

# President's Page

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## Maintenance of Certification

Maintenance of Certification (MOC) is a relatively new concept for physicians. Recently there has been considerable emphasis on improving patient safety using concepts borrowed from aviation. The disparity between the currency requirements to fly as a general aviation pilot compared to those needed to practice medicine has always been intriguing. For instance, I am required to have a flight physical every 2 years to operate my Mooney 201. I would not be able to take antidepressants, use hypnotics within 48 hours of flight, or use a sedating antihistamine (in addition to many others). Many medical conditions prohibit acting as pilot-in-command, and one is subject to a fine up to \$250,000 and/or imprisonment up to 5 years if caught falsifying the FAA medical form. Traffic arrests and DWIs are checked on each physical examination versus a national driver database. Every 2 years I must show a designated flight instructor that I have some ability left to fly an aircraft and review current procedures. If I choose to perform more advanced activities such as flying in instrument meteorological conditions, I must demonstrate specific competency during a proscribed course of instruction, written and practical examinations, and maintain currency. Periodically, a person from the FAA may check at the ramp to see if I am carrying a current medical certificate and the appropriate license. If I were to fly for a scheduled air carrier, I would have random drug and alcohol testing. I would have to show proficiency and employ crew resource management for a variety of emergency procedures in a simulator every 6-12 months and periodically ride with a check pilot during flight operations. The vast majority of type-specific training would be done using a simulator without passenger involvement. All my flights would require the use of a checklist and a second pilot who could readily provide a second opinion or take over should I need assistance.

In medical practice, I have never been asked to have a physical examination. Many physicians providing patient care have medical conditions or take medications that would be disqualifying for the general aviation pilot. Since completing residency, I have never actually had to show anyone that I was still technically competent to practice medicine (although there is a credentialing process), and as new procedures evolved, I have never been asked to show a state medical board that I was proficient in these activities. The local credentialing group does consider these items, but there is considerable variation in this process. After 32 years of residency and practice, I have never been asked to complete a random drug or alcohol screen or physically show a license to an on-site representative of a governing agency. Almost all my training has occurred on patients with very little done by simulator, and many critical decisions (particularly at



**Richard T. Jennings, M.D., M.S.**

night) are made without input from a second provider.

The state licensing boards are now taking interest in these issues and assuring the recency of medical training and continued competency. For instance, when a physician moves to Texas, he/she must have completed a licensing examination or passed a board examination within the previous 10 years. This does not yet apply to individuals that have been licensed in Texas more than 10 years. The boards under the American Board of Medical Specialties (ABMS) have also established time-limited certificates so that periodically, practitioners must demonstrate certain competencies. Most ABMS Boards now require a four-part process for MOC that includes the following: Part I, professional standing; Part II, lifelong learning and self-assessment; Part III, cognitive expertise; and Part IV, evaluation of performance in practice. The American Board of Preventive Medicine (ABPM) process for MOC is called Enhancing Professional Improvement and Quality (EPIC), and this process has been established to help physicians maintain specialty competence and those with time-limited certificates maintain board certification. It is likely to also help those whose state licensing boards require periodic demonstration of proficiency.

The Aerospace Medical Association has been proactive in helping its member physicians obtain MOC credit through its educational activities. AsMA originally participated in a Quadrad with the American Board of Preventive Medicine, American College of Occupational and Environmental Medicine, and American College of Public Health to help develop the MOC process for ABPM diplomates, and for the last several years AsMA has offered at least 20 hours of MOC credit during the Annual Scientific Meeting. Unfortunately, most of the sessions at our meeting do not offer MOC credit. By changing the abstract submission process to include a single question and feedback with each abstract submitted, AsMA will offer MOC credit for almost every session beginning at New Orleans in 2007. In addition, be-

*See PRESIDENT'S PAGE, p. 888.*

# Medical News

## Jack Hastings voted President-Elect of AsMA; Richard Jennings installed as President

John D. "Jack" Hastings, M.D. was elected President-Elect during the Aerospace Medical Association's Business Meeting, held May 16, 2006, at the Caribe Royale in Orlando, FL. He will succeed to the Presidency in 2007.

A Chicago, IL, native, Dr. Hastings entered the pre-medical program at Notre Dame University in 1958. Before earning his degree, he entered the St. Louis University School of Medicine in 1961 and received his M.D. degree in 1965. Following a residency in neurology at the Mayo Clinic he entered the Army, serving 1 year in Viet Nam as one of only two neurologists. He was awarded the Bronze Star. He was then transferred to Fitzsimmons Army Hospital in Denver, CO, as Assistant Chief of Neurology. When he was discharged in 1971, he returned to Chicago where he opened a private practice and became a part-time clinical instructor at the Loyola University Stritch School of Medicine. He was board certified in neurology in 1972 and continues that practice. He became board certified in aerospace medicine in 1999.



Dr. Hastings became an Aviation Medical Examiner (AME) in 1976. He has been a lecturer in aviation neurology for the FAA AME seminars for over 25 years and has served as a consultant to the Federal Air Surgeon since the late 1990s. In this capacity he has written over 1000 opinions regarding aeromedical disposition of pilots with neurological disorders. He has served as a consultant and expert witness for the FAA for the National Transportation Safety Board and Department of Justice. He has advised the Air Traffic Control Specialist community regarding eligibility for air medical certification for those with neurological disorders. He has consulted with the Airline Pilots Association, the Allied Pilots Association and several major air carriers regarding complex cases. He has authored chapters in standard textbooks including "Fundamental of Aerospace Medicine" and "Clinical Aviation Medicine" and contributed to several AsMA supplemental publications including "Medical Guidelines for Airline Travel."

A Fellow of AsMA since 1999, he was the 2005 recipient of the Association's Theodore C. Lyster Award, recognizing him for his leadership and expertise in aerospace medicine, having gained world-wide recognition for his many contributions, especially in the field of aviation neurology. He also received AsMA's John A. Tamisiea Award in 1996.

Dr. Hastings serves as an Adjunct Assistant Clinical Professor of neurology at the Oklahoma University School of Medicine and an Adjunct Assistant Clinical Professor in the Aerospace Medicine residency program at

University of Texas Medical Branch, Galveston. He is past president of the Civil Aviation Medical Association. He is also a commercial pilot with multi-engine and instrument rating with over 5200 hours of flight experience.

Richard T. Jennings, M.D., was installed as the 2006-07 President of the Aerospace Medical Association during the Honor's Night Banquet on May 18, 2006 at the Caribe Royale, Orlando, FL. Dr. Jennings is currently at the University of Texas Medical Branch in Galveston with appointments in Preventive Medicine and Community Health, Ob/Gyn, and Family Medicine. He currently serves as residency director of the UTMB/NASA-JSC aerospace medicine residency program and director of the UTMB Aviation Medicine Center and Clinical Preventive Medicine. He provides astronaut gynecological care, selection examinations, and consultation services at the Flight Medicine Clinic at NASA-JSC. In addition, he supervises the Wyle Laboratories/UTMB physicians who work at the Gagarin Cosmonaut Training Center in Star City, Russia, Johnson Space Center, and International Artificial Gravity project on the UTMB campus.

### Other Officers:

The new Vice Presidents are: Carol A. Manning, Ph.D., and K. Jeffrey Myers, M.D. Robert W. Weien, M.D., and James T. Webb, Ph.D., are fulfilling their second years as Vice Presidents.

The Members-at-Large with terms to expire in 2009 are: Denise L. Baisden, M.D., Jon L. Jordan, M.D., Guillermo J. Salazar, M.D., and Jarnail Singh, M.D.

The Secretary/Treasurer is Russell B. Rayman, M.D., who also serves as Executive Director of AsMA.

The Council representatives to the Executive Committee are Glenn Merchant, M.D., Romie Richardson, M.D., and Joseph McKeon, M.D.

## Executive Director's Column



Rayman

## Aeronautics Research

The alarm of the aeronautics research community (including biomedical research) over budget cuts has apparently reached the ears of the Executive Branch of Government. Consequently, a round table discussion chaired by Dr. Robie Roy (Assistant Director for Space and Aeronautics, Executive Office of the President) was held in Washington, DC, on April 17. In attendance were approximately 30 individuals mainly from academia as well as several government agencies. Representing AsMA was Gen. Garrison Rapmund and your Executive Director. (You may recall Gen. Rapmund delivered the Bauer Lecture at our Reno Meeting in 2001.)

President Bush is required to publish a policy regarding aeronautics research by December 2006. Dr. Roy convened the round table to solicit the advice of the major stakeholders in the U.S. Areas of particular interest included prioritization of aeronautical research, facilities, development of a national research plan, and resources including personnel and budget. The stake holders provided the Chair with considerable input including the criticality of maintaining an enduring R&D program, accelerating global leadership, safeguarding national security, fostering economic competitiveness, and ensuring sustained budgeting.

Your AsMA representatives gave particular emphasis to the need for a sustained effort in attracting students into the sciences, mentoring them, and ensuring a stable and requisite flow of graduates into challenging and promising research careers. In short, our national policy must be to strengthen aeronautical R&D as a contributor to the science base, the technology base, and the educational base of our Nation. We must devise innovative ways to attract the best and brightest young people into these career tracks. We also recommended that the Federal Government seek a formal partnership with industry and academia to develop a strategic plan to serve as a guideline for an array of initiatives that are specific and focused. We must also maintain our global competitiveness, but this requires a sustainable investment over the coming years.

This is only a synopsis of the discussion, but it clearly defines the issues that were presented to the Chair. We can only hope that our thoughts will be included in the recommendations to the President that will be incorporated into his policy plan.

### AsMA Future Meetings

May 13-17, 2007  
Sheraton and Marriott Hotels  
New Orleans

May 11-15, 2008  
Sheraton and Hilton Hotels  
Boston, MA

May 3-7, 2009  
Westin Bonaventure Hotel  
Los Angeles, CA

# Minutes of the Aerospace Medical Association Annual Business Meeting

Tuesday, May 16, 2006, Caribe Royale Hotel, Orlando, FL



1. **Call to Order:** Professor Bagshaw called the meeting to order at 12:30.
2. **Recognition of Past Presidents:** Past Presidents were recognized.
3. **In Memoriam:** Attendees stood in silence in memory of those who passed away over the preceding year.
4. **Report of the President:** The President gave a summary of activities for the year.

## 5. Report of the Executive Director, Secretary Treasurer, General Chair of Annual Scientific Meeting:

*a. Executive Director:* Ladies and gentlemen, it is my pleasure to report to you our activities during the preceding calendar year. I would consider one of our most important activities was participation with the Exploration Life and Medical Sciences (ELMS) Coalition. This is a group of scientific organizations that have become extremely alarmed because of significant budgetary cuts in Space Life Sciences/Medical Care Research. This prompted formation of the coalition of which AsMA was an invitee. Our activities have taken us on numerous visits to Congressional Offices as well as to NASA Headquarters, emphasizing the importance of this research that is particularly critical if we are going to realize President Bush's policy of return to the Moon and a mission to Mars. ELMS continue to be very active and time will tell if we have been effective.

Not only have we seen budget cuts in space medicine research, but also in aeronautics biomedical programs. We have sent numerous letters to Capitol Hill and NASA advocating a reversal of these cuts and explaining the importance of aeronautics biomedical research. A CFIT resolution that was approved at last years Business Meeting was forwarded to governmental offices backed by an in-depth analysis demonstrating great savings to the military if such systems were installed in several types of high performance aircraft. Senator John McCain reacted favorably to this and we hope he will bring this issue forward through the legislative process. And finally we have been strong advocates of space tourism, responding positively to a recent FAA NPRM.

We continue to receive calls from the media on a wide range of subjects including the perennial Age 60 Rule, aircrew and passenger mental illness, in-flight disease transmission, and cabin air quality, to mention a few. Many of these calls are received from overseas radio stations and newspapers.

I would now like to turn to a problem of which all of us are aware, and that is membership. When I first arrived at AsMA, we had approximately 4,000 members. Now, 14 years later we have about 3,000, representing a 25% loss. It is my opinion that the main reason for the loss of membership is due to a shrinking aerospace medicine community in all of its disciplines. As we ask members who leave AsMA their reasons for leaving, practically 100% state that they are retiring or have chosen another career field. Leaving us in anger or with dissatisfaction is very rare. Our community is very much linked to Federal or national budgets, as well as the health of the airlines. When they suffer, we suffer, and I believe this is the case today. I do believe these trends are cyclic and we will eventually come out of this valley to reach higher ground in the coming years. In any event, to do what we can to maintain our present membership, a Tiger Team was formed to discuss the problem and bring forward recommendations. The result was approximately 45 action items, almost all of which have now been completed. Some of these action items included contacting all aviation medical examiners, military flight surgeons, and training programs. We are also making MOC/CME available in the journal this summer. These and other related action items we hope will maintain our current membership. It is vital that each of us tries to get one new member every year. If we could

do this, we would not only maintain our membership, but it would increase significantly. Please make this effort for your Association.

For the coming year we currently have a number of policies under review, including medical examinations for flight attendants, periodicity of medical examinations for pilots, medical standards for UAV operators, to mention but a few. I hope to be able to report to you final action on these and other initiatives in New Orleans in 2007.

I do want to take this opportunity to thank so many of you who have volunteered your time in support of your Aerospace Medical Association.

*b. Report of the Secretary-Treasurer:* As of December 31, 2005, our total income was \$1,167,000.00, and total expenses were \$1,164,700.00 for a net gain of \$2,300.00. Our Merrill Lynch portfolio at the end of the year was valued at \$ 605,500.00.

*c. Report of the General Chair of the 77th Annual Scientific Meeting:* Advance registration was 1,182; on site registration as of 11 AM today was 321, giving us a total registration of 1,503. There were 32 Exhibits.

## 6. Governance - (Jennings)

*Bylaws - Nailling:* In article 10, Section 4, Rules - Delete the last sentence and insert "Unless provided otherwise by Robert's Rules or by these Bylaws, all elections and questions shall be decided by a majority of votes cast." This change is to reconcile differences between Robert's Rules and the Bylaws in the voting process. A motion was made and seconded and unanimously approved.

*Finance - DeVoll:* Since the mortgage has been paid, there will be no further monthly mortgage payments, which will represent a savings in the coming years. An investment policy is being studied to be discussed at the upcoming Executive Committee meeting.

*Nominating - Schroeder:* Dr. Schroeder presented the slate for the coming year as follows: President, Richard T. Jennings; President-Elect, John D. Hastings; Members-at-Large, Jon L. Jordan, Denise L. Baisden, and Guillermo J. Salazar; and Executive Director/Secretary-Treasurer, Russell B. Rayman. A motion to approve the slate was approved unanimously.

## 7. Representation and Advocacy - (Callan)

*Resolutions - Dervay:* The following resolution, Medical Contribution to Civil Aviation Aerospace Accident Investigations, was seconded and approved unanimously:

Therefore, Be It Resolved: That the Aerospace Medical Association strongly recommends a requirement for the active participation by a qualified and trained aeromedical specialist in accident investigation, onsite, to ensure the appropriate collection of medical, toxicological, and pathological data, and to assist with the assessment of the causal and contributory medical factors, and result of injuries, in civil aviation and aerospace accidents.

*Air Transport - Wolbrink:* Position papers on go-no-go pills and physical examination periodicity are being prepared.

*Communications - Weien:* The new Chair of the Committee will be Dr. David Sarnow.

## 8. Education and Research - (Webb)

*Aerospace Human Factors - Nesthus:* The Committee is working on a position paper on Fatigue Countermeasures and will cosponsor four panels at this meeting.

*Aviation Safety - DeJohn*

*Education and Training - Rhodes*

*History and Archives - Mohler:* A description is being written of the namesakes of each of the AsMA Awards and will be published. Four historical films were presented at this meeting.

*Science and Technology - Shender*

## 9. Member Services - (Weien)

*Awards - Bellenkes:* Award winners will be announced on Honors Night.

*Corporate and Sustaining - Sides:* Eight new Corporate and Sustaining members have joined. There are ongoing efforts to create a Dental Affiliate.

*Membership - Bellenkes/Silberman:* The membership loss has apparently leveled and has gained in the past several months very much due an increase in international membership.

## 10. International Services - (Bellenkes)

*International Activities - Kleinsmith*

**11. Unfinished And New Business:** There was no new business.

**12. Adjourn:** The meeting was adjourned at 2:00 p.m.

Respectfully submitted,  
Russell B. Rayman, M.D.  
Secretary

## Opening Ceremonies of the 77th AsMA Annual Scientific Meeting, Orlando, FL



**OPENING CEREMONIES: Orlando, FL, May 15, 2006, 77th Aerospace Medical Association Annual Scientific Meeting--**(Top left) Honor Guard from Patrick AFB, FL, presents the colors. (Top center) Arrangements Chair, Phil Scarpa, and Program Chair, Jeff Myers, salute the flag during opening ceremonies. (Top right) Dr. Bagshaw provides opening remarks. (Above) The Navy Band Southeast, NAS Jacksonville, FL, provides the music for opening ceremonies. (Above right and right) The crowd enthusiastically receive the 52nd Annual Louis H. Bauer Lecture.

**Check out the website at [www.asma.org](http://www.asma.org) for our Photo Gallery on the Meetings page to see more photos of the meeting in Orlando!**

All photos by James Spelios Photography.



**BAUER LECTURE**-Polly Vacher (center) receives a plaque and honorarium from Bob Ellis (right) representing the sponsor, Wyle Laboratories, Inc., as Dr. Bagshaw looks on. Ms. Vacher spoke about her training and experiences flying solo around the world via both Poles in her single-engine Piper Dakota aircraft. She took Desert, Marine, and Arctic survival training. She got a firearms license and learned to navigate by the stars. She donates the proceeds from her flights and upcoming book, "Wings Around the World" to the charity, Flying Scholarships for the Disabled.



**ARMSTRONG LECTURE**--Air Commodore Tony Batchelor, RAF, MC, receives a plaque and honorarium from George Anderson, M.D., representing the sponsor, Environmental Tectonics Corp. Batchelor spoke on "Hearts in the Air"--pilots, doctors, and heart disease. He explained that since pilots don't fit the textbook cases of heart disease, it is difficult to predict who will have problems. Therefore flight physical certificates need to be conservative, but advancing technologies are providing researchers with better tools and better opportunities for pilots.

## Honors Night Reception, Banquet, and Afterglow 2006



**PAST PRESIDENT'S PLAQUE--**(Left) Drs. Bagshaw and Jennings shake hands symbolically changing command as Penny Bagshaw looks on. (Right) Dr. Jennings presents the Past President's plaque to Dr. Bagshaw.  
All photos by James Spelios.



**2006 FELLOWS--**The following Fellows were selected during the 77th AsMA Annual Scientific Meeting: Kris M. Belland, D.O., Ki-young Chung, M.D., Jay A. Danforth, M.D., James W. Dooley, Ph.D., James R. Fraser, M.D., Modesto Garay, M.D., David A. Hiland, D.O., M.P.H., William G. Klein, M.D., Tomaz F. Kozelj, M.D., M.S.C., Jean-Georges M. Mouchard, M.D., Scott E. Parazynski, M.D., Arleen M. Saenger, M.D., Eliot Schechter, M.D., and Deborah J. White, M.B.A., Ph.D. Those present are pictured above with AsMA president, Michael Bagshaw (back row, far left) and Fellows chair, Daniel Lestage (back row, far right). Herman Abromowitz was elected as an Honorary Fellow.



**PHOTOS--**From the Top: Michael and Penny Bagshaw at Honors Night; the Jennings and Lestages at the Head Table; Lorna Brown, Susi Bellenkes, Lois Moser and Ludy Rayman at the reception; Dr. Bagshaw with his daughters Elizabeth and Caroline at the reception; the band at the Afterglow. Right: Honors Night Reception, sponsored by Mayo Clinic.

**Check out the website ([www.asma.org](http://www.asma.org)) for our Photo Gallery on the Meetings page to see more photos of the meeting in Orlando!**





**Dr. Bagshaw**

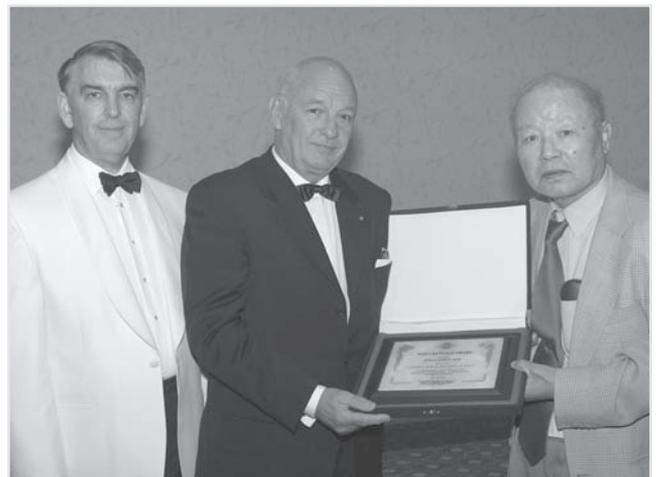
## AEROSPACE MEDICAL ASSOCIATION HONORS NIGHT AWARDS--Orlando 2006

Michael Bagshaw, 2005-2006 President of the Aerospace Medical Association, presented awards to 16 outstanding physicians, nurses, and researchers during the Honors Night ceremonies at the 77th Annual Scientific Meeting at the Caribe Royale in Orlando, FL. Andy Bellenkes, Ph.D., the Chair of the Awards Committee, read the citations. The names of the awards' sponsors and representatives, when present, are printed in parentheses. The President's Citation was also presented during the ceremonies.

All photos by James Spelios Photography.



**JOHN PAUL STAPP AWARD**  
**Francis "Ted" Knox, Ph.D.**  
(George K. Anderson, M.D., Environmental Tectonics Corp.)



**WON CHUEL KAY AWARD**  
**Gen. Robert Auffret, FAF(Ret.), M.D., Ph.D. (posthumously)**  
*Accepted by Jean-Pierre Crance, M.D.*  
(Dr. Oh Jung-Hyub, Aerospace Medical Association of Korea)



**LOUIS H. BAUER FOUNDER'S AWARD**  
**James E. Whinnery, Maj.Gen.(Ret.), Ph.D., MAT, M.D.**  
(Jefferson C. Davis Wound Care and Hyperbaric Medicine Center)



**MARY T. KLINKER AWARD**  
**Daniel Roper, R.N., CEN, CFRN**  
(Accepted by Janet Sanner, Aerospace Nursing Society)



**ERIC LIJENCRANTZ AWARD**  
**David P. Gradwell, B.Sc., Ph.D., M.B.Ch.B., D.Av.Med., FRCP, FRAeS**  
 (Arthur Arnold, M.D., Bionetics Corp.)



**HARRY G. MOSELEY AWARD**  
**Col. Peter Mapes, USAF, MC, CFS**  
 (William Brath, M.D., Lockheed-Martin Corporation)



**THEODORE C. LYSTER AWARD**  
**Robin Dodge, M.D.**  
 (Lockheed-Martin Space Operations)



**BOOTHBY-EDWARDS AWARD**  
**Masanobu Kaji, M.D., Ph.D.**  
 (Sean Daigre, Harvey W. Watt & Company)



**ARNOLD D. TUTTLE AWARD**  
**Michel A. Paul, M.Sc.**  
 (Bob Ellis, Wyle Laboratories)



**SIDNEY D. LEVERETT, JR., ENVIRONMENTAL SCIENCE AWARD**  
**Victor A. Convertino, Ph.D.**  
 (George K. Anderson, M.D., Environmental Tectonics Corp.)



**KENT K. GILLINGHAM AWARD**  
**William B. Albery, Ph.D.**  
 (Wolfgang Lindlbauer, AMST)



**JOHN A. TAMISIEA AWARD**  
**David Millett, M.D**  
 (John Hastings, M.D., Civil Aviation Medical Association)



**JULIAN E. WARD MEMORIAL AWARD**  
**Lt. Col. Lee Harvis, USAF, MC**  
 (Richard Bachmann, M.D., Society of U.S. Air Force Flight Surgeons)



**MARIE MARVINGT AWARD**  
**Stanley R. Mohler, M.D., M.A.**  
 (Marie-Paul Charetteur, Alain Martin St-Laurent, and Jean P. Crance, far right, French Aerospace Medical Association)



**RAYMOND F. LONGACRE AWARD**  
**Donald E. Hudson, Jr., M.D., M.P.H.**  
*Accepted by Robert Weien*  
 (Caroline Bagshaw, Aeromedic Innovations)



**President's Citation**--Dr. Bagshaw presented the 2006 President's Citation to Dr. Royce Moser (right) for his many years of voluntary service as our Parliamentarian.

## Highlights of the Council Meetings

May 14, 2006, the Council meeting was called to order by Professor Bagshaw at 9:00 a.m. on Sunday, May 14, 2006. The minutes of the November 16, 2005, Council meeting were approved as read. Professor Bagshaw briefly reviewed the highlights of the March 2, 2006 Executive Committee meeting. He noted that there had been a decision to hire an "Office Manager" replacing the Administrative Assistant position held by Jackie Carter (see p. 898).

**General:** Dr. Jennings gave a brief description of the newly formed Foundation. The money will be utilized for students/residents for travel to aerospace medicine meetings. The Articles of Incorporation and the Bylaws have been completed and submitted to the IRS. This process takes about 6 - 8 months.

The ED is working with Past President Dr. Bob McMeekin in establishing expert witness guidelines.

The Romanian Society of Aerospace Medicine with 130 members requested Affiliate Status and were approved. We now have 30 Affiliate Organizations (see list, p 891).

Professor Bagshaw informed Council of the establishment of the European Aerospace Medical Association, comprised of 21 countries. Its primary objective will be to deal with regulatory authorities in Europe.

The ED announced that Clinical Aviation Medicine 4th Edition is now available for purchase. All royalties will be donated to the Aerospace Medical Association Foundation.

Dr. Jennings reported that New Orleans should be in good shape for our meeting. There will be a site visit in July. He gave a brief explanation of his preliminary plans for that meeting.

In order to facilitate Bylaws changes, rather than waiting for the Annual Scientific Meeting, it was suggested that a process be implemented to vote for Bylaws changes by email. Dr. Bagshaw assigned this to Executive Committee for further discussion and decision.

There was a suggestion that an Associate Fellow be a member of Council. Dr. Bagshaw assigned this to the Executive Committee for discussion and decision.

**Finance Report:** The Executive Director (ED) reported that for calendar year 2005 we had a \$2,227.00 gain. A partial explanation for this small profit margin was the \$10,000.00 penalty we paid the hotel in Kansas City because we did not fill our room block. The majority of the income for the year came from the dues (\$414,000.00) and meeting registration (\$278,000.00). Most income went to the payroll (\$341,000.00) and printing, mailing and handling (\$164,000.00). The fee for Accurate Image Marketing, Inc., for the year was \$46,000.00. The Merrill Lynch Portfolio as of December 2006 was \$605,500.00.

**Nominating:** Dr. Schroeder made a plea to Constituents to ensure that their representatives on the Nominating Committee will be active participants.

**Outreach:** The ED gave a brief description of outreach efforts during the year. Included was activity on the Hill with sister organizations of ELMS to persuade lawmakers to ensure a reasonable budget for our Space Life Sciences/Medical Care research program. The ED, with retired General G. Rapmund, also met with members of the White House expressing our alarm at significant budget cuts in Aeronautics Biomedical Research. The CFIT resolution approved last year was sent to many members of Congress as well as the DoD. AsMA responded to the FAA Space Tourism NPRM supporting its objectives, recommending that space passengers only be required to complete a health self-assessment rather than a complete physical examination. We also recommended that pilots on orbital missions have a physical examination including laboratory tests and imaging in accordance with the U.S. Preventive Services recommendations. AsMA representatives will also speak to medical students at the University of Virginia in June and also attend the American Medical Student Association meeting in an effort to attract new members. A speaker's bureau has been established to promote aerospace medicine on college campuses.

**AMA Activities:** It is expected that we will be surveyed for AMA membership in 2007. In order to retain our seat in the House of Delegates, 35% of our U.S. physicians must be members of the AMA. Air Transport Medicine (ATM) Committee has several action items pending including: a policy on go/no-go pills by ANG/RES pilots who fly commercially (with Aviation Safety Committee); policy on biohazard contaminants; policy on interval for medical examinations (with American Society of Aerospace Medicine Specialists); policy on medical exams for flight attendants (with ASAMS); procedures on emerging infections (with ASAMS).

**Resolutions Committee:** Dr. Dervay noted that Resolution 06-1 on Medical Aircraft Accident Investigation will be presented at the Business Luncheon (see p. 888).

**Communications Committee:** Dr. Weien reported letters in the Home Office had been revised and updated and a new telephone tree has been installed. The Website review is ongoing. The new Chair will be Dr. David Sarnow.

**Editor's Report:** Dr. Nunneley reported that the rate of submissions is holding steady with decisions on articles averaging 43 days. There is a 28% to 30% rejection rate. Kudos was given to Sarah Rubio by Council for the excellent work she has done on behalf of the journal.

**Managing Editor's Report:** Ms. Day reported that the journal on CD is in progress and should be completed this year. She presented a new journal cover which was enthusiastically received by Council. There will be another postage increase.

**Annual Meeting:** There were 1,182 advanced registrants, which is excellent, with 47 countries represented.

**Science Program:** Dr. Myers stated there were over 600 submissions with 44 abstracts rejected for a 7% total rejection rate. He was very pleased with the work of his committee of 70. He also felt that color coding the agenda improved the printed program.

**Scholarships:** The Davis Scholarship was shared this year between Dr. Sean Phelps, an Army Flight Surgeon, and Dr. Lara Warren, a Physiologist at the University of California. The AsMA student/resident stipend went to Dr. Alyson Calder, a physician in Glasgow.

**Aerospace Human Factors Committee:** The policy on fatigue countermeasures is still in the works.

**Aviation Safety Committee:** The policy on UAV medical standards is being worked with ASAMS; the policy on optimal cabin pressure is being worked with AsPS.

**Education and Training:** A Compendium of ASM Training Courses is being compiled; The ED announced that the new Self-assessment program containing over 900 questions and answers has been completed and will be available to the membership within a month. This was completed by 2 USAF RAMS, Drs. Kelly West and Tim Paulding. The ED announced that the new CME/MOC feature will begin appearing in the journal in June.

**History and Archives:** Dr. Mohler announced that his committee is starting a new project doing the history of the namesakes of our various awards. The article will be published in the September issue.

**Membership:** Although membership has been going downward, in recent months we have seen a plateau and actually a small increase. This is possibly due to an increasing number of international members. It was announced that Dr. Jeff Myers will co-chair the committee with Dr. Warren Silberman. They emphasized they will target students and new AMEs in particular. The ED reported on the Tiger Team activities. The Team was originally formed when we were losing members. In response to this loss, the Tiger Team had 4 telecons and established 45 action items, all of which have been completed. In general this included contacting all flight surgeons offices, sending letters to all AMEs, facilitating committee sign-ups, tracking reasons for member cancellations, and contacting the USUHS Medical School and the Aerospace Nursing Division at Brooks City-Base. The Tiger Team will continue to discuss initiatives by telecon in the future.

**Corporate and Sustaining Membership:** Dr. Sides announced she has recruited 8 new C&S members. She is also beginning to form a Dental Affiliate Group.

**Aerospace Medicine Students and Residents Organization:** AMSRO: Dr. Chase will remain another year as President of AMSRO and representative to Council. She has a number of initiatives to attract new students which will be coordinated with the ED.

May 17: At the May 17 joint Council meeting, Dr. Bagshaw called the meeting to order at 7:00 a.m.

**Aerospace Physiology Certification:** Gail Hathaway, Chair of the Board, gave the report of the Aerospace Physiology Certification Board. She will continue as the Council Representative to the Board. The new President of the Board will be Maj. David Welge. The following individuals sat for the Board and passed. They are Randy McCalip, Richard Folga, and Tyson Brundstetter. These three individuals and Tom Wheaton were also appointed as new members of the Board.

**General:** The Chair of the Fellows Group reported that the Fellows had approved a motion that the Chair of the Fellows Group would serve on the Council as an ex officio member. This would require a Bylaws change. Consequently, the issue will be reviewed by the Executive Committee and by the Council at the meeting in November.

President-Elect Richard Jennings received the gavel from the outgoing President, Professor Michael Bagshaw. Dr. Jennings made brief remarks regarding his plans for the coming year.

The next Executive Committee meeting will be August 24; Council will meet November 15, followed by the Scientific Program Committee meeting on November 16-17.

# Society of U.S. Air Force Flight Surgeons Awards



**SCHAFFER AWARD**--Lt. Gen George Peach Taylor, Surgeon General of the Air Force, receives the George E. Schaffer Award for career contributions to aerospace medicine from Col. Charles Fisher, President of the Society.



**UNGER AWARD**--Howard R. Unger Award for best published scientific article was presented to Lt. Col. James E. Boyd as lead author of "Psychological Test Profiles of USAF Pilots Before Training vs. Type of Aircraft Flown," published in *ASEM* 2005; 76: 463-8.



**GROW AWARD**--Malcolm C. Grow Air Force Flight Surgeon of the Year was presented to Capt. George J. Buse who was unable to attend the awards ceremony.



**OLSEN-WENGER AWARDS**--(Left photo) Olsen-Wenger Airman of the Year was presented to SrA Christian M. Adams; (Center photo) the Senior NCO Award to MSgt. Claude L. Weidow; (Right photo) and the NCO Award to TSgt. Timothy B. Wilder. Col. Charles Fisher (far left), CCMSgt. David Lewis (left) and Lt. Gen. George P. Taylor (far right), presented the awards.



## PRESIDENT'S PAGE, from p. 879.

ginning this summer, an article each month in *Aviation, Space, and Environmental Medicine* will include the option for CME and MOC credit. Special thanks to Drs. Rayman, Nunneley, and Webb, and to Sarah Pierce-Rubio, Pam Day, and Gloria Carter for completing this process. AsMA provides space at the Annual Scientific Meeting for the ABPM to provide the occupational medicine, general preventive medicine, and aerospace medicine recertification examinations. Eventually, AsMA may be able to provide practice improvement modules for Part IV of the MOC process.

Scheduled air carriers in the United States have an enviable record of safety. Medical practitioners are currently beginning to employ some of the operational procedures from aviation to reduce error, improve patient safety, and improve outcomes in medical practice. MOC programs are a step taken by the ABMS boards to help assure documentation of continued competency and practice improvement as physicians maintain their practice. You can be proud that AsMA is doing its best to facilitate this new process for its members.

## Resolution Passed at AsMA Business Meeting

The following resolution was passed at the AsMA Business Meeting, on Tuesday, May 16, 2006. The "Resolved" portion will be forwarded to the proper authorities.

### Aerospace Medical Association Resolution 05-03: Medical Contribution to Civil Aviation and Aerospace Accident Investigations

WHEREAS: Medical factors may contribute to civil aviation and aerospace mishaps and accidents; and,

WHEREAS: Medical factors may not be assessed in all civil aviation and aerospace accidents; and,

WHEREAS: On-site aeromedical participation in all phases of data collection, investigation, and assessment of civil aviation and aerospace accident causation is an essential component of a complete investigation; and,

WHEREAS: JCAO Annex 13 recognizes the contribution of medical data to accident investigation, and states the necessity for the appropriate collection of medical, toxicological, and pathological data; and,

WHEREAS: The appropriate collection of medical, toxicological, and pathological data will be conducted in cooperation, and on a not to interfere basis, with the jurisdiction of the legally assigned medical examiner;

THEREFORE, BE IT RESOLVED: That the Aerospace Medical Association strongly recommends a requirement for the active, on-site participation by a qualified and trained aeromedical specialist in accident investigation to ensure the appropriate collection of medical, toxicological, and pathological data, and to assist with the assessment of the causal and contributory medical factors, and resultant injuries, in civil aviation and aerospace accidents.

## Aviation Health Conference November 2nd and 3rd 2006 London, UK

The Annual Aviation Health Conference is an international 2 day conference that will attract delegates from all over the world tackling issues such as DVT, cabin air quality, cosmic radiation, inflight medical incidents, transmission of infectious diseases in aircraft, and Avian flu.

By bringing together key personnel in airlines, researchers, medical experts, industry associations, medical associations, unions, specialist lawyers, policy-makers, as well as the manufacturers and suppliers of "solutions" such as medical kits and filtration equipment, the conference will provide a valuable update on aviation health issues.

Conference will be chaired by: Air Marshal Sir John Baird, KBE, DL, MBChB, FRCPE, FRCSE, FFOM, FRAeS, DAvMed.

Key Speakers Include: Professor Michael Bagshaw - Director, Diploma in Aviation Medicine, School of Biomedical and Health Sciences, Kings's College, London; Claire Nurcombe, Technical Lead Engineer, Environmental Control Systems, Airbus; Professor Byron Jones, Kansas State University, Chair of ASHRAE SPC161, ACER; Dr Earle Perera, BRE.

To receive further information on this event email [info@quaynote.com](mailto:info@quaynote.com) or telephone + 44 (0) 20 8531 6464. Latest information can be found on our website [www.quaynote.com](http://www.quaynote.com).

## This Month in Aerospace Medicine History-- August 2006

By Walter Dalitsch III, M.D., M.P.H.

### Seventy-five Years Ago

*The stress of flying and maximum flight hour recommendations:* "Scientific medicine and its practitioners through all time have been recognized in every field of human endeavor. Their guiding advice has been sought and followed. No worthwhile movement has ever gone very far before appealing to the medical profession for assistance in the solution of its problems. One need but mention the Army, Navy, Commerce, War, Panama Canal, Sanitation, Public Health, etc. and at once the informed observe the part that is played by scientific medicine. No trade, industry, vocation or government can long exist or succeed without the assistance of skilled medical advisors.

"Aviation is relatively a new industry or vocation. No pilot can fly without a most thorough physical examination and a certification of physical fitness. Those who are following this new vocation are now beginning to realize that while physical fitness is essential in order to begin to fly, there is a greater problem involved, namely, how may the pilot continue to remain physically fit to fly.

"Transport pilots, flying day after day - 100 to 150 hours per month - are noting the mental and physical strain that is incurred. They are commencing to wonder how long they will last, how long it will be before they will be physically unsafe to take off a ship with passengers. How long before they will be grounded? As did the operating railroad train crews, these transport pilots realize that there are limits to the flying hours of physical efficiency and that when that limit is exceeded, they become unsafe pilots and further, they are subjecting themselves to an undermining strain that will, ere long, disqualify them for further flying. And so they turn to the medical profession for information and advice....

"We do know that certain eye, circulatory, neurological and functional defects make a man unfit, unsafe and disqualify him for a pilots' license. We have also observed that pilots whose flying hours extend into the thousands evidence certain variances from the normal when they come for their semi-annual or annual examinations. We are as yet in no position to render definite opinions thereon.

"We can, however, answer in a tentative form, subject to subsequent revision, as our experience broadens, some of the questions propounded. We are of the opinion that no transport pilot should fly more than 100 hours of daylight flying or 70 hours of night flying per month. We also believe that no transport pilot should, after a flight of 5 to 7 hours, take off again until he has had eight to ten hours of rest. We are likewise inclined to advise that a pilot should have one or two days a week in which he does no flying. There are other conditions that we are encountering and observing which are gradually molding our opinions and formulating definite view that we shall be able to express in the near future" (2).

### Fifty Years Ago

*Human control versus automation:* "It is believed essential to consider in some fashion

the fact that the human can vary his dynamic characteristics to complement the dynamics of the system he is controlling. This factor is certainly one of the outstanding capabilities of the pilot and represents a characteristic which is difficult to attain with automatic control" (1).

*Advantages of the turbo-prop aircraft:* "The development of the turbine propeller-driven type aircraft is a logical step forward in the progress of commercial aviation. This aircraft has certain advantages over conventional piston-powered types now in general use. Some of these are 1) ease of operation into and out of existing airport facilities; 2) absence of hazards to ground operating personnel from jet exhaust or jet intakes; 3) added speed; and 4) greater comfort to passengers and flight crews because of lowered noise and vibration levels" (3).

*Possible factors in pilot loss of consciousness (Royal Canadian Air Force Institute of Aviation Medicine, Toronto, Canada):* "During the past few years it is possible that some accidents of high performance aircraft have been due to precipitous unconsciousness of the pilot. Although hazards of high altitude flight have been reduced by the combined efforts of the aviation medical specialist and the engineer, unconsciousness of sudden onset may well be due to organic causes or a combination of normal physiological mechanisms. This type of unconsciousness is manifestly outside the province of the engineer. The detection of individuals who may become unconscious in the air is the responsibility of the flight surgeon and his standards of selection must improve with the developments in flight and the stresses they impose. Nine individuals were investigated at the Institute of Aviation Medicine in 1955 because they had lost useful consciousness during flight. The periods of unconsciousness varied from a few seconds to six minutes. Four of the nine were flying solo during the episode. One pilot did not report his first incident and had a second the following day. The extent of this problem in the RCAF is unknown and may be greater than the nine cases would suggest. No attempt has been made to make a survey of all aircrew to ascertain if unreported incidents are occurring but medical officers have been alerted to the possibility of such episodes....

"Nine cases of unconsciousness of ten seconds to six minutes, occurring in pilots while flying, have been observed and the patients investigated. Apart from hypoxia, and a few other external causes, the reason for unconsciousness is considered to be a summation of physiological factors.

"The factors noted in these cases are: 1) anger or anxiety; 2) probably hypoglycemia; 3) increased prolonged g; 4) probable hyperventilation; and 5) paroxysmal type of EEG. The condition could not be reproduced under laboratory conditions" (6).

*A gap in knowledge: the effects of linear acceleration on extraterrestrial otoliths:* "It is recognized that weightlessness cannot be subject to investigation at the Earth's surface, and so far only twenty or thirty seconds of flight in a parabola at zero acceleration (radial) has been possible. Apart from all the alteration of normal muscle-joint sensation that is known will exist - past pointing and so on, apart from illusions due to the altered action of gravity receptors, the otolith or to the semi-circular canals - nothing is known of the physiological effect of applying a linear ac-

celeration to such receptors conditioned to baselines of activity different from those pertaining in the Earth's gravitational field" (7).

### Twenty-five Years Ago

*Continued consideration of the age sixty rule (Wright State University School of Medicine, Dayton, OH):* "The calendar age of 60 is no longer medically justifiable as an upper age limit for airline pilots. Advances in geontologic studies, clinical medicine, and operational flight proficiency evaluations, now allow individual pilot assessments for health status and performance capability. Individualizing the career duration of pilots by eliminating the present age 60 upper limitation will enhance flight safety and efficiency as the highly qualified, experienced, and proficient older healthy pilots continue their productive careers" (5).

*Advantages of a one-man repressurization chamber (Naval Medical Hyperbaric Institute, Haifa, Israel):* "This report summarizes experience in the use of a Transportable Recompression Rescue Chamber (TRRC) for one man in the rapid initiation of treatment and evacuation in severe scuba diving accidents. An evacuation system is described which incorporates the centralized management of all diving accidents and standardized TRRCs capable of interlocking under pressure with the stationary medical chamber. Oxygen breathing capability in the TRRC allows the use of up-to-date U.S. Navy oxygen treatment tables. Included are 19 cases of Type II decompression sickness and pulmonary barotraumas with neurological manifestations, most of which occurred at remote diving sites with no nearby walk-in chambers. Case analysis includes distance and means of evacuation, delay in initiating therapy, time spent in TRRD, and initial and final outcome. Together, TRRCs and airborne evacuation to a stationary medical chamber insures a minimal delay between the onset of symptoms and the start of recompression therapy. The use of the TRRC is a prime factor in minimizing delay. No complications associated with the use of TRRCs have been encountered. Ideally, evacuation should be made in a pressurized two-compartment (for a victim and an attendant) chamber. However, if this is not available we strongly advocate the use of one-man pressurized TRRCs over unpressurized evacuation" (4).

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# LSBEB AWARD WINNERS FOR 2006

## The A. Howard Hasbrook Award Estrella M. Forster

This award recognizes an individual who has provided noteworthy data or design with respect to safety, survivability or crashworthiness relevant to aircraft or space vehicles. The 2006 A. Howard Hasbrook Award recipient was Dr. Estrella M. Forster for her myriad contributions toward defining the human responses near the edge of the physiological tolerance envelope to the hypoxia of altitude and hypoxia-ischemia of acceleration. Dr. Forster not only elucidated a wide array of psychophysiological responses to aerospace stress in an extensive inventory of scientific publications, she applied her findings to develop advanced, integrated life support systems. For the past 22 years Dr. Forster has been a stellar aerospace medical scientist across numerous aerospace safety and performance disciplines. Her in-depth investigations into the problems of human exposure to acceleration have been particularly extensive and remarkable. Dr. Forster meticulously developed and subsequently introduced the Aircrew Integrated Life Support Systems (AILSS) for Naval aviators in rotor and fixed-winged aircraft. These systems were chosen as select Future Naval Capabilities and Department of Defense (DoD) Defense Technical Objectives, recognizing them as distinctive in representing concurrent engineering, and were the first to demonstrate a head-to-toe systems integration approach to a combined altitude, thermal, acceleration, and chemical-biological threat environment.

Dr. Forster has served with distinction as Science Advisor to the Commander Third Fleet, San Diego, CA, where she utilized her aeromedical scientific expertise to advocate enhanced safety developments for operational naval aviation. Following her DoD service to Air Force and Naval Aviation, Dr. Forster joined the Federal Aviation Administration's Civil Aerospace Medical Institute (CAMI) Aerospace Medical Research Division in Oklahoma City, OK, where she has continued her journey in service to enhancing aerospace safety and scientific excellence. Numerous innovative technologies resulting from her work have application for the aviation and space communities and have already and will continue to expand the safe operational envelopes into environments where man was previously forbidden to safely enter.

As a Fellow of the Aerospace Medical Association, Dr. Forster has simultaneously been a tremendous contributor to her aero-

space medical profession, its institutions, its programs and its people on an international scale, as amply illustrated by myriad contributions to Aerospace Medical Association committees and organizations. She has been a tremendous supporter of the Life Sciences and Biomedical Engineering Branch, particularly in her service as representative to the Aerospace Medical Association Council. Dr. Forster is a preeminent aerospace medical scientist, an acceleration physiology expert, and a trail blazing aerospace research professional.

## Professional Excellence Award Robert M. Shaffstall

This award, presented in conjunction with the AsMA Annual Scientific Meeting, recognizes an individual who has produced outstanding research accomplishments or technical and/or research management achievements important to life sciences and/or biomedical engineering for a number of years.

This year's LSBEB Professional Excellence Award was presented to Robert M. Shaffstall for his lifetime career contributions across a wide spectrum of aerospace medicine, aerospace life science, and aerospace biomedical engineering. While serving a wide spectrum of the aerospace operational and medical communities from the United States Air Force, the Federal Aviation Administration, and the aerospace industry, Robert has made myriad contributions toward expanding the survivable envelope of man in severely stressful aerospace environments. As a Board Certified Aerospace Physiologist, Colonel Shaffstall led the USAF Bioenvironmental Service Corps. As a Fellow of the Aerospace Medical Association, he has been a dynamic leader in both the Aerospace Physiology Society (received the Prestigious Paul Bert Award for Physiological Research, served on the Board of Directors, Certification Committee, Awards Committee, Nominations Committee, Social Committee, and as Bibliographer) and Life Sciences and Biomedical Engineering Branch (honored with the Research and Development Innovation Award, served on the Awards Committee, Nominations Committee, and as President of the Branch). Robert has been recognized by the military numerous times for research contributions in life science and biomedical research, including the Air Force Scientific Achievement Award for Research and Development of Acceleration Protective Equipment along with military decorations, including the Legion of Merit.

Robert is a world-respected leader in physiological research and operational applications, where he has unique expert understanding of altitude physiology and required protective equipment and systems and an equally expert understanding of acceleration and required anti-G protective equipment and systems. Robert's applied research on the high-flow, ready pressure anti-G valve development was simply inspirational, setting the high-water mark for biomedical research in support of those who fly. His longtime leadership in aircrew physiological training and education, along with the practical applications of his research have undoubtedly saved untold lives and allowed man to explore previously unattainable envelopes in both the air and space environments.

Serving the full spectrum of aerospace operations, Robert has been a pacesetter in both military and civilian aerospace communities on a national and international scale. He has shaped the landscape of the last quarter century of aerospace operations through his many presentations, publications, reports, expert opinions, recommendations, lectures, addresses, and regulatory advisories. He has brilliantly led a multifaceted biomedical research team of physicians, scientists, engineers, and technicians at the Federal Aviation Administration's Civil Aerospace Medical Institute, traversing the complete frontier of flight safety research. Our human sojourns into the air and space realms are not only possible but also safe because of the accomplishments of Robert M. Shaffstall.

## Research and Development Innovation Award Nabih Alem

Dr. Nabih Alem was awarded the LSBEB Research and Development Innovation Award in recognition of his significant scientific and technical achievement in the area of prediction and mitigation of injury risk to aircrew and dismounted soldiers. Of his many career accomplishments, his leadership of (1) the working group that has led to the Final Draft International Standard entitled ISO/DIS 2631-5 "Mechanical Vibration and Shock - Evaluation of Human Exposure to Whole-Body Vibration - Part 5: Method for Evaluation of Vibration Containing Multiple Shocks" and (2) the multidisciplinary U.S. Army Medical Research and Materiel Command Science and

See LSBEB, P. 891.



**HASBROOK AWARD** -- LSBEB President, Lloyd Tripp (left), presents the A. Howard Hasbrook Award to Dr. Estrella Forster (right).



**PROFESSIONAL EXCELLENCE** -- LSBEB President, Lloyd Tripp (left), presents the LSBEB Professional Excellence Award to Robert M. Shaffstall, COL USAF (Ret), (center). The sponsor, Labelle-Autofluge, was represented by Charles Hutton (right).



**R&D INNOVATION** -- LSBEB President, Lloyd Tripp (left), presents the Research and Development Innovation Award to Dr. John Crowley (center), accepting for Dr. Nabih Alem who could not attend. The sponsor, David Clark Company, is represented by Daniel Barry (right).

LSBEB, from p. 890.

Technology Objective (STO) IV.ME.2001.01, "Injury and Performance Consequences of Increased Head-Supported Mass" are highlighted for this award.

Dr. Alem is the Senior Biomedical Research Engineer at the U.S. Army Aeromedical Research Laboratory (USAARL), Aircrew Protection Division, Injury Biomechanics Branch. Dr. Alem received his Bachelor of Science degree in 1967 and his Master of Science degree in 1969 from West Virginia University. After receiving the Doctor of Philosophy degree in Mechanical Engineering from the University of Michigan in 1974, Dr. Alem worked as a research scientist at the Highway Safety Research Institute at the University of Michigan until 1986. Since that time he has conducted several major studies at USAARL into various aspects of human tolerance, ranging from repeated shock to helicopter crash impact and neck injury. He currently manages a large research program into the injury aspects of increased head-supported weight and is the U.S. Army's subject matter expert on the effects of whole body vibration and repeated mechanical shock on humans.

Dr. Alem has completed a highly successful program of research into the biomechanical and physiological responses of human volunteers to repeated-shock signatures, which are typically found in Army tactical ground vehicles (TGVs). Because of the unique nature of these signatures, they have not been adequately addressed by current national or international standards on whole-body vibration (WBV). U.S. Army soldiers have, for many years, been exposed to potentially dangerous levels of vibration and repeated shock as they perform their military jobs. In fact, up to 50 percent of tactical ground vehicle drivers have reported blood in their urine.

Dr. Alem, recognizing the hazard of vibration and repeated shock and seeing the solution, embarked on a 3-year program of research with colleagues at USAARL. The immediate outcome of the USAARL research program was a dose-response model that has been used by Dr. Alem for health hazard assessment (HHA) of repeated shock. His careful interpretation of ground vehicle movement data has earned him the greatest respect from government researchers and academic peers as well.

Taking the HHA methodology to the next level, Dr. Alem single-handedly convened a panel of experts in the field and supervised and coordinated the drafting of an International Standard for HHA assessment of repeated jolt. This method incorporates dynamic response models for mechanical shock in the x, y, and z directions and a biomechanical model to estimate internal forces in the lumbar spine. It also includes a novel dose-response model to represent cumulative stress and an injury risk model to estimate the probability of injury based on strength of the spine. Further, a software tool was developed under Dr. Alem's direction to assist in the assignment of risks from repeated mechanical shock in TGVs.

The proposed standard, written by Dr. Alem, ISO 2631-5, "Mechanical Vibration and Shock — Evaluation of Human Exposure to Whole-Body Vibration — Part 5: Method for Evaluation of Vibration Containing Multiple Shocks," reached the Final Draft International Standard Stage (FDIS) in less than 3 years, a record time. By a vote of 14 nations (to 1 na-

tion), the Final Standard was approved in December 2003, and has since been published.

Dr. Alem's new, militarily relevant method replaces the outdated common ISO 2631-1 that assesses WBV in Army tactical vehicles. The new HHA method is improving the validity of the HHA process, and is applicable to a variety of vehicle scenarios. The methodology has now been successfully transitioned to the Center for Health Promotion and Preventive Medicine (CHPPM), and has been a real success story. Dr. Alem's perseverance with the international standards process and difficult negotiations with colleagues from around the world exemplifies his professionalism.

This research has materially improved the Army's technical capability for measuring repeated mechanical shock on humans in all classes of vehicles and has established a scientific basis for technical improvements in the rides of all military and civilian vehicles. The prevention of injury as a result of repeated mechanical shock as the result of this standard additionally supports the National Occupational Research Agenda (NORA) of the National Institute for Occupational Safety and Health (NIOSH) on low back disorders and musculoskeletal disorders.

Dr. Alem's most recent work on neck injury resulting from supporting head supported mass has resulted in the development of a web-based interactive tool. This integrates injury and performance predictions for arbitrary head mounted equipment configurations and enables helmet and helmet mounted display designers to evaluate options to minimize injury potential and maximize performance capabilities for a variety of vehicle and dismounted soldier environments. The tool incorporates both traditional empirical models and a finite element model of the cervical spine and head.

### Ross McFarland Student Award Michael F. Harrison

The Ross McFarland Student Award is given each year to the best student paper accepted for presentation at the annual meeting of the Association reporting a significant achievement in biomedical engineering. The 2006 recipient was Michael F. Harrison, Faculty of Kinesiology & Health Studies, Regina, Saskatchewan, Canada. His paper, entitled *Comparison of CH-146 Cockpit Side on Neck Musculature Responses to NVGs as Assessed by NIRS*, was presented in the poster session on Tuesday afternoon.



**MCFARLAND STUDENT AWARD** -- Lloyd Tripp, LSBEB President (left), presents the Ross McFarland Student Award to Michael Harrison (center). The sponsor, General Dynamics AIS, is represented by Chris Albery (right).

### Affiliate Organizations of the Aerospace Medical Association

Aerospace Medical Assoc. of Korea  
Aerospace Medical Assoc. of Taiwan  
Aerospace Medical Assoc. of Philippines  
Aerospace Medical Student & Resident Organization  
Alliance of Air National Guard Flight Surgeons  
Assoc. of Aviation Medical Examiners, UK  
Assoc. of USAF Reserve Flight Surgeons  
Aviation Medical Society of Australia and New Zealand, (Aust. Inc.)  
Aviation Medical Society of Australia and New Zealand, (NZ. Inc.)  
Assoc. of Space, Naval, Extreme, and Environmental Med. of Russia  
Brazilian Department of Civil Aviation  
Canadian Aerospace Medicine & Aeromedical Transport Assoc.  
Civil Aviation Medical Assoc.  
Corporate and Sustaining Members  
French Aerospace Medical Assoc.  
German Society of Aviation and Space Medicine  
Greek Aerospace Medical Assoc.  
Hellenic Aerospace Medical Society  
Iberoamerican Assoc. of Aerospace Medicine  
Israeli Society of Aerospace Medicine  
Italian Aviation and Space Medicine Assoc.  
Japan Society of Aerospace and Environmental Medicine  
Romanian Society of Aerospace Medicine  
SAFE Association  
Slovenian Aerospace Medical Assoc.  
Society of NASA Flight Surgeons  
South African Aerospace Medical Society  
Spanish Society of Aviation and Space Medicine  
Space Dermatology Foundation  
Swedish Aviation and Naval Medical Assoc.



**PRESIDENT'S GAVEL AND PLAQUE** -- (Top photo) Outgoing LSBEB President Lloyd Tripp hands over the gavel to incoming president Lloyd Tripp. (Bottom photo) William Fraser presents Lloyd Tripp with the past president's plaque.

## SPACE MEDICINE ASSOCIATION NEWS

### The Young Investigators Award

*K. Jeffrey Myers, M.D.*

The Young Investigators Award is a competition intended for those making their first major efforts into Aerospace Medicine Research. To compete for this award, contestants must be making their first presentation of a scientific paper or poster at an AsMA meeting (excluding cases presented at Grand Rounds as a student resident); they must appear as first author on the paper; and they must prepare and submit a manuscript for judging. Finalists compete in a second phase of competition at the AsMA Meeting involving further evaluation of their presentation and interviews. The potential applicability of the findings to Space Medicine and the degree of involvement of the student in the project are major considerations.

The finalists in this year's competition, selected from 197 contestants, are richly talented and diversified. The winner of the 2006 SMA

YIA is Cadet 1st Class Donald T. "Tommy" Aretz. His paper is entitled "The Effects of Tactile and Visual Feedback on UAV Landings." Tommy is majoring in Human Factors at the U.S. Air Force Academy where he is the top ranking Cadet in his class. Human Factors play an ever increasing role in spacecraft and mission design. The challenges of even designing, much less flying an unmanned aerial vehicle on another world are daunting. But it is our job to be forward thinking. An astronaut utilizing a UAV to help plan and prioritize his/her exploration of a new world would likely benefit from such an adaptation. Cadet Aretz put in many hours on this project, even in addition to the staggering demands the Academy places upon its students. His instructors report that Tommy spent more time in the laboratory than any of the other Cadets. These kinds of efforts have come to characterize the Young Investigators Award.

The first runner up is Capt. Miranda Hancock, from the Uniformed Services University of the Health Sciences in Bethesda MD. Her paper is entitled "The Effects of Changing the Maximum Altitude from 43,000 to 35,000 feet in USAF Altitude Chamber Training." The other finalists include: Wen-Chin Li, a Ph.D. candidate at Cranfield University, United Kingdom, (he is on sabbatical from Taiwan); LT Trina Gates, Naval Aerospace Medicine Institute, Pensacola, FL; Jannemiek Sonneveld, an Optometrist from the Royal Netherlands Air Force; Yoshitaka Sada, Ph.D., Aeromedical Laboratory, Japan Air Self-Defense Force, and Robert Sanders, M.D., University of Pittsburg, in collaboration with the National Space Biomedical Research Institute/NASA Johnson Space Center.

I would like to thank the members of the YIA committee (without whom this competition would not be possible!): Drs. John Darwood, Lloyd Tripp, Smith Johnston, Rich McCluskey, Art Arnold, Lu Moreno, and Vernon McDonald.



**YOUNG INVESTIGATORS AWARD**--Jeffrey Myers (right) presents the YIA to Dr. Brian Self (left), a Professor from the USAF Academy, who accepted it for the winner, Air Force Cadet Donald T. "Tommy" Aretz.



**PRESIDENT'S AWARD**--Dwight Holland (President, left) giving an appreciation award to Jeffrey Myers (Chairman of the Young Investigators Award Committee, right) for his long dedication and support to the YIA.



**STRUGHOLD AWARD**--Smith Johnston (Past President, right) presents the Hubertus Strughold Award to Jeffrey R. Davis (left).

This year something very special happened with regard to my involvement with the YIA. As you are aware, I have been doing this for a number of years. It is a great reward to watch these Young Investigators grow within our organization as they continue to make contributions to our science. Just this meeting, LCDR Deborah White, PhD, was elected an AsMA Fellow. LCDR White was one of the very first Young Investigators I had the privilege of working with in this competition and I believe the very first from any competition I coordinated to make Fellow. She is certainly a keen example of how Young Investigators become our future! Congratulations to her and to all the Young Investigators making their way in the Aerospace world!

### The Hubertus Strughold Award

*by Smith L. Johnston III, M.D.*

The Hubertus Strughold Award is presented each year to a member of the Space Medicine Branch for dedication and outstanding contributions in advancing the frontiers of Space Medicine; for sustained contributions to furthering the goals of the Space Medicine Branch; and who best exemplifies the ideals of Hubertus Strughold. The recipient of the award is selected by the Awards Committee. Nominations for this Award will be made by the members of the Executive Committee and by former recipients of the Hubertus Strughold Award.

This year's recipient is Jeffrey R. Davis. Dr. Davis was born in Modesto, CA, on April 8, 1954. He received his Bachelor of Science in biology Phi Beta Kappa from Stanford University in 1976; his Doctor of Medicine from University of California at San Diego in 1980; was a Regents Scholar; completed his Aerospace Residence and Master of Science at Wright State University in 1983; and then received the Julian E. Ward Memorial Award for Superior Performance in an Aerospace Medicine Residency from the Aerospace Medical Association in 1985.

Dr. Davis began his flight surgeon career at NASA - Johnson Space Center, in the Flight Medicine Clinic, 1984-1986. During that time he authored the Most Outstanding Paper by a Young Investigator, Aerospace Medical Association, Space Medicine Branch, 1984; and received NASA Awards for Revising Medical Briefings for Shuttle Crews, 1986; and for Participation in the Challenger Accident Investigation (51L), 1986, with development of the escape team report.

Jeff was Chief, Flight Medicine Clinic - NASA - Johnson Space Center from 1986-1987; Chief, Medical Operations Branch NASA - Johnson Space Center from November 1987 - July 1991; supervised the Flight Medicine Clinic and Dental Clinic, Shuttle Medical Operations, Hazardous Manned Test Support,

See *SPACE MEDICINE*, p. 893

SPACE MEDICINE, from p. 892.

Occupational Medicine, Environmental and Industrial Medicine, Employee Assistance Program, Space Station Medical Operations and Health Maintenance Facility development, and development of the medical requirements for the Space Exploration Initiative (SEI). He provided comprehensive diagnostic, therapeutic and preventive medical expertise and as an Aerospace Medicine Consultant.

During this time he received: the Exceptional Service Medal, NASA Johnson Space Center, December 1988; Harold B. Ellingson Literary Award, for the best paper by an Associate Fellow, from the AsMA Associate Fellows Group, May 1989; NASA Group Achievement Awards for STS-26 Return to Flight in 1989, Lunar/Mars Study in 1990, and for his research on the Treatment of Space Motion Sickness in 1991; and Silver Snoopy Award from the Astronaut Office for Outstanding Support to the Space Shuttle Program, July 1991.

From 1991 to 1994 Jeff left NASA and became the Corporate Medical Director for American Airlines, Inc. His responsibilities included: supervision of six Area Medical

Directors, 112 full-time Medical and Employee Assistance Program personnel, and 11 medical clinics; Federal programs for OSHA and DOT/FAA drug testing; and pre-placement exams for pilots, flight attendants, other employees. During this time he received the Louis H. Bauer Founders Award given annually for the most significant contribution in aerospace medicine by the Aerospace Medical Association, May 1992; and in 1994, the C. Everett Koop National Health Award Nomination, for American Airlines Health Promotion Program. In November 1994 he established recovery efforts and AFIP identification for an American Eagle crash in Indiana involving 68 passengers.

He entered Academia in February 1995 (through the present) as a Professor, University of Texas Medical Branch. He also served as Director of Preventive Medicine Residency Office; Director, Corporate Health Consortium; Director of Aerospace Medicine Residency from 1997 - 1999; and is a former Director, Preventive, Occupational and Environmental Medicine and the Health and Safety Services.

July 1, 2001, he returned to NASA as

Assistant Associate Administrator for Crew Health and Safety. He was responsible for the development of space medicine including requirements, policy, and budget and for advice and recommendations to the Associate Administrator for the Office of Space Operations.

On September 9, 2002, Dr. Davis became the Director, Space Life Sciences, NASA-JSC, with assets of 200 civil servants, 800 contractor personnel, and \$240 million in overall funding. He is responsible for science and health care leadership to promote the safety, health, and performance of human space exploration. He leads us through the Space Shuttle Columbia and hurricane disasters by establishing comprehensive response teams for life sciences, including recovery and investigation teams, critical incident stress, clinical and family support teams, and International Space Station (ISS) re-planning teams.

Dr. Davis is an instrument rated Private Pilot with over 600 hours; over 300 hours T-38 (NASA), Shuttle Training Aircraft, Zero-G Aircraft, and MD-80, and 727 Jump Seat Time.

It gives us great pleasure to award our Branch's Highest Honor to Jeffrey R. Davis.

## Society of U.S. Naval Flight Surgeons Awards and Meeting



**LUEHRS AWARD**--SUSNFS President CAPT Mark Edwards presents the Richard E. Luehrs Memorial Award for Navy Flight Surgeon of the Year Award to LT Alexander B. Galifianakis.



**CARTER AWARD**-- The Sonny Carter Memorial Award was presented to CDR William D. Agerton (left).



**GRAYBIEL AWARD**--The Ashton Graybiel Publication Award was presented to LCDR G. Merrill Rice.



**MITCHELL AWARD**--The Robert E. Mitchell Award for Lifetime Aerospace Medicine Contributions was presented to CAPT Ellsworth J. Sacks.



**LUNCHEON ADDRESS**--(Left) VADM Donald C. Arthur addresses the Society of Naval Flight Surgeons luncheon. (Right) VADM Arthur received a signed drawing from artist Hank Caruso.



**BUSINESS MEETING**--(Right photo) At the Society of U.S. Naval Flight Surgeons business meeting, CAPT Frank Chapman addressed the group. Then, CAPT William Ferrara, Director of Training at the Naval Aerospace Medical Institute, and CAPT John Lee, Head of the Aeromedical Division of the Naval Safety Center, discussed the roles and delineation of duties.



Send information for publication on this page to: **Janet L. Sanner, RN, MSN, COHN-S, CCM**  
[janet.sanner@faa.gov](mailto:janet.sanner@faa.gov)

## AEROSPACE NURSING SOCIETY NEWS

### Message from the New President



I would like to take this opportunity to thank all of the Aerospace Medical Association and the Aerospace Nursing Society (ANS) members who provided such an example of teamwork and interactive communication at the 77<sup>th</sup> Annual Scientific Meeting in Orlando, FL. This demonstrates support and is much appreciated. I am honored to represent ANS and I look forward to a very productive year with teamwork and effective communication among our members.

The Aerospace Nursing Society is a dynamic constituent organization of the Aerospace Medical Association. Our membership includes nurses and technicians from the U.S. Air Force, Army, Navy, in addition to civilian and international members from Australia, Canada, and Korea. One of our goals for this year is to expand our web site and focus on new contacts in order to recruit new members into the organization. Based on the outcome of an AsMA Membership Questionnaire that our organization compiled in 2005, we were provided updated information by our current members. We are ready to engage in adding value to our organization by encouraging members to submit abstracts and articles, stimulate/retain membership, and offer more activities that support the needs of the group by providing certification in the nursing education relevant to the organizational members.

We were privileged to have as our luncheon guest speaker Col. Regina C. Aune, Ph.D., RN, USAF, NC. Col. Aune is the Chair of International Expeditionary Education and Training Department, USAF, School of Aerospace Medicine, Brooks City-Base, TX. She graduated with a BSN from St. Johns College of Cleveland, OH. Col. Aune was commissioned a first lieutenant in the Air Force on 24 Oct 1972 and entered active duty on 6 Jan 1973. In 1974, she was reassigned to the 10th Aeromedical Evacuation Squadron, Travis AFB, CA. Following her flying assignment, she remained at Travis and was assigned first to the 2nd Aeromedical Staging Flight and then to the David Grant USAF Medical Center. In 1977, she began fulltime studies as an AFIT student pursuing a Master's degree at the University of California, San Francisco. After obtaining her Master's degree, Col. Aune was assigned as the Nursing Education Coordinator at the USAF Hospital, Hill AFB, UT. The theme emphasis was to be

passionate about whatever you do, and you will be successful in your life journey.

We would also like to thank Maj. Gen. Peach Taylor, USAF, MC, the Air Force Surgeon General and Brig. Gen. Bruce Green, USAF, and David P. Millett, M.D., M.P.H., FAA Southern Regional Flight Surgeon, for taking time from their busy schedule to participate in our luncheon. These men have provided motivation to ANS by example by being expert role models. We look forward to seeing them next year in New Orleans in 2007.

The Sarah Beard Award Winners were given verbal recognition during the luncheon. These young flight nurses have demonstrated stellar performance during flight school. The first year of their membership to AsMA is paid by (Ret) Col. Sarah Beard. The 86<sup>th</sup> has a great track record. Honor Graduates from the 86th AES included Capt. Karen T. Hines (DG), MSgt Edwin Maldon-ado (DG), Capt. Mark C. Gosling (DG), 1Lt. Kristin R. Keller (DG), Capt. Angela D. Manning (DG), SSgt. David Duthu (DG), Capt. Darcy L. Mortimer (DG), and 1Lt Carla M. Sutton (DG).

The Hans Krauer Junior Flight Nurse of the year award was presented to Captain Kristen R. Keller. The BG E.A. Hoefly Award (recognizes an AsMA/ANS member for significant contributions to Flight Nursing) was presented to Lt. Col. Guylene D. Kriehg-Flemming, USAF. The Edward R. Iverson Sr. Allied Health Professional of the Year Award (technical level) was awarded to Technical Sgt. Rodney L. Lindsey. The award recipients have demonstrated stellar performance while providing service to the United States of America. We honor them for their contributions.

The annual business meeting was held by ANS members after the luncheon. All of the offices, committees, and member-at-large vacancies are now filled. ANS can move for-



**Aerospace Nursing Society Members at the AsMA meeting in Orlando.**

ward to work together as aligned with the parent organization to accomplish the goals that we established during the 77<sup>th</sup> Annual Scientific Meeting in Orlando.

**Respectfully submitted,**  
**Janet L. Sanner, RN, MSN, COHN-S, CCM**  
**President, Aerospace Nursing Society**

### MEETINGS CALENDAR 2006-2007

**September 10-14, 2006, Bangalore, India.** 54th International Congress of Aviation and Space Medicine. This meeting is being hosted by the Indian Society of Aerospace Medicine. A preliminary registration form may be found at <http://www.isam-india.org/conference44/newreg.php>.

**October 11-12, 2006, Arlington, VA.** Homeland Defense Journal Training Conference: "Preparing for Pandemic Influenza." Registration info: Pamela Greenstein, [pgreenstein@marketaccess.org](mailto:pgreenstein@marketaccess.org); (703) 807-2758. Other info: [www.homeland-defencejournal.com](http://www.homeland-defencejournal.com).

**October 16-20, 2006, Moscow, Russia.** 5th International Scientific and Practical Congress. For more info, please call Mr. Valentin Vlasov at 095-953-5842, or Mrs. Dina Valeeva or Mrs. Natalia Mitrokhina at phone/fax 095-239-9851; or e-mail [medic@mak.ru](mailto:medic@mak.ru), attn: Mr. Vlasov V.D. or e-mail [infan.ltd@relcom.ru](mailto:infan.ltd@relcom.ru), attn: Mr. Gabbasov I.Z.; or by fax at 095-953-3508.

**October 19-21, 2006, Kauai, Hawaii.** US/Japan Panel on Diving Physiology, Diving Technology, and Aerospace Medicine biennial meeting. Abstracts are to be submitted to Don Chandler at [donchandler@uhms.org](mailto:donchandler@uhms.org) or submitted online at [http://www.uhms.org/Meetings/US\\_JAPAN/UJNR\\_06.ASP](http://www.uhms.org/Meetings/US_JAPAN/UJNR_06.ASP).

**October 23-25, 2006, Reno, NV.** SAFE Association 44th Annual Symposium. For more info: Ms. Jeani Benton, (541) 895-3012; [safe@peak.org](mailto:safe@peak.org); [www.safeassociation.org](http://www.safeassociation.org).

**November 2-3, 2006, London, UK.** Aviation Health: Tackling the Issues. Full details can be found at [www.quaynote.com](http://www.quaynote.com) or contact Alison Singhal via e-mail or phone +44 (0) 20 8374 6474.

**November 8-12, 2006, Huatulco, Oaxaca, México.** XXIII International Meeting of Aerospace Medicine, sponsored by the Mexican Association on Aviation Medicine, A.C. General Theme: Advances in Clinical Aerospace Medicine. For additional information, please contact: [www.amma.org.mx](http://www.amma.org.mx) or [lamezcua@att.net.mx](mailto:lamezcua@att.net.mx)

### Join the Aerospace Nurses Society!

Dues are just \$10 (\$5 allied health professionals). For further information, contact:  
Diane Fletcher, ANS Treasurer  
PSC 2, Box 10849,  
APO AE 09012.  
[Diane.fletcher@ramstein.af.mil](mailto:Diane.fletcher@ramstein.af.mil)

## Is There a Doctor On Board?

Susan E. Northrup, M.D., M.P.H.

Many healthcare providers dread the over-head announcement "Is there a doctor or healthcare professional on board?" Most responding clinicians are unaware of their responsibilities, liabilities, or even what equipment is on board. This column will discuss the available medical supplies on board most U.S. air carriers and some of the legal issues involved for medical personnel.

So, what is the big deal?

The traveling public is changing. Historically, most fliers were business travelers, usually healthy 20-65 yr olds. Now, leisure travel predominates the airline industry. The causes of this change are diverse but include cost containment in business, an increase in telecommuting, and affordability combined with an increase in expendable income in the U.S. The result is more people are traveling, most notably the very young and retired individuals.

According to the U.S. Department of Transportation 2005 U.S. Airline Scheduled Services data, there were 11,517,000 departures with 738,568,000 emplanements, or people boarding airplanes. The domestic to international ratio was 10 to 1. Despite the number of people traveling and the broader age range, medical events are relatively rare. A review of the medical literature and airline data reveals there is a medical event per 1,000 to 1,400 departures, resulting in about one diversion per 5,000 departures. On average, there is one fatality per million passengers.

In 1998, the Aerospace Medical Association

polled its members regarding what kind of events they had responded to inflight. The top five diagnoses were cardiac, syncope, seizure, asthma, and diabetes related. Reviewing airlines' incident reports shows a slightly different top five. They were cardiac, loss of consciousness or syncope, musculoskeletal (turbulence related, falling, being struck by an object, and lacerations were most common), seizures, and respiratory events. The next five were gastrointestinal distress, blood pressure abnormalities, obstetric issues, strokes, and psychiatric events.

OK, so people get sick. What are a responder's responsibilities and available assets?

On U.S. air carriers, onboard medical equipment exists in several different packages. They are seldom all stored together, but are distributed about the cabin. Each airline has a slightly different configuration of medical supplies, but will meet the minimum FAA required items. On average, there will be a certified medical professional on 85-90% of flights. The responders will be asked to provide proof of their credentials and file a report of the event. Responding medical professionals are protected by the Aviation Medical Assistance Act, but should remain within their own credentials. Most air carriers have medical consultation on the ground available via seat back phones or radios. Be warned, asking the passenger or airline for payment could invalidate the protections of the Aviation Medical Assistance Act.

The most robust medical kit on board is the Enhanced Emergency Medical Kit (EEMK). Because an aircraft may not be dispatched for flight without a closed and sealed EEMK on board, most aircraft are stocked with two. Most EEMKs are stocked with the FAA minimum requirements, although they can be supplemented. The contents are typically placarded on the outside, with the contents grouped by function. The typical contents are (quantities in parentheses):

### Pre-filled syringes:

Atropine 0.1 mg / 10 ml (2)  
Diphenhydramine 50 mg / 1 ml (2)  
Dextrose 50% / 50 ms (1)  
Epinephrine 1 : 1,000 (2)  
Epinephrine 1 : 10,000, 0.1 mg / ml (2)  
Epinephrine 0.3 mg auto-injector or "EpiPen" (1)  
Lidocaine 20 mg / cc, 5 cc (2)

### Capsules and tablets:

Aspirin 325 mg tablets  
Acetaminophen 325 mg tablets  
Diphenhydramine HCL 25 mg tablets  
Nitroglycerine tablets 0.4 mg

**Inhalants :** Albuterol inhaler 17 g (1)

### Additional Items:

Non-latex gloves  
Needles : 18 ga, 20 ga, 22 ga (2 each)  
Syringes : 1-1cc, 2-5cc, 1-10cc  
0.9% Normal Saline 500 ml (1)  
IV set with 2Y connector (1)  
IV catheters: 18 ga X 1-1/2", 20 ga X 1-1/2",

22 ga X 1" (1 each)  
Alcohol prep pads  
Adhesive tape  
Trauma shears  
Tourniquet  
Sharps container  
Stethoscope  
BP cuff  
Oropharyngeal airways: graded from pediatric to adult  
Masks: pediatric, small adult, large adult (1 each)  
One way CPR valve  
Self inflating manual resuscitation device (1)  
Tubing

There will also be a source of oxygen on board but not contained in the kit.

To supplement the EEMK, there is a first aid kit containing basic bandaging materials, splints, gloves, and a pocket mask. There may also be routine supplies in the galley - non-aspirin, antacids, gloves, and bandages. At least one universal precaution kit is considered necessary as well.

Since the airplane cannot take off without a sealed EEMK on board, many airlines have elected to stock a medical accessory pack. They usually contain a biohazard clean-up kit with a personal protection kit, a pocket mask, sharps container, thermometer, glucometer, surgical masks, stethoscope, BP cuff, and more gloves. As this kit is not required, there will be more variability in the contents between airlines.

Finally, an automated external defibrillator was mandated in the U.S. for most scheduled air carriers. It is quite basic and is not officially meant for monitoring. You can expect to find items necessary for getting to the afflicted passengers skin, defibrillator pads, gloves, and an extra battery.

The airline personnel, pilots, and cabin crew will do everything they can to assist the passenger and medical responders. However, they will have limited medical training and will rely heavily on the responding professionals. The medical responders may recommend or be asked for an opinion on the advisability of diverting. Even if they feel an immediate diversion is warranted, the aircraft captain has the ultimate authority. He or she may have sound operational reasons for delaying a divert - airport capabilities, fuel, aircraft weight, or weather to name a few.

In conclusion, medical professionals responding to ill passengers will have a range of basic equipment and ground based consultation to assess and treat a passenger. Medical events happen every day. An awareness of capabilities will assist the responding provider in responding.

**The online version of *Aviation, Space, and Environmental Medicine* is now available to Members for FREE. Simply go to [www.asma.org](http://www.asma.org), log into the Member Home page, and follow the link to the online journal, available through Ingenta.**

The Civil Aviation Medical Association  
Invite you to attend their:

## CAMA ANNUAL SCIENTIFIC MEETING

October 5-7  
Ottawa Marriott  
100 Kent Street  
Ottawa ON K2P 5R7  
Phone 613-569-9442

### Theme: Bringing the World Together

Speakers slated to speak include:

- The Minister of Transportation Canada
- Tony Evans, M.D., ICAO
- Clayton Cowl, M.D., Mayo Clinic
- Frederick Tilton, M.D., U.S. Federal Air Surgeon
- Douglas Ivan, M.D., U.S. Air Force
- Aviation Ophthalmologist
- John Hastings, M.D., FAA Neurology Consultant
- Mike Muhm, M.D., Boeing Corporation
- David Bryman, D.O., CAMA President
- AND MANY MORE

There will also be a full social agenda!  
Please Join Us!

Send information for publication on this page to: **Dale Orford**  
15516 E Acacia Way,  
Fountain Hills, AZ 85268  
480-837-7919; dorford@cox.net

## Reflections on Orlando

Wing members were treated to yet another wonderful and well-run meeting - this time in Orlando, FL. Congratulations to Trish Trifilo and her very dedicated team for putting so much effort into providing us with a most enjoyable week.

Our meeting kicked off with our reception on Monday, where we were pleased to welcome a dozen new members to our group. They were a very energetic bunch and we quickly put them to work distributing the favors. It was a great way for all of us to meet them. We were also honored to welcome Dr. Chuck Berry, who shared with us his memories of his wife, Del, and told us of how they had met when they were very young. Del had been the shy of the twin sisters, and Dr. Berry formed a plan to get to know her by striking up a friendship with her sister. His strategy worked and he and Del shared a very long and happy marriage. He also told us how much the Wing had meant to Del, of the many friendships they had both made in the Aerospace community, and that we were very much an extended family. It was a sentiment we all shared!

On Tuesday, we set off on our all-day tour to the Winter Lake Park area. Although we were treated to a great deal of Florida's "liquid sunshine," the unremitting rain could not dampen our enthusiasm in reconnecting and renewing our many friendships. Our tour featured a quick boat ride to view some of the winter homes of the rich and famous before we headed indoors to the Charles Hosmer Morse Museum of American Art. There we were able to browse at our leisure the many wonderful glass works of Louis Comfort Tiffany, as well as his drawings and paintings. Following the Museum tour, we strolled the Park Avenue area and shopped to our hearts' content. Many of us came home with quite a few bargains.

Our meeting was not without excitement as one of the four towers at the Caribe Royale

was evacuated in the middle of the night when the fire alarm was set off. We were all forced to walk down the many flights of stairs then climb back up when the "all clear" was given. No sooner had we settled back into bed when the whole procedure was repeated! Lorna Brown is to be commended for trekking down from the 9th floor twice. When Stan Mohler was asked why he stopped to put on his AsMA badge, he stated, "If I die in the stairwell, at least they will be able to identify me!" Thankfully, the emergency turned out to be a false alarm.

Wednesday saw us having lunch at the Wolfgang Puck restaurant in Downtown Disney, where we also held our annual business meeting. The food was great and we were able to relax and visit before getting down to the task of installing the new board and voting on the bye-law changes. Members were delighted with the wonderful, original watercolor drawing by Susi Bellenkas of King Ludwig's Castle, the model for Disney's Cinderella castle, which graced our luncheon program. Susi graciously autographed many of the copies for our members.

One of the highlights of our meeting was our half-day tour on Thursday to the Tosohatchee State Reserve and the Lone Cabbage Fish Camp. At the State Reserve, we enjoyed a short walk guided by a park warden who told us about the many different plants and flowers native to Florida. We were able to see a variety of bromeliads, as well as various pine and oak trees and sawtooth palms. Our tour guide was very knowledgeable as to the medicinal uses of these native plants. Our visit to the fish camp included a ride on an airboat where we were all very excited to see so many alligators up close and personal - from the safety of the boat! Alligators even lined the ditches along the highway - it was easy to see why they often come into contact with humans as new housing is being constructed right up against their habitats. At the camp we had the opportunity to sample deep fried alligator - a Florida delicacy. We were also delighted by the many different long legged



**FALSE ALARM!--**Jane Mitchell, Els Salisbury, and Lorna Brown wait for the "all-clear" during the fire alarm.

cranes, egrets, and storks, and especially the graceful great blue herons which inhabit this area.

Our meeting was filled with enjoyable activities, but it is the friendships our members make which bring us back year after year. As Dr. Berry noted, we are an extended family, and we were very pleased to welcome back several of our members who had been unable to attend our meetings in recent years. We were especially delighted to welcome back Deb and Fanancy Anzalone, who brought their daughter Tracy with them. We had the opportunity to see the progress Tracy has made since her injury in Italy. Deb wanted to express her gratitude to the Wing members for their continued support and friendship, and said that she was surprised that so many of us have told her that we now all feel a part of the extended Anzalone family after reading her daily update on Tracy's web site - prayersfortracy.com.

## Thank You

Thank you to Grace Park Lee for once again providing a beautiful floral arrangement for the Wing's hospitality room. Her generosity is greatly appreciated and the flowers added a cheery note to our decor.



**LUNCHEON--**Wing members in Downtown Disney.



**RECEPTION--**Dr. Chuck Berry with Trish Trifilo at Wing reception.

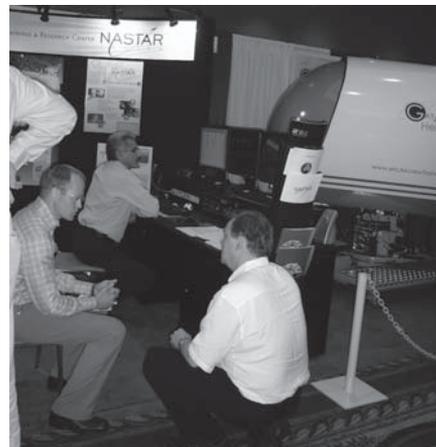
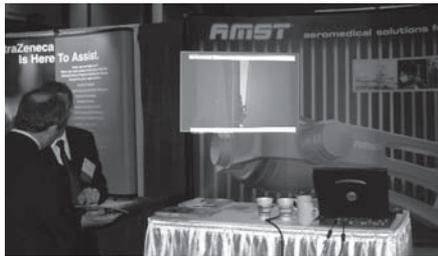
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**Aerospace Medical Association**  
**320 S. Henry Street**  
**Alexandria, VA 22314-3579**

## NEWS OF CORPORATE MEMBERS

### Exhibitors at AsMA's 77th Annual Scientific Meeting in Orlando, FL



**IMAGINEERING**--Jerold Kaplan (left) receives a plaque from Marian Sides for his presentation on "Concepts to Reality at Walt Disney Imagineering." This was the 3rd annual speaker's bureau event sponsored by the Corporate and Sustaining Affiliate. Mr. Kaplan described what it was like to design the multi-media display of Illuminations for Epcot fireworks, music and sounds, lights, fountains, sculptures, and video, all working together.



**EXHIBITORS**--AsMA would like to thank all those who exhibited at our annual meeting. Pictured here are some of our loyal exhibitors.

Photos by Pam Day

**CORPORATE RECEPTION**--A special reception was held to thank exhibitors and AsMA Corporate Members for their support over the years. (Upper photo) The buffet table. (Lower photo) Yvette Debois, editor of the corporate newsletter, enjoys the buffet.

Send information for publication on this page to: **News of Members**  
**Aerospace Medical Association**  
 320 S. Henry Street  
 Alexandria, VA 22314-3579  
 pday@asma.org

## NEWS OF MEMBERS

**Dr. Ian Perry**, a Fellow of the Aerospace Medical Association, has succeeded Dr. Claus Kurdt Christiansen, as the Chairman of the Scholarship Committee of the International Academy of Aviation and Space Medicine. All enquiries about the scholarship for 2006 can be found on the Academy website: [www.iaasm.org](http://www.iaasm.org). Applications can be sent to Dr. Perry at: [ian@ianperry.com](mailto:ian@ianperry.com)

**Michael W. Lischak, M.D., M.P.H.**, was recently elected as a Fellow of the American College of Occupational and Environmental Medicine. In addition he has graduated from the MBA program at the University of Wisconsin Milwaukee (UWM). Dr. Lischak is currently Medical Director, Corporate WORx at Columbia St. Mary's in Glendale, WI.

### New Members

Beaty, Roslyn B., M.D., M.P.H., Fort Worth, TX  
 Brooks, John S., LCDR, MC, FS, USN, Rockville, MD

Casbon, Jon M., Col., USAF, MC  
 Donat, Terry L., M.D., FACS, FIC, Glen Ellyn, IL  
 Fogarty, Jennifer, Ph.D., League City, TX  
 Hara, Shino, M.D., Tokyo, Japan  
 Hollis, Brett F., BSN, MBA, Phoenix, AZ  
 Jefferson, Virgil S., M.D., Biloxi, MS  
 Knight, Derek A., M.D., San Antonio, TX  
 Lenihan, Patrick, M.S., Melbourne, FL  
 Long, Patrick, B.S., M.A., Redmond, WA  
 Lotridge, Jessica A., Capt., USAF, MC, Vacaville, CA

McCarthy, Sean M., M.S., Jacksonville, NC  
 McGinnis, Michael B., CDR, MC, USN, Proville, FL

Mortimer, Darcy L., USAF, NC, APO AE  
 Rivas, Jaime L., USAF, APO AE  
 Robinson, Andrew Y., 2Lt., USAF, Germantown, MD

Sidlowski, Alexander, Capt., B.S., Vincentown, NJ  
 Sutton, Carla M., USAF, BSN, APO AE

### Award Nominations Sought

December 15 is the deadline for receiving nominations for awards to be presented at the 2007 Annual Scientific Meeting in New Orleans, LA.

Nominations can be made by any member of AsMA. The nomination must be submitted via e-mail or online through the AsMA website under Committees and in the Members Home Section: (<http://www.asma.org/members/awards/awardnomination.php>). The completed form should be e-mailed (NO Faxes, Please!) to the Awards Committee Chair, Andy Bellenkes: [andrew.bellenkes@usafa.af.mil](mailto:andrew.bellenkes@usafa.af.mil)

Attachments or biographical material will be retained in Association files.

### Jackie Carter Retires

Jacqueline Carter, who has been the Administrative Assistant and "right arm" of the Aerospace Medical Association for over 27 years, retired in June.

A native of Florence, SC, Jackie came to AsMA in 1979. She had previously worked for the Association of Federal Investigators.



She attended Vanderbilt School of Nursing in Nashville, TN, and had 16 years of clinical work before she switched to association management. Anyone attending Council meetings in the 1980s will remember her southern drawl and stylish dress as

she faithfully recorded the minutes of our meetings. She has kept the home office running smoothly during times of change—the move from National Airport to our permanent home in Alexandria back in 1988; transition to a computerized office; the arrival and departure of many employees (mostly editorial assistants!). She has faced these changes and challenges and served your association with grace and dignity for 27 years.

Jackie has two sons and their families in the Northern Virginia area, a daughter in Illinois, and an extended family in Florence, SC. She plans to spend time with her family.



**RECORD REGISTRATION**--(Top) Gloria Carter (left) and Sheryl Kildall (right) processed 1,182 advanced registrations for the meeting this year. (Bottom) They are pictured here helping with onsite registration and membership.

### Fun Run



**FUN RUN**--The Annual Fun Run was held at Turkey Lake Park, Orlando, FL, on Sunday, May 14. The event was sponsored by Dick Trumbo and Aerospace Life Sciences, Inc. This year there were 58 runners, over twice as many as last year. The winners and their times were:

#### Men's Category

1. Meeuwssen, Ted (21'01.22)
2. Lindsey, Rodney (21'32.68)
3. Barker, Charles (21'53.20)

#### Women's Category

1. Gorbandt, Monica (25'39.37)
2. Rickards, Caroline (27'25.17)
3. Liew, Michelle (27'42.90)

### Reminder for Prospective Associate Fellows

New Associate Fellow applications must be received by August 1 each year in order to be considered for the annual selection.

Update forms are available from the Associate Fellows new website at: [www.asmaafg.org](http://www.asmaafg.org).

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