

President's Page

Friends...Colleagues,

A colleague and I were discussing graduate studies in human factors when he suddenly blurted out a comment that took me at first quite aback. It went something like, "Well, there is nothing new in aviation medicine or human factors...it's all the same old stuff rehashed over and over!" My immediate reaction was to less-than-politely suggest that my colleague consider another field of study. However, after some deliberation, I realized that there was some truth in what he said. In the end, I merely informed him that, yes, there are some issues that require revisiting a number of times, yet there is also a plethora of areas that aerospace medical specialists have only begun to explore, especially those associated with the use of advanced human-centered technologies in the aerospace environment.

Take, for instance, the field of human-systems integration (HSI) in system design, where aeromedicine and human factors come together with a host of other disciplines (manpower, personnel, safety, survivability, human factors engineering and training) to help create everything from airliners to spacecraft, tools, weapons, virtually almost anything we humans use. The focus of HSI is on human-centered design; that is, examine a system's capabilities first and foremost on the roles that humans play in operating, maintaining and managing the system. Now, the notion of designing systems with humans in mind may seem quite obvious to AsMA members. However, what we take for granted (design a system based on humans and not despite them) has been, until recently, generally eschewed by engineers and designers, whose approach has been "we (engineers) know what the users and maintainers need." One result of this philosophy has been that the users of said systems have had to 'train around' the often human-unfriendly designs.

The tide has turned in recent years, as aeromedical and human factors specialists are now beginning to play central roles in system design and acquisition processes. As such, AsMA members are already starting to make and implement policies to ensure that system designs are safe, effective and most importantly, human-centered. However, there remains a wealth of experience under the aerospace medical umbrella that can still be brought to bear on systems engineers, so as to best ensure that the systems we use and maintain are indeed first and foremost designed with humans in mind.

Another approach to human-systems integration in which aeromedical specialists are only beginning to become involved is that of augmented cognition (AugCog). This new and very exciting discipline, which addresses the means of interfacing computer-



Andrew H. Bellenkes, Ph.D.

based technologies with humans in such a way so as to ensure that humans are not task overloaded. As such, limited cognitive resources are effectively exploited in such a fashion so as to maximize human-system performance and minimize error. Doing so not only facilitates more effective workload management, but as such reduces the physical and mental stressors that might otherwise contribute to problems in the health, safety and overall behavior of aircrews, air traffic controllers and maintainers. As with HSI, AugCog is a relatively new discipline in which aeromedical and human factors specialists can truly make pioneering inroads.

These are but two of the exciting new disciplines in which AsMA members are becoming involved. As we shall see at our upcoming annual scientific meetings, there are many more to be explored. The point of my noting this here is that in order to grow and preclude professional stagnancy, our organization must broaden its horizons to encompass these many new exciting disciplines. Doing so addresses one of the goals set out in my first President's Page; that of expanding membership to encompass under-represented specialties.

As noted earlier, it is my goal to ensure all our membership not just includes those working in these under-represented disciplines, but that we as an organization actively pursue recruitment of these specialists and make AsMA their professional home as well. We have already started this process with our meeting in New Orleans, where specialists in AugCog held their first AsMA panel. Interest in this panel was great and the after-action reviews all outstanding. Our members want more of this type of information, and it is my intent to bring our colleagues in AugCog as well as other unrepresented areas securely into the AsMA fold.

Nothing but old rehashed ideas? I think not! For indeed, the future is not what it used to be, and we as aeromedical specialists are just beginning to test the waters of what promises to be a very exciting journey ahead.

See PRESIDENT'S PAGE, p. 810.

PRESIDENT'S PAGE, from p. 809.

A quick aside: Thanks to our AsMA home office and professional meeting arrangements team, plans for our May 2009 annual scientific meeting in Los Angeles are proceeding very well indeed. May I take this opportunity to urge you to submit an abstract for a presentation, panel or poster session. If you elect to do so (and I very much hope you will), please help Dr. Phil Scarpa (our Program Committee Chair) and his team by not waiting until the very last moment to send in your abstracts (Mea maxima culpa!); please submit them on-line well before the deadline.

Finally, let me ask all of you a favor. Many of us are members of more than one professional organization, and as such attend a number of congresses and meetings each year. Might I therefore deputize you all as AsMA Ambassadors. When you attend other pro-

fessional meetings, you may have the opportunity to discuss AsMA with those who may not as yet be members. Our membership is diverse, representing so many areas of specialty under the aeromedical umbrella. Feel free to tell them why you are a member, what the association offers, especially in the way of facilitating contact with so many colleagues from around the world. If your colleagues appear interested, don't hesitate to give them AsMA contact information, and let them know about the wealth of information they can find on our website. Take their business cards and forward that information to our Membership Chair. A member of the Membership Committee and I will follow-up your Ambassadorial duties by contacting these potential members ourselves. In this way, I am hoping that this new AsMA Ambassador program will be yet another means of expanding and enriching our organization.

AsMA STANDING COMMITTEE CHAIRS 2008- 2009

COMMITTEE:	CHAIR'S NAME	E-Mail ADDRESS:
Aerospace Human Factors	Thomas E. Nesthus, Ph.D.	tom.nesthus@faa.gov
Air Transport Medicine	Nigel Dowdall, MBChB	nigel.dowdall@ba.com
Aviation Safety	Arnie Angelici, D.O., M.P.H.	arnold.angelici@faa.gov
Awards	Dwight A. Holland, Ph.D., M.D.	dwightholl@aol.com
Bylaws	Mike Lischak, M.D., MPH	mlischak@columbia-stmarys.org
Corporate & Sustaining	Marian B. Sides, Ph.D.	mbsides@sbcglobal.net
Education & Training	Eilis Boudreau, M.D.	boudreau@ohsu.edu
Finance	P. Glenn Merchant, Jr., M.D.	glenn.merchant@dodmerb.tma.osd.mil
History & Archives	Stanley R. Mohler, M.D.	stanley.mohler@wright.edu
International Activities	Gabor Hardicsay, M.D.	Hardicsay.gabor@nkh.gov.hu
Membership Chair	Warren S. Silberman, D.O.	warren.silberman@faa.gov
Membership Co-Chair	Kenneth J. Myers, M.D.	jeffrey.myers-1@ksc.nasa.gov
Nominating	Richard Jennings, M.D.	rjennings@utmb.edu
Communications Chair	Joseph P. Dervay, M.D.	oseph.p.dervay@nasa.gov
Communications Co-Chair	Daniel J. Callan, D.O.	dcallan@pc.edu
Resolutions	David Gillis, M.D.	dgillis@wylehou.com
Science & Technology	Barry S. Shender, Ph.D.	shenderbs@navair.navy.mil
Fellows Chair	George K. Anderson, M.D.	drgka@comcast.net
Associate Fellows Group	Brian Funke	bryan.funke@shaw.af.mil
SCIENCE PROGRAM		
Scientific Program Chair	Philip J. Scarpa, Jr., M.D.	Philip.j.scarpa@nasa.gov
Deputy Program Chair	John Crowley, M.D.	john.s.crowley@us.army.mil
Slides	Richard Scheuring, M.D.	Richard.a.scheuring@Nasa.gov
Posters	Daniel Weaver, M.D.	dweaver@mepcom.army.mil
Panels	Arleen Saenger, M.D.	Arleen.saenger@faa.gov
Arrangements	Larry Marinelli, M.D.	cotwusnfs@pol.net
Registration	Gordon Landsman, M.D.	glandsman@hotmail.com

Association News

Weien Chosen as President-Elect of AsMA; Bellenkes Installed as President

Robert W. Weien, M.D., M.P.H. has been elected the 2009-2010 President of the Aerospace Medical Association (AsMA). Dr. Weien is a retired U.S. Army Colonel, and is currently an Associate Aeromedical Advisor with the Aviation Medicine Advisory Service in Aurora, CO.



A native of Ottawa, KS, Dr. Weien received his bachelor's degree from the University of South Dakota in 1974. He also earned degrees from Louisiana State University School of Medicine in New Orleans (MD, 1983), and from Harvard School of Public Health (MPH, 1987). He completed an Aerospace Medicine Residency at the U.S.A.F. School of Aerospace Medicine, Brooks AFB, TX in 1988. This was followed by a Fellowship in Hyperbaric Medicine, also at USAFSAM, in 1989. He is board certified in Aerospace Medicine and Occupational Medicine. He is also Board Certified in Aerospace Physiology (AsMA/AsPS), 1992.

Commissioned into the U.S. Army Medical Service Corps, he served as Medical Operations Officer for the 326th Engineer Battalion, 101st Airborne Division, Fort Campbell, KY, 1974 - 1975. He went to the Army flight school at Fort Rucker, AL, and earned his wings in August 1976.

Rated in the Huey (UH-1), he was assigned as a Dustoff (helicopter ambulance) pilot for the 377th Medical Company in Korea, 1976 - 1977. After completing the Aircraft Maintenance Officer/Maintenance Test Pilot Course, he was then assigned to the 54th Medical Detachment at Fort Lewis, WA, as a Dustoff pilot and aircraft maintenance officer.

He left active duty to attend medical school on an Army scholarship. After his surgical internship, he attended the Army Flight Surgeon Course, graduating as the Distinguished Honor Graduate. A follow on assignment as a Flight Surgeon at Lyster Army Community Hospital, Fort Rucker, AL, preceded his entry into residency training.

After residency he returned to Fort Rucker, for assignments as Chief of the Aviation Medicine Department at Lyster, and Chief of the Consult Service at the U.S. Army Aeromedical Activity. He then moved to the U.S. Army Aeromedical Research Laboratory and worked in the Biodynamics Research Division.

He became the Research Exchange Officer at the Royal Air Force Institute of Aviation Medicine/Defence Research Agency Centre for Human Sciences, at Farnborough, Hampshire, UK, in 1992. In this unit his major research activity was as Principal Investigator for human subject studies of altitude decompression sickness, up to 40,000 feet.

In 1995 he became the Division Surgeon of the 25th Infantry Division (Light), Schofield Barracks, Hawaii. He served as senior medical officer on the Division staff, and was responsible for garrison and deployment health care.

From 1997 to 2000 he was Commander of the California Medical Detachment, at the Presidio of Monterey, CA. His unit provided primary care support for the Defense Language Institute and the Naval Postgraduate School. In addition he coordinated care for remotely assigned soldiers throughout most of California.

In 2000 he became Director of the Department of Defense Medical Examination Review Board, Colorado Springs, CO. His unit obtained and then reviewed medical examinations for admission to the five U.S. service academies, three service ROTC programs, and USUHS.

He retired from the Army in 2002, and has since been an Associate Aeromedical Advisor at the Aviation Medicine Advisory Service in Aurora, CO. He provides FAA medical certification advice and assistance, primarily to airline pilots.

He holds Army Aviator and Master Flight Surgeon Wings, and has been awarded the Meritorious Service Medal (four awards), the Army commendation Medal (three awards) and the Army Achievement Medal. He has been awarded the Order of Aeromedical Merit by the Society of U.S. Army Flight Surgeons, and the Order of Military Medical Merit by the Army Medical Department Regiment.

He lives in Colorado Springs with his wife and two daughters. He is an FAA certified flight instructor, and flies sailplanes for recreation.

CDR Andrew H. Bellenkes, USN, was installed as the 2008-2009 President of AsMA during Honors Night ceremonies, May 15, 2008. Dr. Bellenkes has spent almost 30 years in the field of Aviation Human Factors and since 2006 has been assigned to the Military Faculty at the United States Air Force Academy, Colorado Springs, CO, where he holds the positions of the Director of Aviation Psychology/Human Factors curriculae, Human Factors Option Chief, and Assistant Professor.

A fellow of the Aerospace Medical Association, Dr. Bellenkes has served as Vice President, Chair of the Scientific Program Committee, Co-Chair of the Membership Committee, and Chair of the Awards Committee. He also served as President of the Aerospace Human Factors Association for 1997.

A native New Yorker, Dr. Bellenkes earned his Ph.D. in Aviation Human Factors (with a joint minor in International Security Studies) from the University of Illinois. He is also a graduate of the College of Naval Command

and Staff of the U.S. Naval War College. He has become internationally recognized as an authority on Human Factors in Terrorism/Counter-Terrorism operations. [A full biography was printed last year (ASEM 2007; 78:822), and available on the web at www.asma.org.]

Other AsMA Elected Officers:

The newly-elected Vice Presidents are: **Warren Silberman, M.D.**, and **Marian Sides, Ph.D.** **Carol Manning, Ph.D.** was re-elected as a VP, and **Fanancy Anzalone, M.D.**, continues his 2-year term. The elected members at large with terms through 2011 are **Mark Campbell, M.D.**, **Joseph P. Dervay, M.D.**, **K. Jeffrey Myers, M.D.**, and **James T. Webb, Ph.D.** At the Wednesday morning Council meeting, **Estrella Forster, M.D.**, was appointed to fill the position of member-at-large vacated when Dr. Sides was elected as a VP. (Dr. Forster had received the next highest number of votes according to Nominating Committee.) Also at that meeting, **Arleen Saenger, M.D.** was appointed as interim Secretary, in the newly-created position. **P. Glenn Merchant, Jr., M.D.**, continues as Treasurer and **Russell B. Rayman, M.D.**, remains Executive Director.

Articles of Aeromedical Interest

1. Bagshaw M. Cosmic radiation in commercial aviation. *Travel Med Infect Dis* 2008; 6:125-7.
2. Bull K. Cabin air filtration: helping to protect occupants from infectious diseases. *Travel Med Infect Dis* 2008; 6:142-4.
3. Schreijer AJM, Cannegieter SC, et al. Fluid loss does not explain coagulation activation during air travel. *Thromb Haemost* 2008; 99:1053-9.
4. Stauffer W, Christenson JC, Fischer PR. Preparing children for international travel. *Travel Med Infect Dis* 2008; 6:101-13.
5. Tonks A. In-flight Emergencies. *Br Med J* 2008; 336: 584-6.

Journal CME/MOC

We have suspended publishing the CME/MOC questions in the journal until further notice due to insufficient participation in the program.

ERRATUM

In the June article on the Presidents of Constituent Organizations, p. 642, we mistakenly referred to Eugenia Bopp as having an M.D. We apologize for this error. Ms. Bopp is president of the Space Medicine Association.

Opening Ceremonies-- Boston 2008



OPENING CEREMONIES—(Top Left) the Bostonia Allarum Companie fife and drum corps played against the backdrop of flags of the nations as attendees arrived for opening ceremonies of the 79th Annual Scientific Meeting of the Aerospace Medical Association, May 12, 2008, in Boston, MA. (Center Left) The AFROTC Detachment 365, Cambridge, MA presented the colors. (Above left and right) The crowd listens intently to the Bauer lecture, presented by Irwin Braverman, M.D. (Top Right) Dr. Russell Rayman, Executive Director of AsMA and Dr. Jack Hastings, AsMA President for 2007-08, compare notes. (Center Right) Yvette Debois and Marvin W. Jackson, M.D. look at the list of sessions. (Lower Right) Tomaz Kolej and Pete Mapes peruse the program. (Right) Mike Gibson pipes the crowd into the exhibit hall at the close of the lecture.

For more Annual Meeting photos, check out the photo gallery on our website at www.asma.org on the Meetings page.

All photos by Melinda Bruno.

Honors Night Reception and Banquet



THE HEAD TABLE--(L to R) Dwight Holland, the Andersons, the Bellenkes, and the Hastings.



Time to present the awards!



PAST PRESIDENT'S PLAQUE--Dr. Jack Hastings (left) accepts the crystal plaque from Dr. Andy Bellenkes.



PAST PRESIDENT'S PIN--Fonda Hastings "pins" her husband, Jack, with the AsMA President's pin.



FIRST LADIES EMBRACE--Susi Bellenkes and Fonda Hastings.



HONORS NIGHT RECEPTION AND AFTERGLOW PHOTOS by Melinda Bruno. For more photos of the meeting, check out the photo gallery on our website!



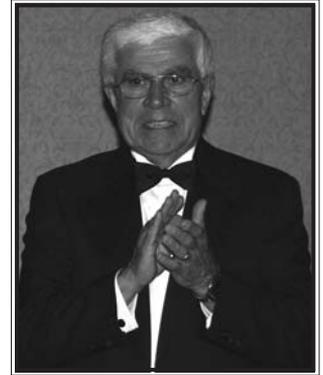
AEROSPACE MEDICAL ASSOCIATION HONORS NIGHT AWARDS--BOSTON 2008

All photos by Melinda Bruno



Award Chair, Dwight Holland,
reads the citations to award winners during Honors Night.

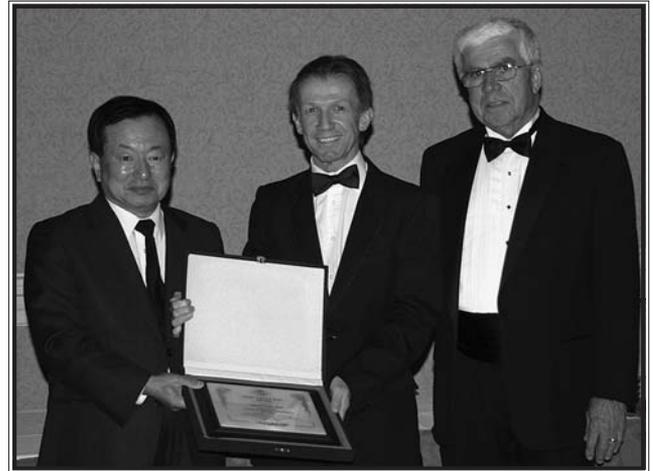
John D. Hastings, M.D., 2007-08 President of the Aerospace Medical Association, presented awards to 15 outstanding physicians, nurses, and researchers during the Honors Night ceremonies at the 79th Annual Scientific Meeting May 15, 2008, at the Sheraton Hotel, Boston, MA. Dwight Holland, M.D., Ph.D., 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 Citations were also presented during the ceremonies.



AsMA President, Jack Hastings,
applauds the award winners during Honors Night ceremonies.



LOUIS H. BAUER FOUNDER'S AWARD
Micheal Bagshaw, D.Av.Med., FRAeS
(James Yolch, Mayo Clinic)



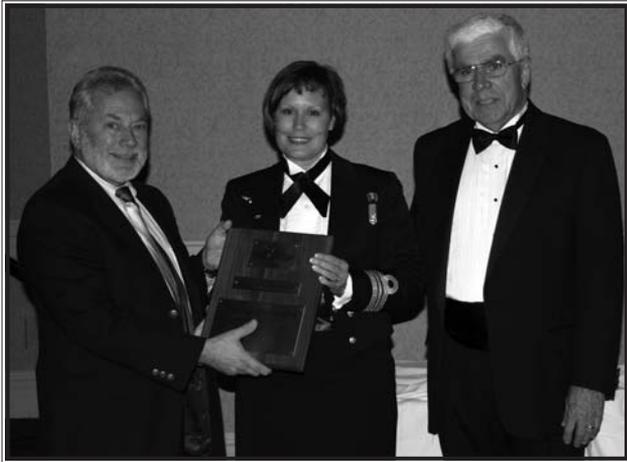
WON CHUEL KAY AWARD
Anthony D. B. Evans, M.B.Ch.B.
(Dr. Oh Jung-Hyun, Aerospace Medical Association of Korea)



JOHN PAUL STAPP AWARD
Dana B. Rogers, Ph.D.
(George K. Anderson, M.D., Environmental Tectonics Corp.)



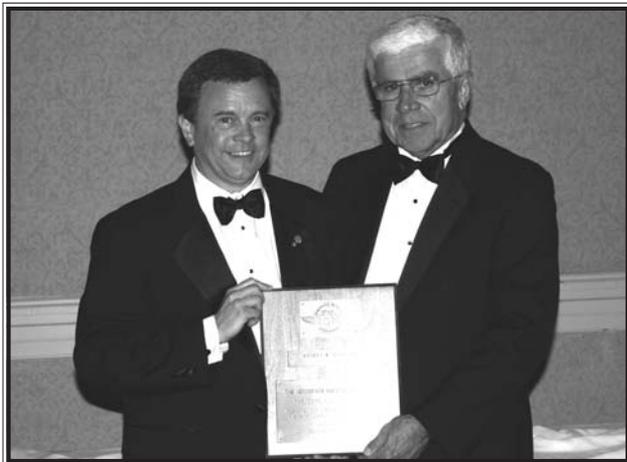
MARIE MARVINGT AWARD
Robert Dille, M.I.H., M.D.
(Alain Martin St.Laurent, French Aerospace Medical Association)



MARY T. KLINKER AWARD
LCdr. (Ret.) Christine Cloutier, CF
 (Les Sherman, Impact Instrumentation)



HARRY G. MOSELEY AWARD
Col. David "Lex" Brown, USAF, MC
 (Lockheed Martin Corporation)



THEODORE C. LYSTER AWARD
Jeffrey R. Davis, M.S., M.D.
 (Lockheed-Martin Space Operations)



JULIAN E. WARD MEMORIAL AWARD
Lt. Col. Lisa Snyder, M.D. USAF
 (Brig. Gen. Douglas Robb, USAF, MC, Society of USAF Flight Surgeons)



ARNOLD D. TUTTLE AWARD
James Ross, M.B.B.S., M.P.H.
 (Bob Ellis, Sr. VP, Wyle Laboratories)



BOOTHBY-EDWARDS AWARD
Robert Orford, M.D.
 (Pat Hiebel, Harvey W. Watt & Company)



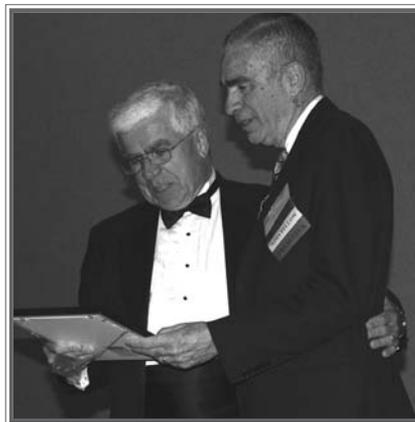
KENT K. GILLINGHAM AWARD
Col. Pete Mapes, M.D., USAF
 (Wolfgang Lindlbauer, AMST)



JOHN A. TAMISIEA AWARD
Prof. Dr. Uwe Stueben
 (Susan Northrup, M.D., Civil Aviation Medical Association)



ERIC LILJENCRANTZ AWARD
Andrew A. Pilmanis, Ph.D. (not present)
 (Luis Moreno, Bionetics Corp.)



PRESIDENT'S CITATION--Dr. Russell B. Rayman, Executive Director of AsMA (left) received the President's Citation from Dr. Hastings. Dr. Rayman was cited for his 40 years of membership and dedicated service to AsMA, the last 17 of which he has served as Executive Director.



PRESIDENT'S CITATION--Dr. Hastings presented citations to Karl Lee (left) and Brian Hadley Reed (not present) for their dedication to recruiting new AsMA members from the Primary Course and RAM classes. By promoting AsMA to young flight surgeons, they have helped to ensure a bright future for AsMA.



RAYMOND F. LONGACRE AWARD
Peter Hancock, Ph.D.
 (Accepted by Melchor Antunaño, M.D.)
 (PricewaterhouseCoopers)



SIDNEY D. LEVERETT, JR., ENVIRONMENTAL SCIENCE AWARD
CAPT Dave Hiland, M.P.H., D.O.
 (Accepted by William "Dave" Agerton, M.D.)
 (George K. Anderson, M.D., Environmental Tectonics Corp.)



ASMA FELLOWS CLASS OF 2008—This is the class of 2008 Fellows: Cynthia Brown, John Caldwell, Cyd Courchesne, Dennis Deakins, Ramon Dominguez-Mompell, Charles "Chuck" Fisher, Charles "Bruce" Green, Nicholas Green, Robin Griffiths, Norbert Kraft, Stein Kravik, Gordon Landsman, Matthew Lewis, Guahoa Li, Michael Lischak, Valerie Martindale, Mark Mavity, Vincent Michaud, Jeffrey Moore, David O'Brien, Huberto Ramos, Daniel Repperger, Roland Reynolds, Kazuhito Shimada, Jarnail Singh, Tracy Smart, Donald Sprague, Glenn Wilson, Andrew Woodrow, and Donald Yoho. Those present at the annual meeting are pictured here with President Jack Hastings and Chair of the Fellows Group, George K. Anderson.

Minutes of the Aerospace Medical Association Annual Business Meeting

Tuesday, May 13, 2008, Sheraton Hotel, Boston, MA



Hastings



Rayman

1. **Call to Order (Hastings):** Dr. Hastings called the meeting to order at 12:25 PM

2. **Recognition of Past Presidents**

3. **In Memoriam:** A moment of silence was given in honor of those who had passed away the preceding year.

4. **Report of the President:** Dr. Hastings made several remarks regarding his year and thanked all those who served during his tenure.

5. **Report of the Executive Director and General Chair of the Annual Scientific Meeting (Rayman):**

Mr. President, officers, and members of AsMA, it is my pleasure to once again deliver to you my annual report. This will be my 17th and final report to you since I became your Executive Director in February of 1992. Consequently, instead of customarily reviewing the previous year's activities, I have decided to give a brief synopsis covering the 17 years of my tenure.

If my predecessor, Dr. Ruf Hessburg, walked into the Home Office today, he would recognize half the staff, but he certainly would not recognize our procedures and policies because of the many changes made over the years. First, we have become 100% computerized offering this relatively new technology in practically every area of our activities. We have automated meeting registration, the membership database, peer-review and submission of journal articles, and the Annual Scientific Meeting. Furthermore, we not only have a website, but it is now multi-lingual.

We have made particular efforts to ensure that the voice of AsMA is heard well beyond the confines of our membership. As aerospace medicine issues have risen to the surface, your Association has been consulted by the media, governmental agencies (national and international), medical associations, private organizations, and in some cases, individuals. This has put our organization on the academic map. I recall some years ago when the AMA convened a special task force to review the FAA Medical Standards, your Aerospace Medical Association was not on the invitation list. I would consider this anomaly a watershed event in our history because it was at that time that we realized we must change our whisper to a shout. I would dare say that no such meeting would occur today without AsMA participation.

As a result of our appearance in the public sector, our committees have prepared approximately 100 position papers and resolutions on a host of aerospace medicine subjects. These documents, as approved by our governing bodies, serve us extremely well in that when we receive the call, we already have in the bank our response. This enormous amount of effort must be credited to our many standing and ad hoc committees and constituent organizations. We are now well represented on a number of national and international bodies including the National Academy of Sciences, the International Civil Aviation Organization, the Federal Aviation Administration, and NASA, among many others.

A third major change is the internationalization of AsMA. We have made every effort to attract international members and to democratize membership so anybody, regardless of nationality, can participate on committees, serve as committee chairs, and hold any elected office including the presidency. This is in vivid contrast to the days when individuals from countries other than the U.S. were associate members paying dues on a lower tier and generally excluded from leadership roles.

Furthermore, as we have faced the contentious issues of aerospace medicine, we have published our recommendations based upon an international, rather than a national, perspective. This is in part due to our increasing international membership that demands a broader view than we have heretofore allowed. This change from the old model has been a salutary one in that it has enhanced our credibility at home and abroad.

AsMA must continue in this direction to live up to its reputation as "The International Leader in Aerospace Medicine".

Perhaps our greatest hour was in 2004 when the President, Dr. Melchor Antunano, led a small group of AsMA representatives to the National Aviation Hall of Fame where AsMA was inducted as an organization. All of us in attendance will never forget this spectacular occasion particularly because we were in the company of Neil Armstrong that evening who presented us with this great honor in front of a very distinguished audience.

And finally, it must be mentioned that our membership, although diminishing since 1992, has leveled off at around 2,800 members. In spite of this, because of our very successful Annual Scientific meetings, we have enjoyed financial gains every year since 1993. We certainly hope this trend continues.

Advance registration was 1,254; onsite registration as of 11 a.m. today was 333 giving us a total registration of 1,587. There were 40 exhibits.

As of December 31, 2007, our net gain for the year was \$87,000 which is the highest in our history. I am confident that the Association will continue to enjoy further success and that we continue to boldly and aggressively advance our cause.

6. **Report of AsMA Foundation (Vanderploeg):** The foundation is establishing a Stanley Mohler endowment and will contribute \$1,500 per year to the Fellows to set up a travel scholarship.

7. **GOVERNANCE - (BELLENKES)**

Nominating Committee (Bagshaw): Dr. Bagshaw submitted the following slate of candidates for office:

President-Elect: Bob Weien; Vice Presidents: Carol Manning, Marian Sides, Warren Silberman; Members at Large: Mark Campbell, Jeffery Myers, Joe Dervay, Jim Webb

The slate was approved unanimously.

Bylaws Committee (Webb): The proposed changes to the AsMA Bylaws were submitted to the membership on 13 May and all passed with a 2/3 majority as they were published in ASEM 2008; 79:155-7. They were presented as the following nine motions:

i. [Article V. OFFICERS. Sections 1 & 5; Article VII. Sections 2 & 5] Add a Secretary position as elected officer to serve on Council and Executive Committee.

ii. [Article V. Section 2] Stipulate that the President is an ex officio member of all Standing Committees except Nominating.

iii. [Articles V & VI] Delete the Executive Director description in Article V. OFFICERS. Section 5 and place under it's own Article VI. EXECUTIVE DIRECTOR, adding a stipulation regarding unbudgeted expenditures.

iv. [Article VII. COUNCIL OF THE AEROSPACE MEDICAL ASSOCIATION AND EXECUTIVE COMMITTEE. Section 1] Delete a duplication of the President's previously-described duty as presiding officer of Council. [Article VII. Section 2] Add a Parliamentarian (non-voting) position to Council membership. Description of the Parliamentarian's duties are in Motion 8.

v. [Article VII. Section 3] States Council's power to appoint the Executive Director.

vi. [Article VII. Section 5] Addition of a Secretary as covered under Motion 1. Stipulates exception to Executive Committee powers and re-named Policy Procedures Manual to Policy and Procedures Manual.

vii. [Article VIII. ORGANIZATIONS. Section 1. B. & C.] Delete Certification Boards and place them in new Article IX. CERTIFICATION BOARDS.

viii. [Article XII. MEETINGS. Sections 4 & 5] changed to reflect better nomenclature and duties of the Parliamentarian.

ix. [Article XIV. FUNDING AND FINANCES. Section 2.] Revises the authorization of unbudgeted expenditures and changes two references to Secretary-Treasurer to Treasurer.

The Bylaws Committee examined copies of Bylaws from all eleven Constituent Organizations and the Aerospace Physiology Certification Board for conflict with AsMA Bylaws. They were reviewed by at least two members of the Bylaws Committee and returned to the Constituent Presidents with suggestions or recommendations for changes.

Finance Committee (Merchant): Dr. Merchant announced on \$88,000 gain during 2007 due to the outstanding performance at our convention in New Orleans. Currently we have \$880,000 dollars in our portfolio. Efforts are now being made to find a new CPA for the Association. There will also be an audit scheduled during the coming year.

8. **REPRESENTATION AND ADVOCACY (MANNING)**

Resolutions Committee (Scheuring): Dr. Scheuring announced there are no resolutions for this meeting but two are in the hopper for the next year. A description of the resolution process will be placed in the

See MINUTES, p. 818.

MINUTES, from p. 817.

policies and procedures manual. The new chair for next year will be Dr. David Gillis.

Air Transport Medicine Committee (Dowdall): Dr. Dowdall announced that there will be a new patient consult sub-committee. His committee is currently working on a periodicity paper as well as on cabin crew and cabin air issues. He will also appoint a committee member as a liaison with the inflight passenger project being worked with George Mason University.

Communications (Dervay/Callan): Dr. Dervay announced that telecon capability is available and is very effective. Work continues to be done on the Aerospace Medicine slide show. Analysis done by the committee has given information regarding website management. We will not do universal email addresses due to high costs. Dr. Manning is currently exploring our computer program?website? and will contract a consultant to assist in this project.

9. EDUCATION AND RESEARCH (ANZALONE)

Aerospace Human Factors Committee (Nesthus): Dr. Nesthus announced that the fatigue and countermeasure paper is in final draft and will be sent to Council for comment and review.

Aviation Safety Committee (DeJohn): A position paper addressing cabin air had been published and the committee is now working on a paper addressing enhanced process for accident data. The new chair will be Dr. Angelici.

Education and Training Committee (Boudreau): Dr. Boudreau announced that the MOC in the journal is temporarily suspended due to the lack of participation. Her committee will explore ways and means to rejuvenate this feature. She also will be analyzing the needs assessment given to attendees after this meeting.

History and Archives Committee (Mohler): Dr. Mohler announced there will be four historical movies playing during the lunch hour. He also thanked authors who published historical articles during the past year.

Science and Technology Committee (Shender): Col. Martindale announced that 78 articles had been published in the S&T watch column in recent years. Four panels were sponsored for this meeting.

10. MEMBER SERVICES (WEIEN)

Awards Committee (Holland): Dr. Holland reported there were nominees for every award. They'll be conferred on Honors Night.

Corporate and Sustaining Committee (Sides): Dr. Sides reported that we went from 36 to 51 Corporate and Sustaining members with 42 more in the pipe line. The speaker's bureau event went very well this year, with the speaker describing the "Big Dig" in Boston. A dental affiliate is currently being formed.

Membership Committee (Silberman/Myers): Dr. Silverman announced that membership has gone up slightly this year although delinquent emails continue to bounce at an unacceptable level. Two for One memberships will be offered at International meetings.

11. INTERNATIONAL SERVICES (MYERS)

International Activities Committee (Kleinsmith): Roughly 25% of the AsMA member is International. Efforts will be made to recruit more members from overseas.

12. Unfinished and New Business: It was suggested that we explore joint meetings with ACOEM.

13. Adjourn: The meeting was adjourned at 1:25PM

Respectfully Submitted,
Russell B. Rayman, M.D.
Executive Director

54th Bauer Lecture: "Art and the Art of Medicine"--Irwin Braverman

On May 12, 2008, Irwin Braverman, M.D., gave the opening 54th Annual Louis H. Bauer Lecture to a packed auditorium at the Hynes Convention Center, Boston, MA. Dr. Braverman is Professor of Dermatology at Yale University. His lecture "Art and the Art of Medicine" focused on the idea of using visual training for his students of dermatology by looking at the details in various paintings. He realized that most medical students learned by rote and that analytical and observational skills were not being taught. There was too much reliance on imagery and lab tests for diagnosis rather than on truly examining the patient.

Understanding that we humans have a high threshold for what is familiar, we need to train our objective observation. We have an intellectual, but not a practical understanding of how to see. We normally look for familiar and

dismiss the rest, except for the grossly abnormal. Developing a new skill does not happen overnight--it takes nearly 10 years to make a new skill.

Since Victorian paintings offer a large number of well-defined details, Dr. Braverman challenged his students to study a painting for 10-12 minutes and then describe what they saw without making any interpretations to come to a concrete, not theoretical, differential diagnosis. The exercise highlighted the problem of premature conclusion based on incomplete data. The painting examples he used were "Death of Chatterton" by Henry Wallis (1856) and "George, 3rd Earl of Cowper & the Gore Family," by Johann Zoffany (1775).

43rd Armstrong Lecture: "One Hundred Years of Flight and Counting: What the Past May Tell us About the Future"--Roger Launius

On May 15, 2008, Roger Launius, Ph.D., delivered the 43rd Annual Harry G. Armstrong Lecture. Dr. Launius took us through a brief history of flight from man's first dreams of flight through the present need to invest in science and technology education in order to continue to advance in space exploration. Dr. Launius is senior curator in the Division of Space History at the National Air and Space Museum, part of the Smithsonian Institute in Washington, DC.

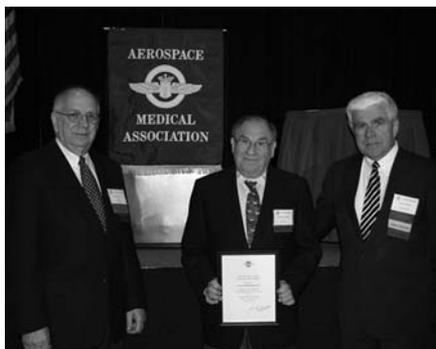
Dr. Launius presented five areas of flight: 1) Pre-Wright Brothers; 2) Biplane; 3) Propeller; 4) Jet; and 5) Spaceflight.

One of the most interesting parts of the lecture concerned early aerial navigation. Bonfires lit landing strips, and rooftops or barns and even the Mormon Tabernacle displayed signs and arrows pointing to the airports. Water towers and rooftops told the pilots where they were.

According to Launius, flight is the single most significant technology of the modern era, driving all others. It is amazing to realize that we went from Kitty Hawk to the Moon in only 66 years. But the last 40 years have not been as dramatic. Dr. Launius concluded by emphasizing that there is currently a crisis in science and technology education and that it is critical that government programs address the advancement of technology for the next phase of flight--interplanetary travel.



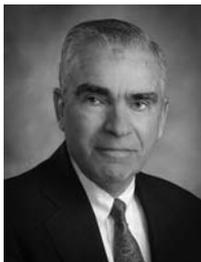
ARMSTRONG LECTURE--Geroge K. Anderson (left) representing the sponsor, ETC, presents Roger Launius, Ph.D., with the plaque for the 43rd Annual Harry G. Armstrong Lecture, as AsMA president, Jack Hastings (right) looks on.



BAUER LECTURE--Bob Ellis (left) representing the sponsor Wyle Labs presented Irwin Braverman, M.D., (center) with a plaque for the 54th Annual Louis H. Bauer Lecture as AsMA president Jack Hastings (right) looks on.

NEW ON THE WEB!
News Online in html on the website, ahead of the printed version! For those of you who like your news early and easy to access, just click on the link from the home page to the latest AsMA news.
Applied Language is now set up to translate our website into several different languages! Check it out!
79th Annual Meeting Photo Gallery-- check out the meeting photos online!
www.asma.org

Executive Director's Column



Rayman

Computerization, Internationalization, Outreach

(The following is a synopsis of the Executive Director's annual report given at the Boston meeting in May, 2008.)

If my predecessor, Dr. Ruf Hessberg (AsMA Executive Vice President 1979-92), walked into the AsMA Home Office today, he would know about half the staff and he would have no difficulty finding his way around the offices, conference room, storage rooms, and library. However, beyond that, he would be completely lost because our AsMA has undergone revolutionary changes over the past 10-15 years.

The biggest change by far in our modus operandi has been the computerization of practically everything we do. Although this might sound mundane at this time, it certainly wasn't 5-10 years ago. We employ electronics for initial and renewal of membership, processing of meeting abstracts, financial reporting/record keeping, updating our membership database, abstract submission for our Annual Scientific Meeting, peer reviewing and publishing journal articles as well as many more features. It was only a few years ago that this was all done by hand. We also have a web site that can be visited in 10 languages.

A second major change is the internationalization of AsMA. We have made every effort to attract international members and to democratize membership so anybody, regardless of nationality, can participate on committees, serve as committee chairs, and hold any elected office including the presidency. This is in vivid contrast to the days when individuals from countries other than the U.S. were associate members paying dues on a lower tier and generally excluded from leadership roles.

Furthermore, as we have faced the contentious issues of aerospace medicine, we have published our recommendations based upon an international, rather than a national, perspective. This is in part due to our increasing international membership that demands a broader view than we have heretofore allowed. This change from the old model has been a salutary one in that it has enhanced our credibility at home and abroad. AsMA must continue in this direction to live up to its reputation as "The International Leader in Aerospace Medicine."

And finally, our outreach program has been very active. We are now represented on numerous national and international bodies including ICAO, NASA, the FAA, ATA, and the National Academy of Sciences—many more could be cited. With AsMA at the table, our voice can be clearly heard. As a result, your Association is frequently called upon by numerous government agencies, private associations and societies, universities and institu-

tions, the media, and sometimes just individuals—all soliciting our position on the many issues that challenge aerospace medicine.

Computerization, internationalization, and outreach—these have been our bellwether.

In addition, I can report to you that our finances are very robust and membership has plateaued. As I see future officers in the wings, I am confident that AsMA will enjoy unprecedented success in the coming decades.

Council Highlights

AsMA Welcomes New Affiliate: The Hungarian Association of Aeromedical Examiners

Sunday - May 11, 2008

The Council of AsMA met twice during the 79th Annual Scientific Meeting, on May 11 and May 14 at the Sheraton Hotel in Boston, MA. The following are highlights from both meetings. The entire minutes are on file at the home office.

After opening remarks, accepting the minutes, etc., the President, **Dr. Jack Hastings**, reported on highlights of the Executive Committee meeting. There was discussion regarding the requirement for 100% Constituent members to be a member of AsMA. Some Council members argued that a percent such as 2% of the total AsMA membership should be the requirement while others thought that it should be a stand alone figure such as 50 members. A motion carried that the Bylaws Committee should consider these options.

By Laws—Webb: There was an action item to delete from the Bylaws requirements for the Executive Committee to approve exhibitors. A motion carried to make this deletion and add language to the Policies & Procedures document for the Home Office and Exhibit Manager to vet exhibitors for appropriateness.

Finance—Merchant: Dr. Merchant reported that we had a good year in 2007 with an \$88,000 gain. General Operations were in the red which is normal although it was not as much of a deficit as in recent years. It was decided to apply for 501 (c)3 IRS classification. Since our accountant is retiring, we will begin the search for a new CPA.

Outreach—Rayman: The ED reported that three documents had been approved by Council and published. The three were the International Space Station, Long Duration Missions, and Emergency Medical Kit Update. This was a very good year for the Association regarding publishing of policy.

Dr. Arnald Nicogossian, Director of the Dept. of Public Affairs, George Mason University, agreed to assist AsMA in preparing position papers. An MOU has been drawn stating that there will be no charges for this service and that no papers will be release publicly without AsMA permission. The Executive Committee, in an effort to test this new arrangement, asked Dr. Nicogossian to prepare a review paper on passenger inflight medical incidents. A member of the ATM Committee will be appointed to serve as a liaison with Dr. Nicogossian's department in the preparation of this position paper. After reviewing the paper, the Association will decide whether or not to continue with this relationship.

The Hungarian Association of Aeromedical Examiners applied for Affiliate status; their

C&BL is consistent with the AsMA Bylaws. A motion was made and carried admitting the Hungarian Association to Affiliate status.

Communications—Dervay: Dr. Dervay informed Council that he is actively using telecons for meetings with his members which he finds very convenient and efficient. He is still working on the Aerospace Medicine slide-show in an effort to introduce more international materials. A communication survey was completed addressing member communication requirements. At this time, there is no interest in universal AsMA email addresses for a number of reasons including very high costs.

Dr. Hastings gave an overview on membership database/website system which currently uses three vendors. Dr. Manning conducted a survey identifying membership requirements for our systems and has recommended that we hire a consultant to help us make a decision on our absolute requirements and how to structure the new system. We then would make our requirements known to a vendor. Of great importance would be the cost for a new system as well as timing since we do not want to be compromised as we enter the late Fall and Winter months when registration begins online. One member of Council proposed a cap to pay a consultant of about \$10,000. A major question that must be answered is do we want a web-based system or continue with our proprietary system. This entire issue will be revisited September Executive Committee meeting.

Resolutions—Scheuring: Dr. Scheuring presented a narrative describing the resolutions process to be placed in our Policy & Procedures document.

Journal—Nummeley & Day: The Editor, **Dr. Sarah Nunneley** reported that we continue to have a 30% rejection rate. There are two supplements in the works. The Managing Editor, **Pamela Day**, reported that printing costs are fairly stable. Unfortunately, the Journal Workshop was canceled because too few members registered for a viable workshop. She is also exploring with the company, Information, Incorporated an online newsletter which would include aerospace medicine journal references. She is also in the process of placing the journal archival material online with Mira.

Annual Meeting – (Rayman): Dr. Rayman announced that we had a record advanced registration of 1,254 (registration as of May 13 was 1587). There were also 40 exhibitors, which is about what we expect every year. Dr. Northrup reported 584 abstracts had been approved and all sessions but one have been MOC approved.

AsHF – (Nesthus): The policy paper on fatigue countermeasures is in final draft and will be forwarded to Council for comments soon. Following that, the paper will be put to a vote at the November Council meeting.

Education & Training – (Boudreau): Dr. Boudreau will be working with the ED in the preparation and presentation of our ACCME application at our survey in Chicago scheduled for this October. Dr. Boudreau also announced that Journal MOC was suspended due to a lack of participation but her Committee will explore possible ways to rejuvenate it. The Committee is also looking at new CME initiatives. A compendium of aerospace medicine courses has been completed and will soon be on the web. She is also examining strategies for a mentorship program.

Membership – (Silberman/Myers): Membership has leveled off at over 2,800 although there has been a slight increase from last year.

Corporate & Sustaining – (Sides): We currently have 51 corporate members with 42 in the pipeline. Dr. Sides is organizing a dental affiliate. The C&S Affiliate group also publishes a newsletter.

International—Myers: Of our 2,859 members, 23% are international. We now have a multilingual website. Efforts have been made to hold an excellent reception this Tuesday evening to honor our International members. He is also exploring the acquisition of funding for international students to attend our annual scientific meeting.

Constituent Reports (Full reports are on file at the Home Office). Aerospace Nursing Society now has a website: www.aerospacenursing.org Airline Medical Directors Association now has a website, www.amda.aero; they have attained non-profit 501c3 status.

AsMA Foundation – (Jennings): Dr. Jennings reported the Foundation has approximately \$21,000. Donations have ranged from \$10 to \$500. One endowed fund has been sponsored which will be announced during the week. To make an endowed fund viable, a minimum of \$10,000 is needed for start-up. It is hoped that the first travel scholarship can be conferred for the May 2009 meeting with a \$1,500 honorarium. Dr. Jennings also stated that donors will be listed in the Journal in the hopes it will encourage others to donate.

Affiliate Reports: (Full reports, if submitted, are on file in the Home Office) Of our 32 current affiliate organizations, 5 were present at the Council meeting to give reports: Corporate and Sustaining Members; European Society of Aerospace Medicine; German Society of Aviation and Space Medicine; Hellenic Aerospace Medical Society; and Iberoamerican Association of Aerospace Medicine.

New Business: Dr. Jennings introduced to Council Dr. Goncharov of the Russian Space Agency who is attending our meeting. He made several remarks in Russian. Dr. Holland recommended that we consider changing the name of this Association to the Aerospace Medical and Human Performance Association. He called for the Executive Committee to consider this at its next meeting in September. A motion carried to this effect.

Wednesday – May 14, 2008

Report of Representative to Aerospace Physiology Certification Board: Valerie Martindale was approved as representative of the Council to the Aerospace Physiology Certification Board. Troy Faaborg, Greg Ostrander, and Jaime Rives were approved as members of the Aerospace Physiology Certification Board. The following nine members who passed the Aerospace Physiology Certification Board exam were approved: Lane Annicelli, James Davis, Jennifer Giovannetti, Miranda Hancock, Eric Hendrickson, Robert Higgins, Susan Jay, Brian Musselman and Debra Yniguez.

Representation And Advocacy – (Manning): Dr. Manning strongly recommended that we implement a better system for allowing newcomers and members to become committee members. The current system of a single book in the registration area has not been satisfactory. President-elect Bellenkes

informed Council this will be a high priority item for him and steps will be soon taken to correct this.

Governance – (Bellenkes): A motion carried accepting CDR Bellenkes' appointment of Drs. Jarnail Singh, Philip J. Scarpa, Jr., and James T. Webb to the Executive Committee.

Constituent members of Council were identified: Aerospace Human Factors Association: Ray King, Ph.D.; American Society Of Aerospace Medical Specialists: Paul A. Young, M.D.; International Association Of Military Flight Surgeon Pilots: Kris M. Belland, D.O.; Aerospace Physiology Society: Vincent W. Musashe; Aerospace Nursing Society: Kim Barber, BSN; Life Sciences & Biomedical Engineering Branch: Lloyd Tripp; Society of U.S. Naval Flight Surgeons: Lee Mandel, M.D.; Society of U.S. Air Force Flight Surgeons: Daniel O. Wyman, M.D., M.P.H.; Airlines Medical Directors Association: Thomas N. Bettes, M.D., M.P.H.; U.S. Army Aviation Medical Association: Justin Woodson; Space Medicine Association: Genie Bopp; Associate Fellows: Bryan Funke; Fellows: George K. Anderson, M.D.; Aerospace Medicine Regent: Christopher R. Armstrong, M.D., M.P.H.; Student/Residents: Alex Garbino.

Governance/New Business: Because one of the Members-At-Large was elected to Vice President, it left an unexpected void. The

Nominating Committee at the Business Meeting did not propose a name to fill this void. The Parliamentarian advised Council that a motion had been made, seconded, and approved at the Business Meeting to accept the slate of new officers. He therefore recommended that a motion be made at this time to amend the previously adopted motion with a specific name to become a Member-At-Large. The Nominating Committee stated that the candidate with the next most number of votes was Dr. Estrella Forster. A motion was then put forward to amend the previous slate naming Dr. Forster as a Member-At-Large to fill the unexpected void. The motion to adopt this motion carried by over 2/3 votes.

Due to the unexpected vacancy on Council and due to the fact that our Bylaws do not have clear and comprehensive guidelines, the Bylaws Committee was asked to prepare such guidelines for presentation to the Executive Committee/Council.

At the Business meeting a new secretary position was created. The President-elect requested Council to authorize him to appoint Dr. Arlene Saenger as an Interim Secretary until the elections next year. A motion carried unanimously to authorize CDR Bellenkes to select Dr. Saenger as the Interim Secretary.

Council will meet November 19 at the Eisenhower Holiday Inn in Alexandria.

MEETINGS CALENDAR 2008-2009

August 4-7, 2008; 27th Annual Cryogenic Engineering Training; Boulder, CO. Sponsored by the University of Colorado's Center for Advanced Engineering and Technology Education. CEUs are available. For more information, visit www.cryoco.com or e-mail thomasmflynn@comcast.net.

August 14-17, 2008; Frontiers of Aerospace Medicine: Annual Conference of the Australasian Society of Aerospace Medicine; Crowne Plaze Hotel, Darwin, Northern Territory, Australia. For more information, please visit www.leishman-associates.com.au/asam2008.

August 20-23, 2008; EASST/45 Conference, "Acting with Science, Technology and Medicine"; Rotterdam. For more information, please visit <http://www.easst.net/node/1646>.

August 22-24, 2008; Annual Conference of the Aviation Medical Society-New Zealand; Wairekei Hotel, Taupo, New Zealand. Held in combination with ANZSOM. For more information, visit amsanz.org.nz/conference/confindex.htm.

August 26-28, 2008; 6th Asian Pacific Congress of Aerospace Medicine (APFAMA 2008) and 8th Chinese Conference of Aerospace Medicine; Xian, China. For more information, visit www.chinamed.com.cn/apfama2008.

September 5-6, 2008; Review Course for Wound Care Certification; San Antonio, TX. Info: www.hyperbaricmedicine.com

September 7-11, 2008; 56th International Congress of Aviation and Space Medicine (ICASM 2008); Bangkok, Thailand. Meeting brochure and Call for Papers is available at www.icasm2008.org/download/2nd_Announcement_MIN.pdf. For more informa-

tion, including registration, please visit their website at www.icasm2008.org.

September 10-12, 2008; ALTA's 2008 Aviation Crisis Preparedness Conference and Aviation Law Americas Conference; Miami, FL. Registration and information are available at www.alta.aero/crisispreparedness and www.alta.aero/aviationlaw.

September 21-22, 2008, 6th Annual Meeting of the Society for Human Performance in Extreme Environments. New York, NY. Info: www.hpee.org; jason.kring@erau.edu.

October 15-18, 2008; XXV International Meeting of Aerospace Medicine; Zacatecas, Zac., Mexico. Sponsored by the Mexican Association of Aviation Medicine and the Iberoamerican Association of Aerospace Medicine. For more information, please visit www.amma.org.mx or contact Luis A. Amezcua G., M.D., Chairman.

October 27-29, 2008; SAFE Association 2008 Annual Symposium; Reno, NV. For more information, please phone 541-895-3012, e-mail safe@peak.org, or visit safeassociation.com or safeassociation.org.

November 20-22, 2008; 2nd International Conference on Air Travel and Health; Dead Sea, Israel. Info: www.palexconventional.co.il/ath2008; ath2008@palex.co.il.

November 26-27, 2008; 21st Century Medicine: Breakthroughs and Challenges; Royal Institute of British Architects, London, UK. For more information or to register, please see the Institute of Nanotechnology's conference flyer: www.nano.org.uk/nanomednet/images/stories/flyers/ion_conference_flyer.pdf.

January 11-15, 2009. D. Eugene Strandness Jr. Symposium: Diagnostic and Therapeutic Approaches to Vascular Disease; Wailea, Maui, HI. Info: www.strandness-symposium.com; strandness@administrare.com; 978-744-5005

Keeping You Informed Of The Latest
Advances In Science And Technology

Applied techniques in sleep/wake classification and fatigue risk analysis are discussed by Dr. Caldwell in this month's edition of the Watch.

**A Recent Advance in the Objective
Quantification of Operational
Fatigue: The Fatigue Science
SleepBand Program**

*John A. Caldwell, Ph.D., Senior Scientist,
Archinoetics, LLC, Honolulu, HI 96813*

Fatigue is a growing problem in today's military as well as in society as a whole. Fatigued personnel are at increased risk of having mishaps due to decreased vigilance, cognitive slowing, short term memory failures, and rapid and involuntary sleep onsets (2). Military personnel and others working non-standard schedules are at particular risk of experiencing fatigue-related problems due to a combination of sleep restriction and circadian factors (working schedules at odds with normal circadian phase). Although the awareness of fatigue-induced hazards has increased substantially, the schedules at the heart of the problem often have not changed sufficiently to significantly mitigate fatigue-related risks. In part, this stems from an inability to accurately track the sleep/wake schedules of personnel and to quantify the risks associated with fatiguing schedules.

Fatigue Science, a subsidiary of Archinoetics, LLC, is attempting to rectify this problem with a new type of unobtrusive program that utilizes a combination of wrist-worn actigraphy and fatigue modeling to quantify fatigue-related risks. The Fatigue Science SleepBand program accurately monitors wrist/activity data for up to 14 continuous days; stores these data for download across the Internet via an infrared bridge; submits the data to a professional evaluator for sleep/wake scoring; processes the results through a fatigue-risk prediction model; and e-mails a report to the designated point of contact of the results. All of this is accomplished with minimal effort on the part of the user.

At the heart of the program is the SleepBand actigraph which is a new implementation of sleep actigraphy. The SleepBand utilizes an iMEMs 3D accelerometer which is smaller than traditional piezoelectric accelerometers and is powered by a 3-volt lithium coin cell battery. The electronics are synchronized by a microcontroller which also performs all calculations. Flash memory stores collected data. The SleepBand measures limb movements 16 times per second, 24 hours per day to determine the number of zero-crossings (the number of times the direction of motion

changes along a given axis). After the data are filtered using a thresholding procedure, the Cole-Kripke algorithm is applied for sleep/wake classification. This technique has been validated at over 87% accuracy in comparison to polysomnography (PSG) (3).

Based on the SleepBand data, determinations are made about 1) time of sleep onset and awakening; 2) sleep duration; and 3) sleep quality. Note that these are the basic parameters required as input to the Fatigue Avoidance Scheduling Tool (FAST) (4), which is a software tool used by the U.S. Air Force, the Federal Aviation Administration (FAA), and a variety of other entities to estimate the fatigue-related risks associated with different work/rest schedules. With the SleepBand program, once the sleep/wake scoring has been accomplished, day-to-day fatigue risk is calculated by automatically processing the data through the Sleep, Activity, Fatigue, & Task Effectiveness (SAFTE) model (5) which is at the heart of the FAST program. This model has been accepted by the U.S. DoD as the standard fatigue risk prediction model and extended by the US Department of Transportation as a basis for re-designing work schedules in an effort to improve on-the-job alertness. The SAFTE model uses the wearer's sleep/wake history and the circadian phase in which work and sleep are occurring to calculate a cognitive effectiveness level and a fatigue risk indication. SAFTE-derived effectiveness scores have been equated with differing blood alcohol concentrations (in terms of performance effects) in an effort to make the scores more meaningful to the average wearer.

An advantage of the SleepBand program over the FAST is the SleepBand's ability to accurately track the sleep/wake cycles and sleep quality of wearers and to automatically input this information into the SAFTE model, whereas with the FAST, sleep parameters often must be estimated based on the duration and circadian timing of off-duty periods, and schedules typically are entered manually or via a spreadsheet. Another advantage of the SleepBand program over the FAST is that it offers the option of easily compiling group reports based on the actigraphic tracking of numerous individuals so that leaders can easily gauge the performance readiness of a large number of people.

The accuracy of effectiveness or fatigue-risk predictions based on the SleepBand is a function of 1) the accuracy of sleep/wake calculations made via the device and 2) the validity of the SAFTE model through which the information is processed. With regard to the accuracy of the sleep/wake calculations, actigraphy has been shown to correlate highly with standard PSG which involves the collection and analysis of electroencephalographic, electromyographic, and electrooculographic data. For instance, Mullaney, et al (6) found a 0.90 correlation between the two measures for the time subjects were in bed, 0.89 for the time the subjects were asleep, 0.70 for the time subjects were awake after sleep onset, and 0.25 for the number of mid-sleep awakenings. A recent study showed that actigraphy data are far more accurate than standard self-report sleep logs (8), and the American Academy of Sleep Medicine (1) has concluded that "actigraphy provides an acceptably accurate estimate of sleep patterns in normal, healthy adult populations and in patients suspected of certain sleep disorders" (p. 519).

With regard to the validity of the fatigue-risk predictions based on the SAFTE model, an independent evaluation of several models ranked SAFTE first in accurately predicting cognitive decrements and subjective fatigue associated with sleep restriction (7). In addition, after analyzing 1,400 freight rail accidents and data from 2,800 engineers and conductors covering 57,000 work shifts, Hursh found a significant relationship between *human factors* accident risk and SAFTE predictions. Furthermore, Hursh determined that when SAFTE-derived effectiveness scores were low (< 77 - indicative of fatigue), human factors accidents were two and half times more expensive than similar accidents that involved little if any fatigue (effectiveness > 90).

The combination of relatively inexpensive sleep monitoring, a user-friendly data analysis approach, and a validated model-based effectiveness/fatigue-risk prediction makes the Fatigue Science SleepBand a useful tool for identifying and mitigating fatigue-related problems in operational contexts. The SleepBand will soon be deployed in a major study of flight attendant fatigue being spearheaded by the FAA Civil Aerospace Medical Institute. A second generation of the SleepBand is under development, which will automatically recognize personnel and download their data when they enter a designated work area or vehicle. At that point their activity will be automatically scored and reported in either individualized or group-summary format, providing a real-time assessment capability.

References

1. American Academy of Sleep Medicine. Practice parameters for the use of actigraphy in the assessment of sleep and sleep disorders: An update for 2007. *Sleep* 2007; 30(4):519-529.
2. Banks S, Dinges DF. Behavioral and physiological consequences of sleep restriction. *J Clin Sleep Med* 2007; 3(5):519-28.
3. Cole RJ, Kripke DF, Gruen W, et al. Automatic sleep/wake identification from wrist actigraphy. *Sleep* 1992; 15(5):461-69.
4. Eddy DR, Hursh SR. Fatigue Avoidance Scheduling Tool (FAST). Brooks AFB Report No: AFRL-HEBR-TR-2001-0140. Brooks AFB, TX: AFRL/HEOA, 2001.
5. Hursh SR, Redmond DP, Johnson ML, et al. Fatigue models for applied research in warfighting. *Aviat Space Environ Med* 2004; 75(3 Suppl):A44-A53.
6. Mullaney DJ, Kripke DF, Messin S. Wrist actigraphic estimation of sleep time. *Sleep* 1980; 3(1):83-92.
7. Van Dongen HP. Comparison of mathematical model predictions to experimental data of fatigue and performance. *Aviat Space Environ Med* 2004; 75(3, Suppl.):A15-A36.
8. Westermeyer J, Sutherland RJ, Freerks M, et al. Reliability of sleep log data versus actigraphy in veterans with sleep disturbance and PTSD. *J Anxiety Disorders* 2007; 21(7):966-75.

The AsMA Science and Technology Committee provides the Watch as a forum to introduce and discuss a variety of topics involving all aspects of civil and military aerospace medicine. Please send your submissions and comments via email to: barry.shender@navy.mil. Watch columns are available at www.asma.org in the two AsMA News links under Journal.

This Month in Aerospace Medicine History-- August 2008

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

Seventy-five Years Ago

There are good aviation medical examiners...and there are bad examiners (Tulsa, OK):

"We as members of the Aero Medical Association and medical examiners of the Aeronautics Branch of the Department of Commerce have a distinct privilege in being so associated, as it is a privilege and signal honor to represent our government in this capacity. Pleasurable contacts at meetings such as this one, and pleasing association with those who fly and desire to fly are other privileges enjoyed by the examiner. In addition to it being a privilege and a pleasure we have our problems, and I wish to discuss a few of these problems as encountered by the civilian examiner in aviation...

"A diversity of technic usually leads to a diversity of results and findings. Some of us use the conventional twenty foot examining room; others of necessity must resort to the ophthalmic mirror. Simpson has made a plea for the use of such a mirror even with the depth perception apparatus and certainly it is an improvement over trying to use a dark hallway or increasing the length of the examining room by opening the door to an adjoining room and make their substitutes serve the purpose. These things should be pointed out, but the examiners here are not the ones needing such instructions.

"I am sure that it will not be taken as a personal affront by anyone when I say that to my mind there are a great many men making examinations who are not fully qualified to do so. This is inevitable when they must be picked from the rank and file, for fully qualified men are not always available at points where it is advantageous to have an examiner. The Department has made every effort to appoint the very best man available and in the great majority of cases has succeeded in doing so, but a few personal experiences have led me to consider the personal element in the examiner himself as a very potent problem that we must face. Some are not averse to seize upon the opportunity to treat an applicant for supposed or unimportant ills, holding that such is essential to the obtaining of a permit. This is not only taking undue advantage but is in truth a fraud, and such practices should be stopped for it is a detriment to aviation and to us all. Others are unable to eliminate the personal factor from the granting of a permit, and because of friendships, associations, and even pressure of politics, may 'overlook' defects and grant a license with its attendant potential danger to not only the applicant, but to others as well. A defective pilot is a menace to innocent persons and a defective pilot is only allowed to get by because some doctor has failed to perform his duty faithfully...

"The man who builds up a reputation as a strict examiner has nothing to fear. It is true the operator of the school is disappointed when a student is lost to him through physical examination, quite naturally. He may switch and get an examiner who is easy but will come back to you again. I have seen it happen before and it will happen in the future...

"We hear of cases where the depth perception apparatus is out on the hall or over on the

floor while the applicant stands up. Perhaps he has never had to take off his shirt. There is nothing you can do about it. You know what the answer is without further discussion.

"Just follow the guide. I think that covers anything about the examination itself, the adherence to the form in a conscientious manner. I think the fifteen minute examiner is washing himself out. I think he will finally come to the end of his string" (1).

Fifty Years Ago

Airsickness, emotion, and attraction to earth (Department of Neuropsychiatry, U.S. Naval School of Aviation Medicine, Pensacola, FL):

"There is a certain degree of frustration felt by a flight surgeon dealing with airsickness in young flight trainees. Should I give medication to help the student overcome his sickness – or should I not? Are drugs the answer? Does providing the student such a crutch do him a disservice? Do we thus carry the student along through early flight training only to have him experience further sickness when the remedies later are of necessity discontinued?

"In a study of young flight cadets experiencing repeated airsickness one gets the impression that factors other than physiological hypersensitivity are significant. It is difficult to diagnose 'motion sickness' in the case of a student who gets nauseated and vomits during gentle turns, climbs and glides, or while the instructor is making a normal approach to a landing. It is scientifically incorrect to use the term 'motion sickness' to classify the illness a student experiences when he steps up on the wing of a plane, smells the usual cockpit odor, or sees his name listed on the schedule board for a hop the following day.

"The concept of G involving the factors of mass and velocity is familiar as a measure of acceleration. We were so impressed with the emotional factors of anxiety and motivation in much of the airsickness occurring in beginning flight students that we wish to propose the concept of 'emotional G.' Students experiencing airsickness while undergoing primary flight training suffer this 'emotional G' of attraction to the earth (or distaste for leaving it) to a greater degree than students not experiencing airsickness. An informal study was thus initiated, with the flight surgeon at the primary training base and the psychiatrist at the U. S. Naval School of Aviation Medicine co-operating...

"Sixty-nine of 2,893 primary flight students developed moderate or severe airsickness in the primary phase of their flight training. Fifty-eight per cent of these students completed their primary phase of flight training after interview and reassurance by the flight surgeon. No medications were used. A past history of motion sickness was common to both those who did and those who did not complete primary. Anxiety toward flying was marked in the majority of those who failed and motivation for flying was poor. A careful interview of an airsick flight student by a trained flight surgeon permits a reliable estimate of a student's motivation and his anxiety level. When anxiety is marked and motivation is poor his airsickness may be a manifestation of 'emotional G.' A new equation is offered to relate the direct proportion of the degree of anxiety and inverse proportion of the motivation" (4).

Twenty-five Years Ago

Astronauts and mental health standards (Neuropsychiatry Branch, USAF School of Aerospace Medicine, Brooks Air Force Base, TX, and Department of Psychiatry, Uniformed Services University of the Health Sciences, Bethesda, MD): "The mental health evaluation of the original Mercury astronauts was a prolonged, meticulous, research-oriented process involving testing and interviews to determine who was best qualified for space flight. The trend since then has been to simplify this evaluation, making it more subjective and clinically oriented. The goal is to identify candidates who are fully qualified, free of psychopathology, and who have a healthy motivation for space flight. The selection of nonpilots for duty as payload specialists introduces new factors – lack of previous exposure to dangerous situations, possible impact of new stresses on the family situation, and interrelationships between crew members. These factors can be included in determinations of individual candidates as being 'fully qualified,' rather than returning to the original 'best qualified' standards, and affirmative qualities may be identified which mark candidates as 'exceptionally well qualified.' Validation of these evaluation procedures and criteria depends upon assessment of space crew members' performance on actual mission" (2).

From whence cometh space motion sickness? (Ashton Graybiel Spatial Orientation Laboratory, Brandeis University, Waltham, MA, and Naval Aerospace Medical Research Laboratory, Naval Air Station, Pensacola, FL): "We compared susceptibility to motion sickness during exposure to sudden-stop stimulation as a function of gravito-inertial force level. Our findings show that susceptibility is greatly enhanced, both with eyes-closed and eyes-open, for zero-g and 2-g conditions in parabolic flight compared with 1-g test conditions. The change in susceptibility is likely related to three factors: alterations in vestibulo-ocular function which result from variations in gravito-inertial force level; the altered pattern of otolithic activity resulting during variations in gravito-inertial force level; and the altered canal-otolith response synergies that result during exposure to gravito-inertial force levels greater or less than terrestrial levels. These factors are shown to be related to the etiology of space motion sickness and to the alterations in performance and vestibular function that are experienced by astronauts during reentry. An explanation is also proposed for the decrease in susceptibility to motion sickness exhibited by the Skylab astronauts inflight and for some period postflight during exposure to cross-coupled angular accelerations" (3).

REFERENCES

1. Braswell JC. Problems of the civilian examiner in aviation. *J Aviat Med*, 1933; 4(3):91-102.
2. Jones DR, Annes DA. The evolution and present status of mental health standards for selection of USAF candidates for space missions. *Aviat Space Environ Med*, 1983; 54(8):730-734.
3. Lackner JR, Graybiel A. Etiological factors in space motion sickness. *Aviat Space Environ Med*, 1983; 54(8):675-681.
4. Phillips PB, GM Neville. 'Emotional G' in airsickness. *J Aviat Med*, 1958; 29(4):590-2.

VOLUNTEER DAY

AsMA Volunteers Continue Service

by Dr. Matt Hoefler and Dr. Kjell Lindgren

In 2007, AsMA members volunteered in New Orleans with Habitat for Humanity during the annual conference. To continue on the success of last year's service project, AsMA Volunteers worked with the Greater Boston Food Bank during this year's 2008 conference in Boston, MA.

Twenty-four volunteers participated in the Volunteer Day on 10 May 2008, the Saturday before the conference. The group worked in the central distribution center of the Food Bank, where donated food is repacked for delivery to local food kitchens and shelters. In an assembly line method, the random pallets of food are broken down and inspected. From there the food is cleaned, sorted into categories, repackaged, and placed onto new pallets for distribution.

The volunteers worked in two shifts, AM and PM. The very motivated crews sorted over 22,000 pounds of food and made it possible for 5000 meals to be delivered to Boston's needy.

AsMA Volunteers will continue this tradition next year during the conference in Los Angeles. If you are interested in participating or becoming a member of the organization, please visit asmavolunteers.org.



Society of U.S. Naval Flight Surgeon Awards

Fraser Receives Mitchell Award

The 2007 Robert E. Mitchell Award was presented to **CAPT James Fraser, MC, USN (Ret)**. The Robert E. Mitchell Award is designated to recognize an emeritus Naval Flight Surgeon for their career contributions.

During his naval career he served as Force Medical Officer, Commander Naval Air Force Atlantic Fleet from 1993-97. Among his duties he was responsible for medical oversight and quality assurance for Medical Departments/hospitals onboard 7 aircraft carriers, 18 Naval Air Station Branch Medical Clinics and over 100 physicians assigned to Naval Air Force Atlantic Fleet and served as Commander in Chief Atlantic Fleet representative to the Bureau of Naval Personnel, Navy Pregnancy Policy Review Board.

He was reassigned as Command Surgeon, Naval Safety Center, Norfolk, VA in 1997, where he remained until his retirement in 2004. In this position he served as Medical Privileging Authority and member of the Atlantic Fleet Executive Committee of the Medical Staff, chaired Joint Safety Service Chief's Human Factors Performance Action Team, chaired Aeromedical Working Group for the Naval Air Force's Human Factors Quality Management Board. He served as Naval Safety Center Representative to the Department of Defense Injury and Occupational Illness Prevention Committee, was selected by the Bureau of Medicine and Surgery to serve on the Department of Defense Patient Safety Working Group, provided medical mishap investigation and human factors training for all Naval Flight Surgeons, Aerospace Physiologists and Psychologists, and investigated and reviewed medical aspects of all deaths and significant injuries involving Navy/Marine Corps personnel and the civilian workforce that supports them.

He received two legions of merit, two meritorious service medals, the Navy Commendation Medal for serving with meritorious distinction during his emergency leave period in Oklahoma City, OK, and the Joint Meritorious Unit Commendation and additional personal recognition for serving as member of the Columbia (STS - 107) Accident Investigation Board, Feb - May 2003.

Dr. Fraser completed a 30-yr Navy career



MITCHELL AWARD-- CAPT Lee Mandel, incoming SUSNFS president presents the award to James Fraser.

and retired as a Captain in January 2004. He holds B.A., M.P.H., and M.D. degrees, all from the University of Oklahoma. He is certified in the specialties of Preventive Medicine (Aerospace Medicine) and Family Practice. He is a Fellow of the Aerospace Medical Association and the American Academy of Family Practice. He is an emeritus member of the Society of U.S. Naval Flight Surgeons where he served as President 2002 - 2003. In January 2004, he was selected for the Federal Aviation Administration (FAA) Executive Service and served as the Manager, Medical Specialties. In April 2006, he was selected and is currently serving as the Deputy Federal Air Surgeon in the Office of Aerospace Medicine at FAA Headquarters in Washington, D.C.

Dalitsch Receives Graybiel Award

CDR Walter W. Dalitsch III, M.D., received the Ashton Graybiel Publication Award from the Society of U.S. Naval Flight Surgeons. While SUSNFS did not have a member with a significant article published in *Aviation, Space and Environmental Medicine* this year, they had quite a few articles submitted for publication in CONTACT, their organizational quarterly. CDR Dalitsch published an article in every edition, as he has done for nearly 3 years. It was the compilation of his work over the past 3 years that provided the basis for his award. In addition to his many articles for Contact, CDR Dalitsch has published a history column in ASEM almost every month since February 2003, over 60 columns covering journal articles over the past 75 years.

CDR Dalitsch has been a member of AsMA and SUSNFS since 1994. He attended the University of Illinois-Champaign, receiving a B.S. in Biology and Philosophy in 1988. He received his M.D. from the University of Illinois-Chicago in 1993. He completed his Senior Naval Flight Surgeon course at NAMI, Pensacola, FL in 1995. His most recent assignment was Department Head of Occupational Medicine, U.S. Naval Hospital Naples, Italy.

Beane Receives Carter Award

The 2007 Sonny Carter Memorial Award was presented to **CAPT Richard Beane, MC, USN**. The Sonny Carter Memorial Award is given to the Medical Corps or Medical Service

Corps Officer who has made the most significant contribution towards promoting communication and teamwork among the aeromedical communities.

A native of Key West, FL, CAPT Beane entered military service in April 1973, serving as a Medical Services Specialist in the U.S. Air Force. After completing his enlistment in 1977, received his BA from the State University of New York at Potsdam in 1980. CAPT Beane received his Doctor of Medicine degree from Upstate Medical Center in 1984, and entered active service in the U.S. Navy as a General Surgery Intern at Naval Hospital Portsmouth. Following Flight Surgeon training at NAMI in January 1986. In 1990, CAPT Beane began training as an Aerospace Medicine specialist, completing a Masters Degree program in Public Health and Tropical Medicine at Tulane University. Following completion of the U.S. Navy Aerospace Medicine residency in 1993, CAPT Beane was assigned as the Senior Medical Officer for *USS INDEPENDENCE (CV-62)* and Battle Group FIVE in Yokosuka Japan, completing two deployments to the Persian Gulf in support of Operation Southern Watch. In 1996, CAPT Beane transferred to Electronic Attack Wing Pacific Fleet in Whidbey Island, serving as the Wing Surgeon and Department Head for Aviation Medicine and Physical Exams at Naval Hospital Oak Harbor. In October 1999, CAPT Beane was assigned as the Wing Surgeon for Helicopter Anti-Submarine Light Wing Atlantic Fleet and Sea Control Wing Atlantic Fleet in Jacksonville, FL. He served as the Department Head for Aviation Medicine, Occupational Medicine, and Physical Exams at Branch Medical Clinic, Mayport. During that tour, he also served as the Senior Regional Flight Surgeon for the Southeast region. From July 2002 to July 2005, CAPT Beane served as the Wing Surgeon for 1st Marine Aircraft Wing in Okinawa, Japan. CAPT Beane currently serves as the Officer in Charge of the Naval Aerospace Medical Institute in Pensacola.

CAPT Beane is board certified in Aerospace Medicine. He is an Associate Fellow of the Aerospace Medicine Association and served as the President of the Society of U.S. Naval Flight Surgeons and the American Society of Aerospace Medicine Specialist in 2007-2008. His personal awards include the Legion of Merit, Meritorious Service Medal (3 awards) and Navy Marine Corps Commendation Medal.



GRAYBIEL AWARD-- CAPT Lee Mandel presents the award to CDR Dalitsch.



CARTER AWARD-- CAPT Lee Mandel (left) presents the award to CAPT Beane.

Society of U.S. Air Force Flight Surgeons Awards

Malcolm C. Grow Award Major Maria M. Angles

Maj. Maria M. Angles was the winner of the 2007 Malcolm C. Grow Award for her tireless approach to mission support and her operational accomplishments. After each deployment she has been on, the mission commander has highlighted the exceptional mission support she provided. During Operation Enduring Freedom-Trans Sahara, she bridged the gap between the services and forged a template for future humanitarian missions. She has won the hearts and minds of families and villages and has made countless positive contributions to the personnel and mission of her unit.

Born in West Virginia, Maj. Angles earned a B.S. from Cameron University in Lawton, OK, in 1994. She was awarded her M.D. from the University of Oklahoma Sciences Center in Oklahoma City in 1998. During her military career, she has served as a Flight Surgeon and Internal Medicine Consultant at Brooks City-Base, TX; as an EMEDs Physician for Operation Iraqi Freedom; and as a Staff Internist at the USAF Academy in Colorado. More recently, she has been a CCATT Physician in Kandahar, Afghanistan, and is currently serving as a Flight Surgeon for the 352 SOSS at RAF Mildenhall in the UK.

Maj. Angles has been awarded a variety of awards and decorations, including being a Distinguished Graduate of the USAF School of Aerospace Medicine Course, serving on the Society of Air Force Physicians Board of Governors, the Meritorius Service Medal, Air Force Commendation Medal, Air Force Outstanding Unit Award, National Defense Service Medal, Afghanistan Campaign Medal, Global War on Terrorism Service Medal, and the Air Force Expeditionary Service Ribbon with gold border. She has accumulated 341 hours of flying time and was named in Who's Who Among American Colleges and Universities in 1994. Her research has covered the topics of radiofrequency ablation and stressors on the aviation community while deployed.

George E. Schafer Award Brig. Gen. Mark A. Ediger

Brig. Gen. Mark A. "Pappy" Ediger was



GROW AWARD--Maj. Gen. Bruce Green (Air Force Deputy Surgeon General) presents the Malcolm C. Grow Flight Surgeon of the Year Award to Maj. Maria Angles. Brig. Gen. Doug Robb looks on. All photos by Dave Duval.

awarded the 2007 George E. Schafer Award for his history of leadership within the aerospace medicine community and his outstanding contributions to the health, safety, welfare, and mission effectiveness of USAF aircrew. He has also contributed to the vitality of the specialty of aerospace medicine over an extended period of time. Command and leadership have been the defining elements of his career.

Brig. Gen. Ediger was a Distinguished Graduate of the AMP course in 1987. He quickly assumed the reins of leadership as the Chief of Flight Medicine and Commander, 1st Tactical Hospital at Langley, all while continuing to serve as the 94th FS SME. Following his Residency in Aerospace Medicine, he served as the Chief of Aerospace Medicine, Tyndall AFB. As AETC Chief of Aerospace Medicine, he developed and implemented aeromedical support plans for joint flight training with the U.S. Navy and was the catalyst to establish the ongoing RAM exchange between USAFSAM and NOMI. During this period he was instrumental in establishing the Enhanced Medical Flight Screening to better identify ocular and cardiac defects in flight training applicants. He then assumed the flagship duties as the Chief of the Aeromedical Division of the Air Staff and Aerospace Medicine Consultant to the Surgeon General.

Brig. Gen. Ediger has represented the USAF Aerospace Medicine community in such diverse capacities as the Aerospace Medicine & Occupational Health Advisory Subcommittee of NASA, Head of U.S. Delegation to the NATO Aerospace Medicine Working Party, and Chair of the NATO Research and Technology Agency Working Group 26 on Medication Use in Military Aircrew. He has commanded both the 16th Medical Group at Hurlburt Field and the 363rd Expeditionary Medical Group, Prince Sultan Air Base. Leveraging total Team Aerospace capabilities, he established training for 16th MDG optometrists to help maximize aircrew performance during night vision goggle missions. Under his leadership, the 363rd EMG helped sustain a 4-month surge of 24/7 operations and over 7000 combat sorties in support of the Iraq invasion. The Air Force has twice turned to Pappy to serve as Command Surgeon, first for AFSOC and now for USAFE. He has also been recognized as a Fellow of the Aerospace Medicine Association, and as an



SHAFFER AWARD--The George E. Schafer Award was presented to Brig. Gen. Mark "Pappy" Ediger (not present). Brig. Gen. Doug Robb accepts the award from Maj. Gen. Bruce Green.

elected Past President of the Society of U.S. Air Force Flight Surgeons.

Flight Surgeon Safety Award Lt. Col. Michael J. Wood

Lt. Col. Michael J. Wood received the 2007 Operational Flight Surgeon Safety Award for his dedication to safety. His command of human factors and calm demeanor has guided a mishap Accident Investigation Board to a successful conclusion which directed focus on correction of unsafe operations. His efforts have resulted in the identification of three related human factors and seven additional

See WOOD, p. 827.



UNGER AWARD--Brig. Gen. Doug Robb and Maj. Gen. Bruce Green pose with the bookends for the Howard R. Unger Award, which was given to Lt. Col. Roscoe E. Van Camp, who could not be there. He was the recipient of the award for his role as lead author of "Hand Sanitizer and Rates of Acute Illness in Military Aviation Personnel" (ASEM 2007; 78:140-2). The award encourages and rewards publication of original work.



OLSEN-WEGNER AWARD--This year's recipient of the Olson-Wegner Award in the Senior Non-commissioned Officer category is Senior Master Sergeant Cleveland Wiltz, from the 10th Medical Group, United States Air Force Academy, CO. He has demonstrated superb aeromedical leadership. He runs an extremely effective and efficient flight medicine clinic yet manages to work a 1.6 million dollar ambulance contract, teach ACLS, SABC, and EMS. Additionally, this year's award winner excelled in leading the medical control center and as interim group superintendent. Presenting the award are CMSgt Joseph Potts, Maj. Gen. Bruce Green, and Brig. Gen. Doug Robb.

LSBEB Award Winners for 2008

The A. Howard Hasbrook Award Deborah J. White

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. LSBEB has presented this award since 1990. This year LSBEB sponsored the award, which was presented by LSBEB President Estrella M. Forster, Ph.D.

The 2008 LSBEB A. Howard Hasbrook Award was presented to LCDR Deborah J. White, Ph.D., MSC, USN, for her efforts to significantly enhance the mission effectiveness of the Naval Safety Center and directly contribute to improvements in naval aviation safety and fleet operational readiness. Specific contributions include: 1) developing a human factors analysis instruction booklet to provide Safety Officers across the fleet a tool to determine causal factors for on- and off-duty mishaps; 2) developing and fielding a joint service human factors classification system that enables a common analysis of human error mishaps across all services; and 3) conducting over 150 Aeromedical Safety Surveys on Navy and Marine Corps aviation squadrons, providing feedback and training to improve command climate and enhanced sailor performance, resulting in more efficient use of money, people, and material assets.

Professional Excellence Award Phillip E. Whitley

This award recognizes an individual who has produced outstanding research accomplishments or technical and/or research management achievements important to life sciences and/or biomedical engineering of a number of years. LSBEB has presented this award since 1965. This year, the award was sponsored by Autoflug Safety Systems Inc. and was presented by LSBEB President Estrella M. Forster, Ph.D.

The 2008 LSBEB Professional Excellence Award was presented to Phillip E. Whitley, Ph.D., for life- and career-long efforts to enhance aviation safety, particularly in the field of acceleration physiology, developing require-



HASBROOK AWARD—LSBEB President Estrella M. Forster (left) presents the Hasbrook Award to LCDR Deborah White.

ments for and means of adapting humans to extreme environments, assessment of risk and injury potential of environments and products, and forensic investigation of product failures and human injuries involved in litigation.

Research and Development Innovation Award Dennis Burian

This award is given to an individual who has demonstrated innovative life sciences and/or biomedical engineering research as related to the design or development of aerospace medical equipment or systems. This award has been sponsored by the David Clark Company, Inc., since 1985 and was presented by Mr. Jack Bassick.

The 2008 LSBEB Research and Development Innovation Award was presented to Dennis Burian, Ph.D., for his seminal work in functional genomics through analysis of environmentally responsive genes and their protein products in the context of normal and abnormal physiologic states. Dr. Burian's research applies gene expression technology to define human response to aerospace stressors such as alcohol, drugs, hypoxia, or fatigue.

Ross McFarland Student Award Jennyfer Lecompte

This award has been given by the LSBEB since 1975 to the author of the best student paper accepted by the AsMA Scientific Program Committee that reports on a significant achievement in biomedical engineering. The LSBEB Awards committee makes its selection by rating each abstract on five categories: scientific merit, clarity of presentation, application of findings, scope of interest in outcome, and an overall qualitative impression. This year, the award was sponsored by Athena/GTXtreme and was presented by LSBEB President Estrella M. Forster, Ph.D.

The 2008 LSBEB Ross McFarland Student Award was presented to Jennyfer Lecompte for her abstract "Influence of gender and helmet-mounted devices on neuromuscular activation of neck muscles during head-neck segment stabilization under G_z loading." The results of her study of neck muscle EMG activity provided increased evidence of the potentially higher risk of injury in women

compared with men when helmet-mounted devices are used during flight and the need to improve neck extensor strength and cross-sectional area in women and/or weak pilots.



R&D INNOVATION—Mr. Jack Bassick (right) of the David Clark Co., Inc., presents the R&D Innovation Award to Dennis Burian.

Aerospace Human Factors Association Awards

The complete program is available on the AsHFA website at: http://www.asma.org/Organization/ashfa/Pages/AsHFA_2008_Program.pdf

The **Henry L. Taylor Founder's Award** is given in recognition of outstanding contributions in the field of aerospace human factors. The 2008 recipient is **Stanley R. Mohler, M.D.** He will give the luncheon lecture at next year's meeting in Los Angeles, CA.

The **Stanley N. Roscoe Award** is presented for the best doctoral dissertation written in a research area related aerospace human factors. The 2008 Roscoe Award was presented to **Capt. Joseph C. Jenkins** for "The Effect of Configural Displays on Pilot Situation Awareness in Helmet-Mounted Displays."

The **William E. Collins Award** is presented for the outstanding human factors publication of the year (for work completed in the previous calendar year). The 2008 recipient is **William F. Storm** et al. for the article "Cognitive Performance Following Premature Awakening from Zolpidem or Melatonin-Induced Daytime Sleep," *Aviat. Space Environ. Med.* 2007; 78:10-20.

The **2007 Henry L. Taylor Founder's Award** was presented to **James C. Miller, Ph.D.**, who in turn was the luncheon speaker for this year's meeting. His topic was "Recent Developments Based Upon Applied Research Concerning Fatigue Effects."

A native Californian, Dr. Miller worked summers for Dr. W. Ross Adey in the fledgling Space Biology Laboratory at the University of California, Los Angeles (1958-65), and academic years for Dr. Steven M. Horvath in the new Environmental Stress Laboratory at the University of California, Santa Barbara (UCSB; 1963-65). He received his B.A. degree in Analytical Biology from UCSB in January 1965. He served in Viet Nam as a USAF C-130 tactical transport pilot (1966-71) and was

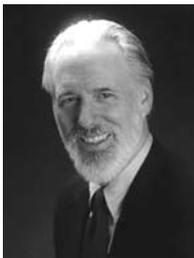
See MILLER, p. 827.



MCFARLAND STUDENT AWARD—LSBEB President Estrella M. Forster (right) presents the McFarland Award to Jennyfer Lecompte.

MILLER, from p. 826.

awarded the Distinguished Flying Cross and the Air Medal with four Oak Leaf Clusters for flight in combat. After his active military service, he received his Ph.D. in 1976 following multidisciplinary studies in applied human physiology and psychological psychology at



the UCSB Institute of Environmental Stress. His doctoral studies with Dr. Horvath involved human sleep and cardiovascular functions at altitude, and electrical impedance cardiography. At Human Factors Research, Inc., Goleta, CA (1974-80), he worked with Dr. Robert

R. Mackie to conduct U.S. DOT and industrial investigations of driver fatigue, alertness and performance in truck and bus operations and co-authored a literature review of human vigilance performance.

At the USAF School of Aerospace Medicine, San Antonio, TX (1980-87), he investigated aircrew and ground personnel workload, performance and fatigue, and workstation and work shift design with Drs. Bryce O. Hartman and William F. Storm. Subsequently, Dr. Miller was Chief of Human Factors for USAF development flight test at Edwards AFB, CA (1987-89). His Human Factors Engineering Branch evaluated cockpit functions and pilot workload for such aircraft as the B-1 and B-2 bombers, and the F-15E and F-16 fighters. Dr. Miller also performed USAF Reserve duty with the US Air Force Academy (1976-83) and the Air Force Office of Scientific Research, Life Sciences Division (1987-89).

Dr. Miller investigated human performance, fatigue and fitness-for-duty for DOT as the Director of Technology, Performance Factors, Inc. and Vice President, Human Factors, Evaluation Systems, Inc. (1989-95), designing the FACTOR 1000®, RedyShift®, and Smart Truk® testing systems. He also investigated human performance and fatigue, and provided workstation design and shiftwork scheduling assistance to government and industry through his company, Miller Ergonomics, in Lakeside and then Imperial Beach, CA (1992-97). He was one of the primary investigators for the Federal Highway Administration's Driver Fatigue and Alertness Study (1990-96), and was the principal investigator for the US Coast Guard investigation of cutter crew fatigue (1997-98). He was also an Adjunct Associate Professor in the Dept of Neuropharmacology, The Scripps Research Institute, La Jolla, CA where with Dr. Merrill Mitler and others he conducted quantitative electroencephalographic analyses and human performance assessments related to sleep and fatigue (1994-97).

In 1997, Dr. Miller became the founding Director of the Human-Environmental Research Center at the US Air Force Academy (USAFA), Colorado Springs, CO. He also helped design and chaired the USAFA Institutional Review Board for the protection of human subjects in research, 1998-2000. In 2000, Dr. Miller was recruited by Dr. Storm to help create the Air Force Research Laboratory's Warfighter Fatigue Countermeasures R&D Group at Brooks City-Base in San Antonio, TX where he recently retired as the Senior Research Physiologist in the Fatigue Countermeasures Branch.

Dr. Miller is Board Certified in Professional Ergonomics. He is the author of *Controlling Pilot Error: Fatigue* (McGraw-Hill, 2001), an Associate Editor of *Ergonomics in Design* and a reviewer for *Aviation, Space and Environmental Medicine*. He is a former Chair of the DoD Human Factors Engineering Technical Advisory Group and a member of the Human Factors and Ergonomics Society, the Aerospace Medical Association and the Psychophysiology in Ergonomics technical group of the International Ergonomics Association.

WOOD, from p.825.

human factors during a Safety Investigation Board for the MQ-1 Predator. These observations will contribute toward improvements in traffic collision avoidance, aircrew situational awareness, training, retention, and unit organizational values and culture.

Currently the Chief of Aerospace Medicine for the 355th Medical Group at Davis-Monthan AFB in Arizona, Lt. Col. Wood earned a B.S. in Biology at Missouri State University in 1989. He was awarded an M.D. in 1995 from the University of Missouri-Columbia. He served a Family Medicine Residency at the University of Texas Health Science Center in San Antonio in 1998, then earned an M.P.H. from Harvard University in 2002. He graduated from an Aerospace Medicine Residency in 2003 and from an Occupational Medicine Residency in 2004, both at the USAF School of Aerospace Medicine.

During his military career, Lt. Col. Wood has served in a variety of positions, including as a Flight Surgeon at the Royal Air Force Station in Lakenheath, UK and as Chief of Aerospace Medicine, Deputy Chief of Medical Staff, Aerospace Medicine Flight Commander, at F. E. Warren AFB, WY. His awards include the Meritorious Service Medal, the Air Force Outstanding Unit Award with four bronze oak leaf clusters, the National Defense Service Medal, and the Global War on Terrorism Service Medal. He is board certified by the American Board of Family Practice and the American Board of Preventive Medicine and is a member of the USAF Medical Corps, the Aerospace Medical Association, and the Society of U.S. Air Force Flight Surgeons.



The winning UTMB team in the annual RAM Bowl, holding the traveling RAM Bowl trophy, and standing beside the score from the finals match with the U.S. Air Force RAM team. From left to right, they are Nicole Powell-Dunford, Richard Cole, David Cole, Jon Riccietello, and Kjell Lindgren. Of note, the UTMB team included two RAMs from the Navy/Army program who were assigned to UTMB for their MPH.

U.S. Army Aviation Medical Association Luncheon and Awards

Annually, the U.S. Army Aviation Medical Association (USAAvMA) selects a recipient for our sponsored Joseph L. Haley writing award, which is presented for the best article on the contributions to Rotary Wing Medicine. This year's winner was Dr. Ian Curry and Dr. Rick Roller for their article on "A Physiological and Human Factors Evaluation of a Novel Personal Helicopter Oxygen Delivery System."

Also at the luncheon we conducted our annual business meeting. We had numerous new RAMs and of course our seasoned RAMs exchanging great stories and fellowship. The new president, COL Steve Bernstein, was officially recognized and the new Vice President, LTC(P) John Albano, was elected.

The guest speaker was COL Joe McKeon, the Aeromedical Consultant to the Surgeon General, who gave an update on the current Army Flight Surgeon status, the future of Army RAMs and the health of the Army Aviation Community.



HALEY AWARD-- COL (Dr.) John Campbell, President of USAAvMA, presenting the Haley award to Lt. Col. (Dr.) Ian Curry of the Royal Army Medical Corp, United Kingdom, who is currently assigned to the U.S. Army Aeromedical Research Lab at Ft. Rucker as an aeromedical exchange officer.



LUNCHEON SPEAKER-- COL Joe McKeon gives an update on Army flight surgeons, RAMs, and the Army Aviation community.

Send information for publication on this page to: **Mark Campbell, M.D.**
420 N. Collegiate Dr., #300
Paris, TX 75460
mcamp@1starnet.com

SPACE MEDICINE ASSOCIATION NEWS

Young Investigator Award

By K. Jeffrey Myers, M.D.

The Space Medicine Association Jeff Myers Young Investigators Award (SMA JM YIA) 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 182 contestants, were richly talented and diversified.

The winner of the 2008 SMA JM YIA is Marc O'Griofa, M.D. His paper was entitled "Sleeping Through the Arctic Martian Sol." Marc's interest in aerospace began during a visit to the Kennedy Space Center when he was 10 years old. His dream—to fly in space and perform experiments there. After an odyssey of 16 years, Marc was selected as a Principle Investigator (PI) for the Cardiac Adapted Sleep Parameters Electrocardiogram Recorder (CASPER) International Space Station (ISS) experiment. But there was still much work to be done; such an experiment must undergo rigorous reviews and the PI must integrate the project with the other payloads and crew schedule. This was a daunting task for our young student, since Marc was attending medical school in Ireland at the time! Juggling call schedules, exams, overseas flights, and review boards, he was still able to bring his project in on time. It was a happy day in 2006 when his experiment finally flew on ISS and demonstrated a useful technique for measuring sleep quality in austere environments. But Marc wanted more. He gained funding from the European Space Agency (ESA) and University Enterprise of Ireland and expanded the experiment to a remote

Arctic research expedition on Devon Island. There he demonstrated that explorers could readily adapt to the Martian 24.6-hour clock. With a handle on that problem, Marc looks forward to working with the Space Medicine community to address the remaining constraints to living and working on Mars, and, of course, to fulfilling the rest of his dream by flying there.

The first runner up is Leia Stirling, Ph.D. (candidate), from the Massachusetts Institute of Technology. The second runner up is Captain Chris Meigs (an airline Captain), from Embry-Riddle Aeronautical University. The other finalists include: Annie Martin, Tovy Kamine, Trond-Eirik Strand, M.D., Sasirajan (Sasi) Jeevarathinam, MD, Yamil Diab-Forero, M.D., and Wen-Hsien Lu M.D.

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, Art Arnold, Dan Woodard, Lu Moreno, Jeff Jones, and Vernon McDonald. It is certainly my good fortune to serve in this capacity. I thank you for this opportunity and the kind recognition you have bestowed. This competition is a window to the good future of our field. These Young Investigators demonstrate not only the lessons of science, but of life, as they overcome its struggles to pursue their dreams and to serve humanity.

Hubertus Strughold Award: Richard Jennings

The Hubertus Strughold Award is presented each year to a member of the Space Medicine Association for dedication and outstanding contributions in advancing the frontiers of Space Medicine, and for sustained contributions to furthering the goals of the Space Medicine Association. The recipient of the 2008 Strughold Award was Dr. Richard Jennings.

Dr. Jennings graduated from Oklahoma State University and the University of Oklahoma School of Medicine. He completed residency in obstetrics and gynecology at the University of Oklahoma Tulsa Medical College and in aerospace medicine at Wright State University. He is a diplomat of the

American Board of Preventive Medicine in Aerospace Medicine and the American Board of Obstetrics and Gynecology.

Richard served as a NASA Johnson Space Center flight surgeon from 1987-1995 and was the Chief of the Flight Medicine Clinic and Chief of Medical Operations-Space Shuttle. During this time, he was the crew surgeon or deputy crew surgeon on 15 Shuttle missions and provided direct mission support to 45 Shuttle flights. He has served as the President of the AsMA, the Space Medicine Association, and the Society of NASA Flight Surgeons.

Lifetime Achievement Award: Professor Igor Borosovich Goncharov

Prof. Igor Borosovich Goncharov received a lifetime achievement award from the Space Medicine Association. He is currently Director of Spaceflight Medical Operations at the State Research Center of the Russian Federation, Institute of Biomedical Problems of the Russian Academy of Science in Moscow.

Since joining the Institute of Biomedical Problems in 1972, he has been involved in over 100 spaceflight launch and landings. As the Director of Spaceflight Medical Operations, he supports launch, in-flight medical care and monitoring (including EVA), landing recovery, and post-landing rehab.

Prof. Goncharov graduated from the Medical Department of the I. M. Sechenov's Moscow Medical Institute in 1967. In 1971 he received his Candidate of Medical Science degree and in 1998 received his Doctor of Medical Science degree. In 1999 he was given the academic title of Professor.

He is a former Co-Chair of the Russian-American Space Medicine Working Group, an Associate member of the International Academy of Astronautics and became an Academician in 1999. Also in 1999 he was elected as an Academician of the K. E. Tsiolkovsky's Russian Academy of Astronautics. He has co-authored over 126 scientific publications and has 23 inventor's certificates. He has received the "Order of the People's Friendship," "Honoured Doctor of Russia," as well as several medals from the Astronautics Federation of Russian and from foreign space agencies.



YIA AWARD--Marc O'Griofa received the Jeff Myers Young Investigators Award. Presenting the award is Dr. Jeff Myers.



STRUGHOLD AWARD--Dr. Richard Jennings receives the Hubertus Strughold Award from Dr. Smith Johnston.



LIFETIME ACHIEVEMENT AWARD--Dr. Igor Goncharov receiving the Lifetime Achievement Award in Space Medicine by the President, Dr. Mark Campbell.

Send information for publication on this page to: **Lt. Col. Andrew Woodrow, USAF, BSC**
Chief, Aerospace Physiology Formal Programs, Brooks City Base, TX 78235
210-536-6441
Andrew.Woodrow@brooks.af.mil

AEROSPACE PHYSIOLOGY REPORT

2008 Board Certified Aerospace Physiologists

CDR T. J. Wheaton, MSC, USN

Nine Aerospace Physiologists passed the 2008 examination in Aerospace Physiology, earning Board Certification, (CAsP). The exam was administered on 11 May 2008 at the AsMA Annual Scientific Meeting in Boston. The individuals certified in Aerospace Physiology for 2008 are:

Maj. Lance L. Annicelli, USAF, BSC, an Air Force Aerospace Physiologist currently assigned to the U.S. Air Force Medical Support Agency in Falls Church, VA as the Chief of the Environmental and Occupational Health Research Branch. He was



commissioned to the Air Force in 1994. Major Annicelli is a member of AsMA, the Aero-space Physiology Society, the Society for Human Performance in Extreme Environments, The American College of Sports Medicine, the American Society for Clinical

Pathology, and the Society of Armed Forces Medical Lab Scientists. He holds an M.S. in Exercise Physiology from the University of Nevada Las Vegas, and is an Associate Fellow of AsMA.

Capt. James W. Davis, USAF, BSC, is an Aerospace Physiology Officer currently assigned to RAF Lakenheath, UK as the Officer in Charge of the Aerospace Physiology



Human Performance Training Team in support of 48th Fighter Wing and 100th Air Refueling Wing. He was commissioned an Air Force Officer in 2001. Capt. Davis holds a B.S. in Biology from the University of Kentucky, and is completing a Masters

degree in Aeronautical Science from Embry Riddle Aeronautical University. Capt. Davis is a member of AsMA.

Captain Jennifer M. Giovannetti, USAF, BSC currently serves as the Officer in Charge, Human Performance Training Team (HPTT), 4th Aeromedical Squadron, 4th Medical Group, 4th Fighter Wing, Seymour Johnson AFB, NC.



Captain Giovannetti is a 2001 graduate of the U.S Air Force Academy with a B.S. in Biology. She holds

a M.S. in Physiology from the University of Oklahoma, and is a member of AsMA.

Capt. Miranda L. Hancock, USAF, BSC, is currently the Chief of the Human Performance Training Team, 35th Fighter Wing, Misawa Air Base, Japan. She was



commissioned in 1999 and designated an Aerospace Physiologist in 2001. Capt. Hancock earned her B.S. in Biology from the University of Alabama, and holds a Masters in Public Health from the Uniformed Services University of Health Science. She

is a winner of the 2006 PACAF Chief of Safety Medical Achievement Award, and has presented at AsMA meetings and the Mayo Clinic. She is an AsMA and Aerospace Physiology Society member.

Capt. Eric M. Hendrickson, USAF, BSC, is assigned to the 354 Medical Operations Squadron, Eielson AFB, AK. He is 2001



graduate of the U.S. Air Force Academy with a degree in Biology, and holds a Masters in Public Health from the University of New Mexico. He was selected as the Air Force's 2007 Aerospace Physiologist CGO of the Year. He is a mem-

ber of AsMA and the Aerospace Physiology Society.

LCDR Robert P. Higgins, MSC, USN, is currently assigned as the Head, Aviation Physiology Training Department, Aviation Survival Training Center Pensacola. He



was commissioned a Naval Medical Service Corps Officer in 1998 after serving as a Marine. His deployments include Operations Desert Shield/Storm and Operation Iraqi Freedom. LCDR Higgins holds a B.S. in Biology and a M.S.

in Cellular Biology from East Carolina University.

LCDR Susan M. Jay, MSC, USN, is the Department Head, Aviation Survival Training Center Jacksonville, FL. She entered the Navy as a Medical Service Corps Officer in 2003. LCDR Jay holds a B.S. in



Exercise Physiology from the University of Iowa, a M.S. in Physical Education from South Carolina, and a Ph.D in Kinesiology from the University of Texas. She has been a member of the Aerospace Physiology Society and AsMA since 1998.

Maj. Brian T. Musselman, USAF, BSC, is currently the Chief, Human Factors Investigation and Analysis at the Air Force



Safety Center, Kirtland AFB. He is a 1994 graduate of the U.S. Air Force Academy and holds a M.S. in Aeronautical Engineering from Embry-Riddle University. Maj. Musselman was selected as an Air Force Aerospace Physiologist

in 2001, and is a member of the Aerospace Physiology Society and AsMA.

LCDR Debra L. Yniguez, MSC, USN, is currently assigned as a Department Head



for the Naval Survival Training Institute, Pensacola. She was designated as a Naval Aerospace Physiologist in 1986, and holds B.S. from the University of Arizona, and a M.S. in Physical Education from San Diego State University. LCDR Yniguez has been a member of the

Aerospace Physiology Society and AsMA since 1996.

JOIN AsPS TODAY!

Take advantage of the outstanding network potential and the chance to gain knowledge from the field's top minds.

Take part in forums for the integration and utilization of experts in many diverse professional fields. Our members have shared their expertise in multinational and multi-service working groups for altitude effects, acceleration, spatial disorientation, passenger and patient transport, and human factors.

Membership is only \$10. For more information, please contact Joe Essex at joseph.essex@navy.mil, or write to:

LCDR Joe Essex, MSC, USN
 BLDG 2272 Suite 345
 47123 Buse Rd
 Patuxent River, MD 20670

Send information for publication on this page to:

Lt. Col. Kim Barber, USAF, NC
flygrl141@woh.rr.com

AEROSPACE NURSING SOCIETY NEWS

2008 Aerospace Nursing Society Awards



THE LUNCHEON--Colleen Morissette, Maj. Gen. Bruce Green, Dr. Marian Sides and Brig. Gen Douglas Robb.

Aerospace Nursing Society Awards

During this year's ANS luncheon, held May 14 2008 at the Sheraton in Boston, the following five awards were presented to outstanding members.

Hans Krakauer, Junior Flight Nurse of the Year Award Capt. Juvelyn T. Chua

Capt. Juvelyn Chua received the 2008 Hans Krakauer Junior Flight Nurse of the Year Award in appreciation for her significant contributions to the success of the 375th Aeromedical Evacuation Squadron, Scott AFB, IL. She is an outstanding Air Force officer and top-notch Flight Nurse Examiner. In the past year, she has delivered superb results as an Executive Officer, Flight Nurse Instructor, and Evaluator. She was deployed in support of Operations Enduring Freedom and Iraqi Freedom. Her demands for compassionate and quality nursing care from her fellow crewmembers truly made a difference in the quality of patient care delivered to our combat wounded warriors. She trains and mentors flight nurses by passing on her exceptional clinical skills and her commitment to treat all patients with dignity, respect, and compassion.

During her last deployment, Capt. Chua was assigned to the 332nd Expeditionary Aeromedical Evacuation Squadron at Balad Air Base, Iraq. As the Medical Crew Director, she flew 10 combat sorties transporting 80 sick and wounded to safety and provided emergent medical care in blackout conditions. She

was committed to attending to her patients' special needs and ensured that the patients received their pain medications on time and constantly monitored for patients' comfort during the flight. A combat veteran of the largest and busiest hospital in the Area of Responsibility, she saw the need for more nursing support at the theater hospital. During her off duty time, she volunteered to work 4 to 10 hours a week in the Emergency Room, Intensive Care Unit, and on the Medical Ward. She provided nursing care to our wounded warriors and other casualties. She fed those who could not feed themselves, and assisted the doctors and medical staff when injured soldiers arrived in the emergency room. She also manned the aeromedical evacuation operations center and launched four urgent missions with the Critical Air Transport Teams when manning was short-staffed.

As the Standardization Liaison Officer in a deployed location, she posted the flight crew information file, medical read file, updated operating instructions, and ensured on-time posting of all Battle Staff Directives. She identified a crucial need for an Expeditionary Operation's Group point of contact to ensure personnel were trained in Self-Aid/Buddy Care. In all, 88 personnel were briefed with the life-saving skills in less than 5 days. Her natural leadership abilities, hard work, and dedication led to her being recognized as the #1 of 10 Company Grade Officers at her deployed location.

As the Officer-in-Charge of the Squadron Executive Office, she perfected officer and enlisted performance reports, awards, and decorations for 154 squadron members, which led to 100% on time and improved accuracy. Her commitment to self-improvement was impressive as she was awarded a national certificate in Emergency Nursing and completed a Master's of Science Degree in Health Sciences in the same year.

Her peers, whether in a deployed location or at her home unit, recognize her clinical expertise and compassion that she provides to her patients and their families in every case. Her professionalism and her patient advocacy is an inspiration to all.

Brigadier General E.A. Hoefly Award Maj. Julie M. Faubion

Maj. Julie Faubion was the 2008 recipient of the Brig. Gen. E. A. Hoefly Award for her outstanding skills as an Air Force officer and Chief of Aircrew Training, and for her leadership contributions to the success of the 375 Aeromedical Evacuation Squadron, Scott Air Force Base, IL. In the past year, she has delivered superb results as Flight Commander of Professional Development and, more recently, Flight Commander of Aircrew Training. She has deployed in support of Operation

Enduring Freedom, Operation Iraqi Freedom, and for the Joint Task Force in the Horn of Africa. She always demands the utmost in compassionate and quality nursing care from staff and fellow aeromedical evacuation crewmembers and has truly made a difference in the quality of patient care delivered to our combat wounded warriors.

During her last deployment she was assigned to Al Udeid AB, Qatar, as the Chief Nurse, 379th Expeditionary Aeromedical Evacuation Squadron. She directed nursing services and provided clinical guidance to several Total Force aircrews and ground support personnel. The result was 689 casualties expediently and safely evacuated from their theater of operations, and over 52,000 forces were supported by the theater's only 911 response. The exceptional clinical care provided to each casualty was a direct result of Maj. Faubion's executive nursing leadership and oversight.

Maj. Faubion's leadership in the Nurse Corps was recognized with the Air Mobility Command's Outstanding Company Grade Officer of the Year Award, and she was instrumental in her team winning the 2002 TRICARE Command Excellence Award. She was the Distinguished Graduate of a class of 48 students at the challenging AF Flight Nurse Course. Her exceptional performance led to her being named the HSI/JCAHO project officer for her Medical Group.

In the Education and Training forum, Maj. Faubion has tremendous responsibilities. She is charged with oversight of all Readiness Skills Verification training, Inservice training, Basic and Advanced Life Support currency, RN Licensure currency, and Emergency Medical Technician training, to name a few. Under her direction and leadership, not a single lapse or expiration occurred in any of the above named programs. Each of her 175 students in the Air Education and Training Command clinical Phase II program endured 390 hours of clinical and didactic training and had an unheard of 100% pass rate.

Finally, Maj. Faubion recently returned from a 120-day deployment in February 2008. In just one example of her attitude of "Service Before Self," she recognized that her squadron did not have the right level of expertise to fill a short-notice Chief Nurse deployment tasking as the sitting Chief Nurse left in June 2008. Realizing that she was the only person in the squadron that had the expertise to execute the deployed duties, she raised her hand again and will leave for another 120-day rotation beginning in April 2008.

Iversen Award SSgt. Kristen M. Pinner

SSgt. Kristen M. Pinner was the 2008 winner of the Iversen Award for her exemplary Aeromedical Evacuation Technician skills, which defined the "Standard of Performance" during the last year. She has volunteered



ANS AWARDS--Kristen Pinner (Iversen Award) and Julie Chua (Krakauer Award) pose with their awards. Lt. Col Williams (center) accepts the Garrecht Award for Paul Pfennig and the Hoefly Award for Julie Faubion.

and deployed on a yearlong CONUS tour in support of Operations Enduring/Iraqi Freedom and has also deployed to the 775th Expeditionary Aeromedical Evacuation Squadron (EAES) at Andrews AFB, MD. Within a month, she gained 100% proficiency for Aeromedical Evacuation on C-130, C-117, and KC-135 airframes and has provided top-notch medical care to over 400 combat casualties/ill warriors on over 50 missions in 6 months. She has been lauded by her patients returning to CONUS-based Medical Facilities for exceptional and compassionate care.

SSgt. Pinner has been an enthusiastic participant in patient care with a passion and charisma that earned her respect from all crewmates and has displayed abilities/expertise as Charge Medical Technician at a level far exceeding expectations of her rank. She is a charismatic leader with remarkable grasp of Aeromedical Evacuation Operations who readily adjusts to changes and has flown over 300 flight hours during the yearlong deployment; she approached each mission with a true team concept. As a result, she was noted by the deployed OIC as an "Outstanding Performer" in all Aeromedical Evacuation Technician crew positions and has been a role model to Airmen/Officers; her freshness of outgoing personality/can-do attitude has been praised as welcome respite. Her stalwart support of the Aeromedical Evacuation Operations Team provided invaluable assistance for missions and she was an integral member of a rotational ground support team providing the expertise needed to insure successful missions. Additionally, she voluntarily assumed the role of a Critical Care Air Transport Team (CCATT) "Chase" driver for 10 missions.

SSgt. Pinner has been responsible for insuring all equipment/personnel were packaged for travel for immediate return to Ramstein AB and for efficient, timely transport for CCATT assets to/from three National Capitol Area Medical Facilities. Her efforts were critical in ensuring optimal mission readiness capabilities for CCATT members and equipment and she risked her own life to save the lives of three individuals involved in a single vehicle automobile accident, teaming with five other individuals to pull three victims from a vehicle engulfed in flames. She assumed the leadership role of directing personnel, assisting at the scene until the arrival of emergency officials and was lauded by the on-scene commander for the "awesome manner in which she controlled emergency rescue operations." She has also volunteered for/assumed duties as NCOIC of Publications Management and has ensured that 65+ assigned and attached flight nurses and AETs possess all required flying



ANS OFFICERS-- Nora Taylor, President Elect, Kim Barber, President, and Christine Cloutier, Secretary pose after the luncheon.

publications/references. She is respected as a tireless worker and leader who puts in long hours and has assured successful, safe mission execution.

SSgt. Pinner is a highly regarded Airman who was awarded Wing Airman of the 3rd Quarter 2007 for her outstanding accomplishments. Her unmatched enthusiasm, expertise, and drive led to her being recommended to upgrade to flight instructor as a 3-level SrA. She completed Professional Military Education CDC and the Airman Development Course in a 5-week time period and her performance has been exceptional and unparalleled by other NCOs. She possesses the skill/knowledge/character to lead and is peerless in her readiness to seek out learning opportunities to advance her professional knowledge and skills. She vigorously sought out opportunities to improve her patient care skills while playing a vital role in mission effectiveness and her aspiration to gain knowledge and hone skills is reflected in improved patient outcomes.

SSgt. Pinner supported a "lifetime opportunity" for over 20 Venerini Academy students/chaperones visiting Westover ARB, and represented Airlift Wing, Operations Group, and Air Force Reserve with distinction. She assisted in preparation/execution of a 3-day joint field exercise with over 950 civilian/military participants and is a staunch supporter of the Aeromedical Evacuation Jamboree 0704, signing on early for the 3-day training platform incorporating 4 aircraft, over 30 aircrew, and over 70 AE crewmembers for 8 training sorties. Her efforts have insured enhanced familiarization/comfort in executing AE missions on all airframes for those involved, and she is a valued mentor for junior Aeromedical Evacuation Technicians who excels in calmly managing crisis situations.

Brigadier General Claire M. Garrecht Award Capt. Paul L. Pfennig

Capt. Paul Pfennig received the 2008 Brig. Gen. Claire M. Garrecht Award for his outstanding skills as an Air Force officer and Flight Nurse Examiner and for his contributions to the pain management arena and the aeromedical evacuation mission. He is stationed at Scott Air Force Base, IL, with the 375th Aeromedical Evacuation Squadron. In the past year, he has brought pain management and side effect management issues to MAJCOM and HQ Air Force levels. He has contributed greatly to the squadron in the past year in Aircrew Training prior to and during an Aircrew Stan/Eval Visit. He was also selected for a position with the 375th Operations Group as the Chief Flight Nurse Examiner for the 375 Airlift Wing. He has deployed twice in support of Operation Iraqi Freedom, Operation Enduring Freedom, and for the Joint Task Force in the Horn of Africa. The patient care he provides clearly demonstrates professional expertise, compassion, and astute problem-solving techniques. During each of his interactions with other nurses as an evaluator, he pushes each to excel beyond their current level of demonstrated proficiency.

As one of only two Air Force nurses with a certification in Pain Management Nursing, Capt. Pfennig was contacted by the office of the Chief Nurse of the Air Force for discussion on the creation of a pain resource nurse at the

ASF at Ramstein AB and Andrews AFB as well as the creation of a consultant to the SG in pain management nursing. He coordinated with colleagues in the field and wrote two background papers for the Director of Air Force Nursing Services to address these issues. After the AMC Surgeon General, Chief Nurse, and Flight Nurse Evaluators observed pain management practices that were not adequate, an AMC Special Interest Item of pain management in the aeromedical evacuation system was created. He created a customized briefing for the 375 AES that discussed current pain management practices. This briefing brought together research-based information with the challenges of in-flight care. He also expanded the brief to discuss hospital-based pain management practices. His briefing was informative to both nurses and technicians, bringing up to date information to over 21 nurses and technicians in attendance.

Capt. Pfennig also researched and recommended to the AMC Surgeon General's office a solution to a nursing protocol/supply mismatch which, when left uncorrected, left nurses vulnerable for charges of prescribing medication without a license. A change in the medication for nausea was made without a corresponding change in the Air Force Instruction. He obtained research-based data that supported keeping the new medication and changing the regulation.

Observing and interacting with patients during Continental U.S. patient movement, Capt. Pfennig observed what he thought might be a deficiency in pain management in patients being moved from the Operation Iraqi Freedom and Operation Enduring Freedom theaters of operation. Coordinating with commanders from both the 375 AES and the 791st Expeditionary AES, he was authorized to conduct a quality initiative study to look at pain management practices. He gathered data of diagnosis, medications ordered, and pain ratings on 120 patients from over 13 flights and consolidated the data onto a single data-sheet. Obtaining permission from the IRB at the 60th Medical Group at Travis AFB, CA, he analyzed this data and found indicators that improvement in pain management for in-flight care is needed. Recently, he has been accepted to present his pain management QI review, titled "Pain Management in Operational Aeromedical Evacuation," at the 15th Annual Phyllis J. Verhnick Nursing Research meeting. This presentation will allow his research to be presented in front of a Tri-Service audience, which will help bring the message of adequate pain management practices to the nursing services of the Army, Navy, and Air Force. His superior work culminated in him being selected for an Air Force Institute of Technology-sponsored Master's Degree program in Medical Surgical Nursing with an emphasis on Pain Management...the first of its kind.

Join the Aerospace Nurses Society Today!

Dues are just \$10 (\$5 allied health professionals). For further information, contact:

Diane Fletcher, ANS Treasurer
4042 Stonewall Lane
Shiloh, IL 62221
Work: (618) 206-8467
Home: 618) 830-4581
diane.fletcher-02@scott.af.mil
Fletcher4echarter.net

Send information for publication on this page to:
Jennie Bendrick
 8825 Redwood Blvd
 California City, CA 93505
 760-373-810; butljenn@aol.com

WING NEWS & NOTES

Boston Welcomes The Wing

By Dale Orford, Photos by Dale Orford

Congratulations to Susi Bellenkes and her dedicated committee for putting together a fabulous meeting for Wing members in the historic city of Boston. Our meeting kicked off with a Boston Tea Party Reception where we welcomed 19 new members at the top of the Sheraton Hotel with its magnificent views of the Charles River, downtown Boston and the city of Cambridge. Tuesday saw us touring the historic sites of the city where we learned how the early settlers used the Boston Commons for a myriad of activities from grazing cattle and horses and gathering fire wood, to public gatherings, both political and social. We next visited Beacon Hill (photo 1) with its brick paved streets, sidewalks and elegant houses, with their tiny multipaned, and sometimes purple, windows. The entire city of Boston seemed constructed from thousands upon thousands of red bricks which were transported from England in the colonial era. Quite an amazing feat! A highlight of this tour was the Freedom Walk where we saw Paul Revere's house and the Old North Church (photo 2) with its statue of Paul Revere seated on a horse in the garden (photo 3). Inside the church we viewed the square pews, which we learned, were heated in winter by "foot-warmers", small metal containers filled with hot bricks or stones. No central heating in those days! Attached to the backs of the pews are small brass plaques identifying which pews belonged to which families, including one identified as belonging to Theodore Roosevelt.

On Wednesday, Wing members enjoyed a taste of typical Boston cuisine at our annual Business Luncheon, where we sampled New England clam chowder, baked scrod, which we were informed is simply whatever fresh white fish is available that day, and Boston Cream Pie. Susi Bellenkes presented the new



slate of officers for our Los Angeles meeting in 2009 and presented the gavel to our incoming President, Peggy Trumbo (photo 4). Our Luncheon co-chairs, Phyllis Hain and Jeanette Wells generously donated tea party baskets as door prizes, and Lin Beane contributed a lovely fresh-water pearl necklace which was won by Jackie Jordan (photo 5).

Thursday's tour took us across the Charles River to Cambridge where we toured the Harvard campus with its magnificent library, its many imposing buildings and the statue of John Harvard, who we learned was not in fact the founder of Harvard. The statue, by Daniel Chester French, is often referred to as the statue of "the three lies". The plaque on the statue reads "John Harvard, Founder, and the date 1638". We learned that John Harvard was instead a benefactor hav-

ing left his book collection and half of his estate to the school, which was in fact, founded two years earlier in 1636, and that the likeness of the statue was that of a professional model, as no paintings or other likenesses of Harvard had existed from which to cast the statue. Thus the three lies. We were also told of the custom of rubbing the brass shoe of the statue for good luck which many of our members took advantage of (photo 6). In Cambridge, we also visited the home of Henry Wordsworth Longfellow who was a professor of modern languages at Harvard. It was here that he also began his writing career and is credited with being the founder of modern American literature. His lovely house, a wedding gift from his in-laws, is surrounded by hundreds of lilac bushes, and in his later years when Longfellow became a famous lecturer, he would refuse all speaking engagements while the lilacs were in bloom (photo 7). One look at the beauty of the home surrounded by these magnificent blooms and one could see why. Our tour wound up with a lovely, leisurely boat ride on the Charles River. In fact, it was so relaxing some of us took the opportunity to catch a few winks and rest up for our Honor's Night dinner.

Our Boston meeting provided Wing members with a wonderful opportunity to reconnect with friends from around the world, to sample the tastes of New England cuisine, and to exploring this very special and historic city. It is one we will fondly remember.



Send information for publication on this page to: **Corporate News**
Aerospace Medical Association
320 S. Henry Street
Alexandria, VA 22314-3579

NEWS OF CORPORATE MEMBERS

Exhibitors at AsMA's 79th Annual Scientific Meeting in Boston, MA

AsMA would like to thank all those who exhibited at our annual meeting. Pictured on this page are some of our loyal corporate members who exhibited during the meeting. All photos are by Melinda Bruno



Sperian & Axiom Become Newest AsMA Corporates

Sperian Eye and Face Protection, Inc., and Axiom Worldwide Aerospace & Defense Contract Division are the newest companies to join AsMA's Corporate Membership. Sperian is a world leader in personal protection with three core businesses: head protection, fall protection, and body protection. Their mission is to provide men and women with the best possible hazard protections in the workplace.

Originally, Sperian was two separate companies: the Christian Dalloz Group and the Bacou Group. Christian Dalloz was founded in France in 1957 by Christian Dalloz while the Bacou Group was created by Henri Bacou in 1974. The two companies eventually merged in 2001 to become the Bacou-Dalloz Group. In 2007, the company changed its name to the Sperian Protection Group. They offer products adapted to high-risk environments to protect workers in the manufacturing and services industries.

Axiom Worldwide specializes in the creation and delivery of non-surgical medical equipment to healthcare providers. Their goal is to produce new treatment options using the latest technologies and science in order to offer patients and doctors alternatives to surgery. Their mission is to provide superior products, support, and dependable service essential to the success of the doctors they serve.

Axiom also offers marketing tools to its customers to better market the company's products. The company has clients in over 20 countries and is expanding its European market. It recently received certification as a medical device manufacturer in the Japanese market, which will allow the company to expand throughout Asia.

— For more information on Sperian, please visit their website at www.sperianprotection.com/index.asp. For more information on Axiom, see them on the web at axiomworldwide.com/Default.aspx.



NEWS OF MEMBERS

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

David P. Millett, M.D., M.P.H., is now the Executive Vice President of the Civil Aviation Medical Association. He remains in Peachtree City, GA. In an unrelated matter, as announced by Stanley Mohler, M.D., at the AsMA annual business meeting on May 13, 2008, Dr. Millett has agreed to donate his collection of Russian aviation artifacts to the Archives of Wright State University. This donation is being made in the name of Dr.



Millett's father, Dr. John D. Millett, who was the founder of Wright State University. The majority of this collection was obtained when Dr. David Millett was the embassy physician at the American Embassy, Moscow, from 1973-1975.

New Members

- Alghonmien, Shadi I., M.B., B.S., Amman, Jordan
- Anthony, Craig R., Pharm.D., Valdese, NC
- Ashouri, Anousheh, M.D., B.S., Galveston, TX
- Bravar, Ivo, SAF, Jevtica, Slovenia
- Cataman, Elena, M.D., Chishinau, Moldova
- Chappelle, Wayne, Ph.D., San Antonio, TX
- Clark, Patrick J., O.D., Ph.D., San Antonio, TX
- Dawson, David L., Lt.Col., USAF, MC, Sacramento, CA
- Fehr, Thierry, Villepreux, France
- Gundlach, Ronnie M., LT, MC, USN, Peakasie, PA
- Heins, James N., M.D., Kirkwood, MO
- Hendrickson, Eric M., Capt., USAF, BSC, Eielson AFB, AK
- Higginbotham, Keith D., Maj., USAF, MSC, Albuquerque, NM
- Husek, Christian W., M.D., Vienna, Austria
- Hyland, Gregory, Lt.Col., USAF, MC, Converse, TX
- Jeevarathinam, Sasirajan, M.B., B.S., Vellore, Tamil Nadv, India
- Jensen, Robert L., Colledale, TN
- Kadhim, Mohammed T., Capt., APO, AE
- Koh, Benjamin, M.B., B.S.M.Med., Crows Nest, Australia
- Kupfer, Doris M., Ph.D., Oklahoma City, OK
- Lupa, Henry T., M.D., Ph.D., Reading, Berkshire, UK
- Magee, Gary L., M.D., Thornhill, Ontario, Canada
- McMorrow, Roger C. N., M.B.Ch.B., Dublin, Ireland
- Melo, Rolando, Bogota, Columbia
- Murphy, Juliet, DDS, Sunnyside, NY
- Novy, Pamela L., Ph.D., Cibolo, TX
- Olkonomov, Konstantinos C., 1Lt., HAF, MC, FS, Atravida, Iliia, Greece
- Patlach, Robert, League City, TX
- Reichlen, Christopher P., 1Lt., USAF, BSC, Sumter, SC
- Richards, Collette, Sqn. Ldr., RAAF, BMBS, Henlow, UK
- Rincon, Eliana P., Maj., CAF, MC, Houston, TX

- Salicrup, Carlos, M.D., Mexico City, Mexico
- Seah, Michael, Wg.Cdr., RAAF, Langley AFB, VA
- Sewell, Louise M., M.D., Jumeirah, Dubai, United Arab Emirates
- Sharma, Jayashri D., M.B.B.S., M.D., Gurgaon Haryana, India
- Smyrski, John A., LTC, MC, USA, Waipahu, HI
- Stenlund, Per-Marten, Lt.Col., SAF, MC, Frolunda, Sweden
- Stout, Timothy W., Capt., USAF, BSC, Iota, LA
- Strand, Trond-Eirik, M.D., Oslo, Norway
- Thomas, William, Col., USAF, MC, San Antonio, TX
- Tidaback, Dale R., M.D., M.P.H., Fairfax Station, VA
- Turner, Alan R., Flt.Lt., RAAF, Wallsend, Australia
- Um, Hong Dae, Chung Cheong buk-do, Korea
- Vanbrabant, Marina, M.D., Elewyt, Belgium
- Wentworth, Michael W., LCDR, MC, USN, Pensacola, FL
- Wheeler, Leigh F., Jr., M.D., Merrimack, NH

CLASSIFIED ADS

POSITIONS AVAILABLE

AEROSPACE MEDICINE SPECIALIST

The Tennessee Air Guard is looking for one special person to fill the above position. Position requires military membership in the Air National Guard and is located in Memphis. Serve one weekend per month and 15 days of active duty per year and receive a tremendous incentive package, to include a \$75K cash bonus and a \$50K student loan repayment program. Please email CV to Bradley.tidwell@us.af.mil for further information and qualifications. Also check out our website at www.goang.com.

Reminder for Prospective Associate Fellows

The Chair of the Associate Fellows Group reminds prospective Associate Fellows that their 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 website at www.asmaafg.org.

Submit your 2009 Scientific Meeting Abstract

www.asma.org
Site available: August 5, 2008
Deadline: October 31, 2008

Online step-by-step instructions will guide you through the process. You will receive immediate confirmation with a control number for online submissions. There are many exciting features available through this site including an itinerary builder. Through the COS Research Tools/Workbench feature (located at the very top of the page) you can find funding opportunities and searches for colleagues, articles, meetings and much more. Explore this site to take full advantage of its features!

Aerospace Medical Association Seeks Executive Director

The Aerospace Medical Association (AsMA) is seeking applicants for the position of Executive Director. The Executive Director serves as the chief operating officer responsible for all management, administration and professional activities of the Association. Applicants should possess a doctoral degree and be familiar with the AsMA. Major responsibilities include membership services, planning and conducting an annual scientific meeting, publishing a scientific journal, and conducting liaison with related national and international organizations. Salary will be commensurate with these responsibilities and the experience of the applicant. Applications should include a 1- to 2-page narrative describing interest, professional qualifications, and vision for the Association. Also include a professional resume, salary history, and salary requirements. A position description may be obtained by calling (301) 469-5461 or visiting the Announcements section at www.asma.org. Mail applications to: Robert R. McMeekin, M.D., Chair, Search Committee, 7435 Arrowood Road, Bethesda, MD 20817-2822.

INDEX TO ADVERTISERS

Aerospace Medical Association
 Call for Papers iii
 Corporate Members 808
 Information for Authors Cover III
 Membership Application ii
 ETC Cover IV