2011, President Barack Obama reappointed Member Sumwalt to an additional five year term. His term of office as a Board Member will run until December 31, 2016.

Prior to coming to the Board, Robert was a pilot for 32 years, including 24 years as an airline pilot with Piedmont Airlines and then US Airways. In 2004 he left the airline to become Manager of Aviation for SCANA. He logged over 14,000 flight hours.

Along the way Robert served as an aviation safety research consultant to NASA's Aviation Safety Reporting System, where he researched various issues involving flight crew performance. He has written extensively on aviation safety matters, having published over 90 articles and papers in aviation trade publications. He co-authored a book on aircraft accidents and wrote chapters pertaining to aircraft accident investigation in two books.

In 2003, Mr. Sumwalt joined the faculty of the University of Southern California's Aviation Safety and Security Program, where he was the primary human factors instructor.

In recognition of his contributions to the aviation industry, Member Sumwalt received the Flight Safety Foundation's Laura Taber Barbour Award in 2003 and ALPA's Air Safety Award in 2005. He is a 2009 inductee into the South Carolina Aviation Hall of Fame. He is a graduate of the University of South Carolina.

Press Release

InoMedic Health Applications, Inc
Kennedy Space Center, Florida



Dr. Hall (left) receiving the award announcement from NASA's John Shaffer

NASA Kennedy Space Center recognized InoMedic **employee Dr. Carlton Hall, PhD** as the **NASA Kennedy Space Center Engineer/Scientist of the Year Award** in recognition of his highly innovative work in Climate Adaptation Science Investigations. Leading a Team of several InoMedic scientist, and working with the NASA scientific community, Dr. Hall has consolidated over three decades of data pertaining to the ecosystem and natural resources of the greater Kennedy Space Center region and integrated climate change impacts into current and future strategic development plans for the Spaceport. His research has also greatly enabled the planning and mitigation of impacts from storm surge and climate change risks, ensuring that investment into space access infrastructure endures for decades to come. His work is now being adopted across all NASA Centers and has been published in the Bulletin of the American Meteorology Society.



Verathon Medical designs, manufactures and distributes reliable, state-of-the-art medical devices and services that offer a meaningful improvement in patient care to the health care community.

Verathon expanded its product portfolio with the GlideScope Video Laryngoscope (GVL) brand in January, 2006.

Glidescope® provides a consistently clear view of the airway, enabling quick intubation, and offers significant benefits in Anesthesiology, Critical Care, Military Trauma care and Emergency Medicine for the management of difficult airways.

The Glidescope Ranger®, a smaller, rugged military-designed unit is the only video assisted intubation device to receive US Army Air Worthiness Certification and US Air Force "Safe To Fly" designation on all patient transport aircraft.

Ranger® has been deployed in Iraq and Afghanistan over the last seven years, serving in multiple roles including Special Operations mission support, en-route care, CSH Trauma and Anesthesia Airway management and long distance patient transport to Ramstein AFB and forward to the US. The US Air Force Critical Care Air Transport (CCAT) wing of Air Mobilization Command (AMC) standardized their global training and duty bag sets with Ranger®.

Ranger® is currently posted by US Army/Ft. Detrick Joint Services Product Standardization Board, as Joint Services Product of Choice and is utilized in a lifesaving role, across all Military service branches, globally.



James Pattarini was accepted into the combined Aerospace Medicine/Internal Medicine residency program at the University of Texas Medical Branch (UTMB) in March of 2010. Over his four years of training, he has contributed to several studies in commercial space flight research at UTMB as part of the FAA's Center of Excellence in Commercial Space Transportation initiative. Over the past two years he has served as project co-investigator, focusing on the effects of chronic medical conditions on subject tolerance of acceleration forces mimicking suborbital space flight profiles.

His abstract entitled **Preflight Screening Techniques for Centrifuge-Simulated Suborbital Spaceflight** will be presented at the Aerospace Medical Association's 85th annual scientific meeting in San Diego, CA and was selected for the 2014 AMSRO Scientific Paper Award. The screening procedures employed in this study were able to identify individuals physically capable of tolerating simulated suborbital flight from among several disease groups. Many subjects successfully participated in centrifuge trials despite medical histories of disease that would be disqualifying under historical spaceflight screening regimes, including coronary artery disease, diabetes, hypertension, pulmonary disease, and back and neck injury or disease. Such screening techniques are likely applicable for use in future commercial spaceflight operations and suggest that spaceflight may be physically tolerable for a large segment of the general population.

Dr. Pattarini is currently Chief Resident and Assistant Professor in the Department of Internal Medicine at UTMB in Galveston, TX. His educational background includes a B.S. in Evolutional Biology from Syracuse University, an M.D. from the State University of New York at Buffalo, NY, and an M.P.H completed as a component of his aerospace medicine training at UTMB in 2013. James resides in Houston, TX with his wife, Harita, a short drive from Johnson Space Center.