

Abstracts Not Presented at 75th Annual Scientific Meeting

The following abstracts, listed by number title and authors, were not presented at the 75th Annual Scientific Meeting. These abstracts appeared in print in Section 2 of the April issue of *Aviation, Space, and Environmental Medicine*. These abstracts should not be used in references, as the data was not presented.

- 5, Medical Wastage During Flight Training - A Retrospective Study, *E. Barenboim, Y. Sherer, M. Goldfine, B. Azaria, A Grossman and L. Goldstein*
- 25, Challenges to Normalization Of Routine UAV Flight Operations, *E. Stolz*
- 43, Relative Utility Of Instruments For Monitoring Performance, *T. J. Balkin, P. Bliese, N. Wesensten, D. Thorne, M. B. Russo and G. Belenky*
- 71, A-Loc: A Case Report and Survey, *E. G. Johnson and C. Anderson*
- 89, CLL Cluster Among ATC, *L. Garand and J. Whitehead*
- 91, Heat Stress Development and Carbon Monoxide Exposure During Vehicle Transportation By C130, *A. Dor, M. Zilberberg, R. Jacobovich and L. Goldstein*
- 93, The Enigma Of High Altitude Cerebral Edema, *S. Johari*
- 95, Temporal Adjustments In Working Memory and Vigilance Functions During 6 Days Of Acclimatisation At 10, 500' Altitude, *K. Tripathi, C. V. Apte and C. R. Mukundan*
- 99, Hypoxis Of Cabin and Lactic Acid, *G.C. Port and C.F. Gerk*
- 123, Army Aviation, Low Intensity Conflict Operations and Safe Night Flying: An Aeromedical Perspective, *S. Ghosh*
- 130, Evaluation Of Human Cadaver Neck Response to Dynamic Tensile Loading, *E. Yliniem, J. Pelletiere, E. Doczy and R. Ching*
- 196, Board Located Medical Simulators For Future Flights to Other Planets: A Necessity and Creation Problems, *R. D. Grygoryan*
- 209, Methanol Poisoning Of Aviation Workers, *J. R. Brock*
- 212, Applied Aeromedical Decision Making Model In Recurrent Malignant Melanoma, *J. Woodson*
- 239, The Aeromedical Disposition Of A Pilot With Major Depression Treated With SSRI Antidepressant Medication, *D. Emonson*
- 285, Baseline and Anticipatory Heart Rate Variability In Navy Aircrew Candidates, *A. O. Lords, F. Andrasik, M. Prevost, E. Jovanov and C. A. Morgan*
- 289, NASA Task Load Index (NASA-TLX) and Mismatch Negativity Component Of Evoked Potentials As Indices Of Mental Workload, *K. K. Tripathi, C.R. Mukundan and T. L. Mathew*
- 293, U.S. Air Force Aircrew Fatigue Survey, *K. J. O'Toole*
- 294, Polyphasic Rest-Activity Cycles and Phototherapy: Effects On Sleep Onset Process, *M. Casagrande, F. Pirri and F. Guadalupi*
- 297, Psychophysiological Software Model For Aviation Operator Workload and Physiological Stress, *A. P. Karavolos*
- 345, Longitudinal Evaluation Of Cardiovascular Disease Risk Factors Among NASA Flyers, *J. P. Locke*
- 350, Is Alternative Medicine Compatible With Aviation Safety? A Literature Review, *L. V. Duque Arrubla*
- 356, An Evaluation Of The Change In Presentation Of Hypoxia With Age and Experience In Fighter Pilots Exposed to Altitude In A Hypobaric Chamber, *B. Alagha and S. Ahmadbeygi*
- 453, The Sensitivity Of Several Oculometric Measures In Relation to Fatigue Stress, *J. C. Miller, D. Eddy and J. R. Fischer*
- 470, The European Overview, *M. Brusati*
- 525, Effects Of +Gz Acceleration On Indices Of HRV, *R. Pipraiya and K. K. Tripathi*
- 530, Simulated Microgravity Induces A Transient Increase In Phospholipase C- Activity: A Potential Gravity Sensor, *I. Litosch*
- 534, Effect Of Microgravity and Environmental Stress On Brain Energy Metabolism and Function, *R. F. Villa and A. Gorini*
- 539, Micronutrition Supports Enhanced Immunity and Gene Repair On Extended Space Missions, *H.R. Mcdaniel and A. C. Muscatello*
- 553, From Shuguang-I to Shenzhou-V Mission: Chinese Space Medicine In Retrospective and Perspective, *W. Zhi-Xiang*
- 583, Capstone: An Aviation Safety Initiative In Alaska, *G. Childers and J. Cieplak*
- 584, Capstone: Advanced Avionics Training For Pilots, *L. Kirk*
- 674, An Investigation Of The Construct-Related and Criterion-Related Validity Of Cogscreen Aeromedical Edition, *L. P. Lehenbauer*

President's Page

Recently, I was thinking about our friend and colleague Larry Pepper, D.O., who, with his wife Sally and their children Adam, Megan, and Kelly, relocated to Africa in January of 1996. Dr. Pepper left a very successful aerospace medicine career at NASA to become a full-time missionary in Mbarara, Uganda. In addition to providing medical care for the poor, conducting continuing medical education for primary care providers, and attending to the emotional and spiritual needs of the local community, Dr. Pepper still maintains a connection with aerospace medicine by serving as an FAA designated Aviation Medical Examiner (AME) in Uganda. I recently had the opportunity to go on a missionary trip to Acuña, Mexico, accompanied by my wife Sandi and our sons Evan and Adam, and we briefly experienced what Dr. Pepper and his family have faced for the last 8 years. Let me tell you, it was a very humbling experience for us to meet and assist so many good people who have the misfortune of being poor and are forced to live in small cardboard shacks without running water, toilets, or electricity, in a harsh environment with 100(+)°F temperatures. Most of these people struggle every day, not having enough food to eat or clothes to wear. They are constantly fighting illness and disease with limited or no access to proper medical care. However, it is admirable that even under such terrible living conditions, many of them have very strong spiritual lives, are willing to extend their hospitality and open their hearts to other people, and care for each other in their communities. They are also very appreciative of any positive changes that happen in their lives, no matter how small or insignificant these changes may seem to others.

On the other hand, some of us may not fully appreciate the opportunities that we have to live comfortably, to be able to provide for the needs of our families, to work in interesting jobs that are challenging and motivating, and to know people who share positive life values and principles. It is commendable that we are so dedicated to excelling in our careers and other professional commitments. However, occasionally it is necessary for all of us to get a "reality check" in order to become more appreciative of everything that is good in our lives, to remind us not to take for granted those who care for and support us, and to support and assist others whenever we can. My experience in Acuña has re-energized me to do my best in serving you as AsMA President and supporting you as a colleague. It has also re-affirmed my commitment to establish the first AsMA Mentorship Program for our students and residents who represent our future.

I want to take this opportunity to recognize Sarah Nunneley, M.D., for her efforts as ASEM Editor-in-Chief in leading the successful implementation of the online manuscript submission system. This effective and efficient approach allows newly submitted manuscripts to be sent out to reviewers within 4 days. The reviews are then returned, and the author receives a publication deci-



Melchor J. Antuñaño, M.D., M.S.

sion within 35 days. AsMA's first edition of the "*Journal of Aviation Medicine*" was published in 1930, this became the journal "*Aerospace Medicine*" in 1959, and in 1975 evolved into the current journal "*Aviation, Space, and Environmental Medicine*." This peer-reviewed journal represents an important vehicle for publication of up-to-date scientific information in aerospace medicine and allied disciplines, and it is the most widely used and cited journal in our field worldwide. Dr. Nunneley is currently working with Dougal Watson, M.D., in developing an archival CD to make all back issues of the AsMA journal available in a digital format that is searchable and readable. Unfortunately, the most effective way to scan old issues of the AsMA journal involves their destruction. Therefore, if you have any old issues of the "*Journal of Aviation Medicine*" especially those published between 1929 and 1943, please contact Pam Day (pday@asma.org) for a list of missing issues.

I would like to share with you other recent AsMA accomplishments and activities, including: 1) practical demonstration of AsMA's new website currently under development; 2) Council approval of the new "Marie Marvingt Award," sponsored by the French Aerospace Medical Association, that will honor excellence and innovation in aerospace medicine; 3) Council approval of major position papers on the Aging Pilot, concluding that "age should not be the sole criterion for pilot disqualification," and on SSRIs and the Aviator, suggesting that "the use of SSRIs in selected pilots with minor depression might be considered for medical qualification for flying, and recommending a prospective study;" 4) submission of an AsMA letter to the USAF Chief of Staff in support of the military use of go/no-go pills; and 5) publication of an AsMA task force report on "Emerging Infectious Diseases Including Severe Acute Respiratory Syndrome (SARS): Guidelines for Commercial Air Travel and Air Medical Transport."

In my first President's Page, I indicated that our Executive Committee developed an updated strategic
See *PRESIDENT'S PAGE*, p. 722.

PRESIDENT'S PAGE, from p. 721.

plan for AsMA. This plan is now being implemented, and I have asked the AsMA Executive Director, Executive Committee Members, Council Members, and Representatives of Constituent and Affiliate Organizations to review it and identify specific performance targets under each strategic goal and objective. In the meantime, I am asking you to review this plan and identify any areas where you would be willing to volunteer your support for the benefit of our Association.

AsMA Strategic Plan

Vision: The international leader in aviation, space, and environmental medicine.

Mission: Apply and advance scientific knowledge to promote and enhance the health, safety, and performance of those involved in aerospace and related activities.

Goals:

1. Provide effective governance of the Association to maintain a sound financial structure and ensure organizational continuity

- 1.1 Integrate representatives from all constituent organizations into the Association's committees
- 1.2 Define specific roles and responsibilities for the Association's vice presidents and identify criteria for their selection
- 1.3 Demonstrate sustained growth in the Association's membership
- 1.4 Develop and implement a financial policies and procedures manual
- 1.5 Ensure sound compliance with best business financial practices for non-profit organizations to promote the Association's growth
- 1.6 Upgrade the website to optimize communications with membership and the public, and improve the quality of online services

2. Provide opportunities for education and promote research

- 2.1 Promote a human-centered approach to support new and evolving aerospace technologies
- 2.2 Foster interdisciplinary approaches to manage aerospace medicine issues
- 2.3 Identify current aerospace medicine research capabilities and programs worldwide and the existing gaps in basic and applied knowledge
- 2.4 Promote aerospace medicine research to address gaps in basic and applied knowledge and advocate for

increased funding

2.5 Optimize the quality and relevance of the Association's continuing education activities

3. Provide members opportunities for professional growth and development

- 3.1 Promote interdisciplinary networking
- 3.2 Foster international collaboration and joint agreements
- 3.3 Establish a formal mentorship program
- 3.4 Promote participation of all members in the Association's committees
- 3.5 Provide life-long learning opportunities and support for the Association's core membership

4. Represent the discipline of Aerospace Medicine before professional, commercial, and governmental organizations and advocate policies and standards

- 4.1 Improve the Association's responsiveness to emerging aerospace medical issues/concerns
- 4.2 Identify emerging issues in aerospace medicine and allied disciplines
- 4.3 Advocate aerospace medicine resolutions, policies, and positions
- 4.4 Optimize the use of all available methods of communication to support the members and inform the public
- 4.5 Promote jointly-sponsored professional meetings, technical exchanges, and training opportunities with other professional organizations to expand the Association's outreach and relevance
- 4.6 Encourage development of medical practice guidelines and position papers utilizing evidence-based medicine whenever possible

In closing, by the time you read this page, you will already know the great news about the first successful suborbital flight of Burt Rutan's SpaceShipOne (reaching an altitude of 62 miles) that was completed at 11:20 a.m. on June 21, 2004 by private astronaut Mike Melvill. This is a historical achievement that set a record for the first manned suborbital spaceflight conducted by a non-government aerospace program. It is expected that SpaceShipOne will fly again in the near future carrying three occupants to compete for the Ansari X Prize. Following the progress on the expanding flight envelope of this privately-operated reusable launch vehicle (RLV) has been exciting, and it provides a clear indication of the new types of challenges that we are facing in our aerospace field. We must continue to be prepared to take challenges like this head on!

Medical News

AVIATION, SPACE, AND ENVIRONMENTAL MEDICINE

Bagshaw voted President-Elect of AsMA; Antuñano installed as President

Michael J. Bagshaw, MB, BCh, MRCS, LRCP, FFOM, DAvMed, DFFP, FRAeS, was elected to President-Elect of the Aerospace Medical Association at the Annual Business Meeting in Anchorage, AK, May 4, 2004. **Andrew H. Bellenkes, Ph.D.**, was elected Vice President, and **Richard T. Jennings, M.D.**, was re-elected Vice President. Both terms end in 2006. In addition, four Members-at-Large for Council with terms to end in 2007 were elected: **James R. Hickman, Jr., M.D.**; **P. Glenn Merchant, Jr., M.D.**; **Susan Richardson, M.S.**; and **Thomas W. Travis, M.D. Melchor J. Antuñano, M.D.**, was installed as President during Honors Night Ceremonies on May 6. Dr. Antuñano is currently Director of the U.S. Federal Aviation Administration Civil Aerospace Medical Institute in Oklahoma City.

Michael J. Bagshaw is one of the British Airways team of occupational and aviation physicians. Holder of an ATP (flying part time as a Hawker 800 captain), flying instructor, and flight examiner, he is a recognized authority on human factors in aviation and contributing author to a number of aviation and travel medicine textbooks, including the Oxford Textbook of Medicine. He has published more than 60 scientific papers on topics such as deep venous thrombosis (DVT), cosmic radiation,



and the aircraft cabin environment, and lectures internationally.

Born in Formby, Lancashire, UK, Dr. Bagshaw earned his medical degree in 1973 at the Welsh National School of Medicine in Cardiff, and a Certificate in General Aviation Medicine in 1974. He attended RAF College in Cranwell from 1975–1976, and then RAF Central Flying School from 1977–1978. He attended the RAF Institute of Aviation Medicine, Farnborough, in 1980 and earned a Diploma in Aviation Medicine.

Dr. Bagshaw had an 18-year career in the Royal Air Force serving in a variety of positions including Senior Medical Officer, A&AEE; Flying Instructor at the RAF College; Senior Medical Officer (Pilot) and Specialist in Aviation Medicine; and was Squadron Leader when he retired from the RAF Medical Branch in 1986. Before joining British Airways in 1992, Dr. Bagshaw worked as a consultant in audiology (neuro-otology) at St. George's Hospital London, and as a family practitioner.

He is a member and Fellow of the Aerospace Medical Association, the Royal Aeronautical Society, and the Faculty of Occupational Medicine; President-elect of the Airlines Medical Directors Association; Honorary Civil Consultant Adviser in Aviation Medicine to the British Army; and visiting lecturer in aviation medicine at Kings College

London. He currently serves as Vice Chairman, Royal Aeronautical Society Aviation Medicine Group; on the Scientific Committee, International Academy of Aviation and Space Medicine; on the Editorial Board of the *Journal of Travel Medicine and Infectious Disease*; and is on the Aviation Steering Committee at Kings College London. In the past, he has served as Associate Editor for *Aviation, Space, and Environmental Medicine*; Chairman of the Association of Authorised Medical Examiners; Chairman of AsMA's Air Transport Medicine Committee; a member of the European Union Cabin Air Quality Working Group; and a member of the American Society of Heating, Refrigeration & Air-conditioning Engineers Cabin Air Quality Standards Committee.

Dr. Bagshaw has won a variety of honors and awards including: the Buchanan Barbour Award from the Royal Aeronautical Society; the Award of Merit from the Guild of Air Pilots and Air Navigators; Patron of the Institute of Aviation Medicine International in Switzerland; Honorary Member of the Slovenian Aerospace Medical Association; and the George J. Kidera Award from the Airlines Medical Directors Association. He is also a Past President and member of the British Medical Pilots Association, a Fellow of the Royal Society of Medicine, and a member of the Society of Occupational Medicine.

Council Highlights:

On Sunday, May 2, Dr. David Schroeder called the meeting to order at 9:00 a.m. Council meeting minutes of November 19, 2003, were approved as read. Dr. Schroeder gave an overview of the February 27, 2004, Executive Committee Meeting including the Strategic Plan. On Wednesday, May 5, Dr. Schroeder opened the meeting at 7:00 a.m. and turned the gavel over to incoming president Dr. Melchor Antuñano.

The following are highlights of both of those meetings.

Editor's Report: Dr. Nunneley reported that 115 papers have been submitted in the past 6 months with a 20% rejection rate. The online system for manuscripts was working very well. Dr. Nunneley announced that Dr. William Johnson has retired as our book review editor and Dr. Glenn Mitchell has taken over the feature. Dr. Michael Barrett is the new Space Medicine Editor. Dr. Dougal Watson continues to work on archiving our past journals on CD.

Managing Editor's Report: Pam Day reported that the journal is sound. It has been online since last August, but members are not taking advantage of this availability.

Annual Meeting: Dr. Manning reviewed the Science Program. There were a record 731 abstracts submitted for consideration for the scientific meeting; 59 were rejected. Dr. Rayman

announced that there were nearly 1,200 advanced registrants for the meeting. Exhibits were down, which will result in a smaller gain this year as compared to previous years. FedEx has given AsMA \$9,000 to support the Welcome Reception.

Education and Training—It was announced that the AsMA CME program will be surveyed in November by the ACCME. The Executive Director is preparing the application package with the Chair of the Education and Training Committee. Dr. Jennings also reviewed the MOC program for this year's meeting. This year's meeting has been accredited for the AMA, AOA, and AAFP.

Membership—Dr. Andy Bellenkes described a number of initiatives to increase membership, which has been increasing over the past two quarters. He and his Co-chair, Dr. Warren Silberman, presented a very ambitious program for the coming year. Membership as of January 1, 2002, was 3,132 and as of January 1, 2004, it was 3,128.

Corporate Members—The First International Congress on Space Flight Issues in the 21st Century: Cardiovascular Effects and Fluid Shift Issues, will be held in Bellagio, Italy, 18–21 October 2004. Many international members will participate in the conference.

International Activities—Dr. Navathe stated that Medical Guidelines for Airline Travel was published in Spanish and French and may be published in other languages as well.

Awards—Dr. Moore stated that there were nominations for every award this year. The new Marie Marvingt Award sponsored by the French Aerospace Medical Association will be implemented for the 2005 meeting.

Resolutions—There were no resolutions to bring forward to the membership. Two are still in committee, one was voted down and one was withdrawn.

Communications—The new AsMA website is in the design stage. A prototype was available to view at the convention center and comments were solicited during the meeting.

Aviation Safety—The Age-60 paper has been submitted to the journal for publication. (Published elsewhere in this issue.)

History and Archives—The historic film series will resume during next year's meeting in Kansas City. Several articles were published in the journal and there will be sessions on aerospace medicine history at the meeting.

Finances—The Executive Director reviewed the End of Year 2003 Finance Report. There was a net gain of \$23,649. In general, this was a good year financially. The Finance Committee gave further detail and was of the opinion that the finances for 2003 were good.

Air Transport Medicine—Dr. Bagshaw announced that the SSRI paper was published in the May issue of the journal and that the European community is very interested in our recommendations as they prepare their own position on this issue. He also announced that Dr. Nigel Dowdall will continue representing

See COUNCIL, p. 724.
COUNCIL, from p. 723.

AsMA at ECAC. Under discussion are Cabin Air, Pilot Certification Periodicity, and Cosmic Radiation.

Report of Representative to Aerospace Physiology Certification Board: Seven candidates sat for the certification examination with five of them passing the examination: LT Anthony Artino, MSC, USN; Rainer Kowoll, M.D., Ph.D.; LT Darian Rice, MC, USN; LCDR G. Merrill Rice, MC, USN; and LT Barry Shaddix, MSC, USN. These five candidates were approved as certified in Aerospace Physiology. Col. Richardson submitted three new names for the Certification Board for the coming year: Ryan W. Maresh, Valerie Martindale, and Julia Sundstrom. Russell S. Lawry will Chair the Board Committee for 2004-05. Departing the Board are: Timothy J. Byrne, David Service, and Brenda Crook. Col. Jeff Sventek will continue to serve as Council representative to the Certification Board. The AsPS is planning to confer a certificate in Aerospace Physiology (CASp) for anyone who had certified or does certify by passing the examination. This designation of CASp has been approved by the U.S. Patent Office. The AsPS will pay for this privilege.

Dr. Antunaño submitted the names of Col. Susan Richardson, Dr. Robert Weien, and Dr. Dwight Holland as Council representatives to the Executive Committee.

As of now, the only new Committee Chair will be Alex Wolbrink, taking over the Air Transport Medicine Committee from Dr. Bagshaw.

AMSRO President Dr. Shoor gave an excellent account of student/resident activities and has asked for assistance from the officers in establishing a mentorship program and providing articles to *The Orbiter*. These issues will be worked with the incoming president. Constituent Members of Council were identified: Aerospace Human Factors Association-Carol A. Manning, Ph.D.; American Society of Aerospace Medical Specialists-Daniel Van Syoc, M.D.; International Association of Military Flight Surgeon Pilots-Dwight A. Holland, Ph.D.; Aerospace Physiology Society-Russell S. Lawry; Aerospace Nursing Society-Colleen Morrisette; Life Sciences and Biomedical Engineering Branch-Estrella Forster, Ph.D.; Society of U.S. Naval Flight Surgeons-Dwight C. Fulton, M.D.; Society of U.S. Air Force Flight Surgeons-Romie Richardson, M.D.; Airlines Medical Directors Association-Thomas B. Faulkner, M.D.; U.S. Army Aviation Medical Association-Joseph F. McKeon, M.D.; Space Medicine Branch-TBD; Aerospace Medicine Regent-Jeffrey R. Davis, M.D.; Student/Resident-Johann Westphall.

Constituent Members of the Nominating Committee were also identified.

Council will meet next on November 17, 2004, and Executive Committee will meet August 19, 2004.

"The First International Congress on Space Medicine Issues in the 21st Century" will be held in Bellagio, Italy, from 18-21 October, 2004.
 Limited space is available for additional participants. Anyone interested in attending or wanting further information, please contact Dr. Marian B. Sides at: mbsides3@myexcel.com.

New Annual Award Approved

Council approved the fifteenth annual award to be presented during Honors Night Ceremonies. The Marie Marvingt Award was established by the French Aerospace Medical Association in memory of Marie Marvingt (1875-1963), a pioneer French pilot and surgical nurse who, for more than 50 years, actively and untiringly involved herself in the conception and development of air ambulance services and in the education of the general public regarding their use and benefits. The award will be presented annually to honor excellence and innovation in Aerospace Medicine. Please consider nominating a colleague for this new award, or one of the many other prestigious awards offered by AsMA. The nomination form is available on our website under the committees and is often printed in the journal.

Executive Director's Column



Rayman

6,000 or 8,000 Feet

About 50 years ago the aviation industry decided to impose an 8,000-ft maximum cabin altitude on commercial aircraft. I was told by several of our Gray Eagles that this decision was made after many hours of discussion and debate in smoked filled rooms. I was also told there are no minutes or records left that recounted these discussions. We only know that the 8,000-ft maximum cabin altitude came about by compromise between the aeronautical engineers and the medical community. The former took into account aircraft design, aircraft structure, and operational requirements, while the medical community took into account human performance and health under conditions of various degrees of mild hypoxia. In any event, this was acceptable to most, if not all, nations of the world pledging allegiance to this compromise.

Nevertheless, over the years there have been apologists for lowering the maximum cabin altitude to 6,000 ft in the interests of enhanced cockpit crew performance and passenger health. Two of our prestigious members, Ross McFarland and John Ernsting, supported this change. It is interesting to read the 1978 Armstrong Lecture delivered by Dr. Ernsting, which was published in our journal (1). It is entitled "Prevention of Hypoxia: Acceptable Compromises." Also, Dr. McFarland's classic textbook, "Human Factors in Air Transportation" argues for a lower cabin altitude, although not as enthusiastically as Dr. Ernsting (2).

Because human beings are basically sea level creatures, would we fare better at lower cabin altitudes? Certainly there are differences between 6,000 and 8,000 ft regarding barometric pressure, oxygen pressure, PaO₂, and oxygen-hemoglobin saturation. But are these differ-

ences significant?

There have been studies clearly showing that human performance, i.e. cockpit performance, is degraded with increasing degrees of hypoxia. For example, at higher altitudes, there is degradation of color vision and the ability to perform novel tasks that might be necessitated by an in-flight emergency. But, is there a significant difference in degradation when comparing 6,000 ft to 8,000 ft cabin altitude?

Flight attendants can be extremely busy during flight depending upon flight duration and passenger load. Besides walking the aisles, they must push heavy carts and tend to other passenger needs. It might be assumed that flight attendants who are engaged in work in flight would do better at a lower cabin altitude in that work at 6,000 ft might be less fatiguing than work at 8,000 ft, although this has never been demonstrated. Also, would it be presumptuous to assume that work at 8,000 ft is an added health risk for flight attendants as compared to work at 6,000 ft? Is there evidence?

And finally, what about the passengers? We know that many passengers with significant cardiopulmonary disease fly on commercial aircraft. It would be physiologically defensible to assume that these passengers would be at increased risk of exacerbation of their illness at 8,000 ft rather than at 6,000 ft. Although this appears to be logical, is there evidence to support this? Significant in-flight illness has been reported in passengers with coronary artery disease and chronic obstructive pulmonary disease. But are symptoms necessarily correlated with cabin altitude? The aerospace medicine literature is silent on this issue.

In summary, one might assume that 6,000 ft is more salutary than 8,000 ft. However, there is precious little, if any, evidence that a lower cabin altitude would significantly facilitate cockpit crew performance, enhance flight attendant work, and protect passenger health. If the discussions of 5 decades ago were to resume today, there is no doubt that our aeronautical engineering colleagues would ask, is lowering cabin altitude to 6,000 ft really worth the manufacture of heavier air frames, the need for more fuel, and the increased costs borne by passengers?

REFERENCES

1. Ernsting J. Prevention of hypoxia: acceptable compromises. *Aviat Space Environ Med* 1978; 49:495-502.
2. McFarland RA. Human factors in air transportation. New York: McGraw-Hill Book Co. Inc.; 1953.

**AsMA
Future Meetings**

May 9-12, 2005
 Kansas City, MO
 Hyatt Regency Crown Center

May 14-18, 2006
 Caribe Royale Hotel
 Orlando, FL

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

Minutes of the Aerospace Medical Association Business Meeting

Tuesday, May 4, 2004, The Hilton Hotel - Dillingham & Katmai Rooms, Anchorage, AK

1. Call to Order: Dr. Schroeder called the meeting to order at 12:55.
2. Recognition of Past Presidents: Past Presidents were recognized.
3. In Memoriam: There was a moment of silence in memoriam.
4. Report of the President: The President highlighted his year including the Strategic Plan, the Financial Audit, Best Business Practices, and a new Website Design.
5. Report of the Executive Director, Secretary Treasurer, General Chair of Annual Scientific Meeting:

A. Report of the Executive Director, Russell B. Rayman, M.D.

Ladies and gentlemen, it is my pleasure to report to you our activities during the preceding calendar year. Once again, your Association had a very busy and productive year engaged in the many current issues of aerospace medicine. A seminal event was the passage of 2 major position papers: one was on the aging pilot concluding that age should not be the sole criterion for pilot disqualification; the second position paper on SSRIs and the aviator suggested that the use of SSRIs in selected pilots with minor depression might be considered for qualification for flying. The paper also recommended a prospective study.

Because of the popularity of Medical Guidelines for Airline Travel, a second edition was published as a supplement and is also on the AsMA Website. Other important instruments of AsMA policy included a letter to the USAF Chief of Staff in support of the military use of go/no-go pills. In addition, because of the SARS epidemic and its implications for air travel as well as air medical transport operations, an AsMA Task Force convened and prepared a paper entitled "Emerging and Infectious Diseases including SARS: Guidelines for Commercial Air Travel and Air Medical Transport." The paper was published in the January '04 issue of the journal. And finally, a letter was sent to major regulatory agencies and major airlines around the world recommending that an anticonvulsant medication be carried in on-board emergency medical kits.

AsMA was represented on a number of important committees and working groups. For example, one was the U.S. Institute of Medicine of the National Academy of Sciences report on the Longitudinal Study of Astronaut Health (which was recently published). We were also represented at the table at meetings of the Air Transport Association of America Medical Committee, the NASA Aerospace Medicine and Occupational Health Advisory Committee, a USAF Aerospace Medicine Summit Meeting, and the APHA/CDC Seminar on Deep Venous Thrombosis. AsMA representatives also regularly attend meetings of the Commission on Accreditation of Medical Transport Services and the European Civil Aviation Conference (ECAC).

These are your major outreach initiatives for 2003. Thanks to all of you who have given your time and energy to a most productive year.

B. Report of the Secretary/Treasurer
As of December 31, 2003, our total income was \$1,148,830.00, total expenses were \$1,125,181.00 for a net gain of \$23,649.00.

C. Report of the General Chair of the 75th Annual Scientific Meeting.

Advance registration was 1,198; onsite registration as of 11:00 a.m. today was 264, giving us a total registration of 1,462 [final total 1,488]. There were 33 exhibits: 18 technical and 15 scientific.

6. GOVERNANCE - (Antunaño)

A. Committees

a. Bylaws - Nailling

The Bylaws Committee proposed a change with the following addition:

The immediate Past President shall serve as a member of the Nominating Committee for a one year term, and shall become Chairperson of that Committee the subsequent year.

A motion was made to accept the change and passed by over a 2/3 majority. However, there was a question of a quorum at the time of the vote. It was found that only 92 AsMA members were present although a quorum requires 100.

Consequently, 10 - 15 members in adjunct rooms were called into the Business Meeting to ensure that there was a quorum. The motion was made once again to pass the Bylaws proposal, receiving well over 2/3 of the vote: 85 voted yes, 13 no, with 2 abstentions.

b. Finance - Weien

Dr. Weien reviewed the Finance Report as given in Paragraph 5 above.

c. Nominating - Landry (Dr. Davis presented)

The Nominating Committee approved the slate of officers for the coming year. A motion to approve the slate carried.

7. REPRESENTATION AND ADVOCACY - (Hastings)

A. Committees

a. Air Transport Medicine - Bagshaw

The Committee is studying the periodicity of flight medical examinations and standards for the transportation of patients. Panels are being planned for next year. An update from ECAC on medical standards is under review.

b. Communications - Hoffman

A new Website was demonstrated at the meeting and will soon be activated once it has been tested.

c. Resolutions - Faulkner

A resolution on G-CAS and G Protection is being worked by the Committee for rewording. It will be presented at next year's meeting.

8. EDUCATION AND RESEARCH - (Jennings)

A. Committees

a. Aerospace Human Factors - (Nesthus)

The Committee sponsored 3 panels this year and is working on a slide show for the new Website.

b. Aviation Safety - DeJhon

c. Education and Training - Van Syoc
AsMA will be surveyed by the ACCME in November. The MOC program was reviewed.

d. History and Archives - Mohler

The Committee sponsored 2 panels this year.

e. Science and Technology - Goodman
The Committee is planning panels on nanomedicine for the Kansas City Meeting.

9. MEMBER SERVICES - (Taylor)

A. Committees

a. Awards - Moore

Nominations were received for all awards this year. A new Marie Marvingt Award sponsored by the French Aerospace Medical Association was approved with the following citation: The Award is presented annually to honor excellence and innovation in aerospace medicine. (See related article.)

b. Corporate and Sustaining - Sides

There are 44 members in the Corporate and Sustaining Affiliate Organization. Dr. Charles gave an excellent lecture to the group on a Mars Mission. The Bellagio conference is scheduled for October 18 - 21, 2004.

c. Membership - Bellenkes/Silberman

The Committee reviewed membership statistics as of January '04. There were 3,128 members. Future plans for membership initiatives were described.

10. INTERNATIONAL SERVICES - (Bagshaw)

A. Committees

a. International Activities - Navathe

11. UNFINISHED AND NEW BUSINESS: There was none.

12. ADJOURNED: The meeting was adjourned at 2:10 P.M.

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

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This Month in Aerospace Medicine History-- August 2004

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

Seventy-five Years Ago

Airship circumnavigation: The very first round-the-world journey by an airship was accomplished in August 1929. The Graf Zeppelin (LZ-127) flew 21,300 miles in 20 days and 4 hours, not only becoming the first airship to accomplish circumnavigation, but setting a distance record as well (8).

Fifty Years Ago

Growth of space medicine: "This is the second Space Medicine Issue of The Journal. The first one was published in August, 1952. During the five years' existence of this special branch of aviation medicine, its scope has become considerably more clear and its goal much closer. Its applicability to flight is now obvious to everyone who has followed the achievements in high altitude flying during these five years. The altitude record of 83,225 feet attained last summer by Lieutenant Colonel Marion E. Carl, U.S.M.C., ...rocket flight carrying mice and monkeys up to 100 miles, and the tests of the two-stage rocket 'WAC Corporal' up to 250 miles are only a few of the challenging events in this field. Major Charles E. Yeager, U.S.A.F., has flown two and one-half times the velocity of sound...[V]arious reports in this issue...deal with experimental methods of reaching the upper atmosphere in balloons, with problems of primary and secondary cosmic rays, and with physiological requirements and climatization techniques in a sealed cabin which is the experimental prototype required for space flight and space travel. In addition, a report on the psychophysiological effects of weightlessness is presented"(1).

Residency in aerospace medicine: "Physicians desirous of qualifying for examination for certification in aviation medicine by the American Board of Preventive Medicine must complete a one-year residency in this specialty, instead of two years as previously required, according to a recent announcement...This announcement does not change the total requirement of six years' graduate training and experience following internship to attain eligibility for examination, as follows: two academic years of study in preventive medicine and aviation medicine, one year of which must be in a school of public health accredited by the American Public Health Association and another in an approved school of aviation medicine; a one-year residency; one year of supervised experience in aviation medicine; and two years of teaching or practice in this specialty" (2).

Cosmic radiation (Naval Air Station Pensacola, FL): "The potential hazard to humans from exposure to the primary cosmic radiation in flight at extreme altitudes centers upon the heavy nuclei component of the primary radiation. Along the tracks of heavy nuclei in living matter very high local radiation dosages are administered to the cells, though the overall total body exposure stays well below the permissible level. These high local ionization densities reach excessively large values in the terminal sections of the tracks (so-called thin-down parts)... The shielding of ordinary heavy nuclei hits in a protective

layer is due to nuclear collisions and thus obeys different laws. The shielding power depends on the atomic composition, materials of small atomic weights being more effective. Therefore, substances with a high hydrogen content offer the best weight economy. The shielding factors for paraffin, plastics, and aluminum are computed and presented in graphs. The weight requirements are again prohibitively high.... [P]rotection of man from heavy nuclei hits seems possible only by limiting the exposure time" (4).

Space equivalent zone (Randolph Air Force Base, TX): "In all fields of science, a clear definition or concept is sometimes just as valuable as a successful experiment, for both research and teaching. This is especially true in scientific fields which are apt to invite wild speculation from the outside - such as that of space flight. In this field, the concept of the functional borders between atmosphere and space, which was developed by members of the department of Space Medicine, USAF School of Aviation Medicine, Randolph Field, Texas, in 1950, has proven to be very fruitful and enlightening.... In this paper the term 'space equivalent' will be used to denote the conditions found in the stratosphere and the upper atmosphere. The applicability of this concept partially overlaps that of the functional borders of space. For the most part, however, it is broader. We can associated the term 'space-equivalent' with certain levels within the atmosphere that are identical with the functional borders. Also we can apply it to the entire region above the functional borders of space. Further, it can be applied to conditions which are not confined to any specific level or border - such as the zero-gravity state. And finally, because the term 'equivalent' is found in many languages, it is well understood internationally.... The concept of space-equivalence shows us where we stand today in the advancement of flight. In the area where we encounter one or several - but not all - factors typical of space, we deal with a partial space equivalence. This region begins at 50,000 feet. Above 120 miles all the factors characteristic of space are met. Thus, if we ignore some minor variations, we face here a total space equivalence within the earth's atmosphere" (7).

Twenty-five Years Ago

Skin pain threshold (Naval Air Development Center, PA): "To determine the maximum permissible temperature any material may attain without causing pain or burn on contact with bare skin, over 2000 observations were made of pain threshold during contact with materials at elevated temperatures. Six materials were used representing the full range of thermal properties from good conductors to good insulators. Time to pain threshold was converted to time to threshold blister on the basis of the relationship between pain and burn established earlier for radiant and for convective heating. Calculated times to blister were used to predict the material temperatures causative of 'touch-burn.' Experimentally produced threshold blisters at the predicted temperature-times verified the predictions. Graphs and equations were generated for determining safe temperatures for any material in contact with bare skin for 1-5 s solely from a knowledge of its thermal properties. Conversely, the thermal inertia (k²c) of the optimal material for a specific use and skin contact can be predicted from a knowledge of the

maximum material temperature and length of contact time anticipated" (6).

Cockpit thermal stress (Royal Air Force Institute of Aviation Medicine, United Kingdom): "Thermal data have been obtained from Jaguar aircraft flying routine, warm-weather operations in Sardinia. These data have been analysed [sic] in terms of the ambient and cockpit wet bulb globe temperatures (WBGT) and the mean body temperature (T_b) of the pilot. In contrast to similar data previously obtained from Harrier and Buccaneer aircraft, no interrelationships could be demonstrated between ambient WBGT at ground level and either cockpit WBGT or pilot T_b. Relationships which could be described by equations of negative slope were obtained between T_b and sortie time and between cockpit WBGT and sortie time. A model has been derived for predicting aircrew thermal strain in the Jaguar from cockpit temperature and sortie time... [D]espite an effective cabin conditioning system, pilots flying the Jaguar aircraft in summer conditions are generally above the ideal level of thermal comfort, although the conditions do not approach those regarded as dangerous..." (3).

Assisted positive pressure breathing (Brooks Air Force Base, TX): "The effect of both assisted and unassisted positive pressure (PPB) breathing on +Gz tolerance was evaluated. A GOR (gradual onset rate = 0.1 G/s) acceleration profile was used to evaluate five different experimental conditions: 1) G-suit-only, 2) G suit + unassisted PPB, 3) G suit + PPB assisted by the English jerkin, 4) G suit + PPB assisted by the Canadian waistcoat, and 5) the Swedish counterpressure garment G suit combination. Acceleration tolerances for these experimental conditions (excluding the Swedish garment) with the subjects performing M-1 maneuvers were measured using an exhaustive ACM (Aerial Combat Maneuvers) acceleration profile. GOR tolerances were similar for both assisted and unassisted PPB with the pressure breathing experimental conditions providing a significant GOR tolerance increase over the G suit only condition. Assisted PPB increased ACM tolerances over both unassisted PPB and G suit only conditions. It appears that assisted PPB may offer a practical method for reducing the fatigue associated with exposure to high G" (5).

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Peters and Bagshaw win AMDA's Kidera Award

Eric B. Peters and Michael Bagshaw recently both won the George J. Kidera Award of the Airlines Medical Directors Association (AMDA). The award was presented during the AMDA annual meeting held in conjunction with the AsMA meeting in Anchorage, AK, in May 2004.

Dr. Peters was born in England in 1943 and emigrated with his family to South Africa after



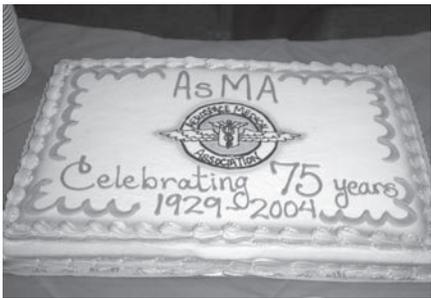
World War II. He received his medical training at the University of Cape Town (UCT) and while there, earned his private pilot's license. In 1976, he transferred from the Department of Anesthetics at Groote Schuur Hospital to South African Airways

(SAA) Medical Service, beginning his career in aviation medicine.

Since that time, Dr. Peters has served as a member of the South African Aviation Medical Panel. He is an Aviation Medical Examiner, holds a Diploma in both Anaesthetics and in Occupational Medicine, and is a member of the South African Society of Occupational Medicine.

He is an Associate Fellow of the Aerospace Medical Association, and in the past has served as President of the South African Aerospace and Environmental Society and President of the AMDA. He is an invited member of the International Airline Medical Advisory Committee and has received the Lennon Aviation Medicine Achievement Award for his valuable contributions to the South African Aerospace Medical Society.

Dr. Bagshaw is the president-elect of both the AMDA and the Aerospace Medical Association. His biography can be found on page 723.



75th ANNIVERSARY--Our 75th anniversary was honored during the Sunday Night Welcome at the Captain Cook Hotel in Anchorage. Chocolate and vanilla cakes were served, in addition to a fabulous spread, made possible by donations from Federal Express. Jim Henderson of the Anchorage Convention and Visitors Bureau gave a humorous speech welcoming the Aerospace Medical Association to Anchorage.



Aerospace Physiology Society News: Greetings from the Incoming President, Gail Hathaway

I'm thrilled to be able to take over the office of Society President for 2004-05 from my good friend and colleague, CAPT Donna Murdoch. What an awesome job Donna did for us during her tenure as President. We are forever grateful!

We now begin preparation for our annual meeting in Kansas City by reflecting on the successful meeting held in Anchorage. Kudos to all of our members who were able to attend and participate in Anchorage and for rising to the challenges that travel to Alaska presented. For those unable to attend, it was simply an awesome week.

Our meeting success was no small ordeal. The week began for our Society at our Training and Education Day on Tuesday morning. One of the largest-attended sessions dealt with aviation performance. LT Al Bransdorfer, MSC, USN, and Maj Andy Woodrow, USAF, BSC, did an outstanding job of bringing together several experts in the field, including representatives from the Navy, Air Force, and National Institutes of Health. Next year's Education and Training day will continue this year's theme of enhancing our aviator's performance through nutrition and supplementation, with Major Woodrow, again, heading up the speaker search committee.

Tuesday's social and Wednesday's luncheon were the culmination of hard work, creative emailing, and hours of web surfing! Our social committee found the Sourdough Mining Company for the occasion, where we sold out of tickets, again! After a sumptuous meal of barbeque, salad, and assorted beverages, we retired to the roof of the Hilton to enjoy Alaska's beautiful "midnight" sunset. During the luncheon we announced our 2004 award winners. Look for an article on their accomplishments in a future issue of the ASEM Journal. Congratulations to all of our award winners!

Our preparation for next year's meeting in Kansas City has begun. Starting on Thursday morning, at the annual AsPS business-planning meeting, we developed the roadmap which will take us to and through next year's meeting. New officers should be elected in the next couple of months...be sure to visit the web site to place your vote if you haven't already done so (www.aspsociety.org). You can also use the website to submit change of address information and to find the address to send dues payments.

I anticipate a busy year of laying out the groundwork for yet another successful scientific meeting, and I challenge each one of you to become actively involved in both the Society and in our parent organization, AsMA. Nothing can happen, unless we make it happen.

I look forward to a great year ahead!

2004-05 MEETINGS CALENDAR

August 11, 2004, Leicester, UK. UK SPACE MEDICINE DAY. University of Leicester, Leicester, UK. Full day of presentations, workshops, and posters by leading UK and International Space experts. Conference pack issued. Cost: £20. Contact: alysongcalder@doctors.org.uk.

September 5-9, 2004, North West Province, South Africa. 52nd International Congress of Aviation and Space Medicine (ICASM). Sponsor: International Academy of Aviation and Space Medicine and the South African Society of Aerospace and Environmental Medicine. Sun City Hotel and Conference Facility. Further Info: www.sasaem.co.za; mwbandad@iafrica.com.

September 20-24, 2004, New Orleans, LA. 48th Annual Meeting of the Human Factors and Ergonomics Society. Info: HFES (310)394-1811; info@hfes.org; <http://hfes.org>.

September 27-29, 2004, Salt Lake City, UT. SAFE Association 42nd Annual SAFE Symposium. Info: Jeani Benton (541)895-3012; www.safeassociation.com.

September 16-19, 2004, Adelaide, South Australia. Annual Scientific Meeting of the Australasian Society of Aerospace Medicine. Contact: Jodie Parker, Iceberg Events. +61 7 3715 5000; jodie@icebergevents.com.au.

September 27, 2004, London, UK. British Society of Neuro-Otology Annual Scientific Meeting. Info: www.rsm.ac.uk or email: jennifer.lake@rsm.ac.uk

October 27-30, 2004, Port of Acapulco, Guerrero, Mexico. XXI International Meeting of Aerospace Medicine. Theme: Human Factors and Aerospace Medicine. Sponsor: Aviation Medicine Association of Mexico. Info: Claudia Palomeque ó Azucena Laguna, Tel.: 5575-1860, 5575-7295 y 1994-3691; cpalomeque@grupodestinos.com.mx; alaguna@grupodestinos.com.mx.

January 26-29, 2005, Long Beach, CA. The 13th Annual Medicine Meets Virtual Reality Conference, organized by Aligned Management Associates, Inc. (www.amainc.com). Info: www.nextmed.com/mmvr_virtual_reality.html; mmvr13@nextmed.com.

July 22-27, 2005, Las Vegas, NV. 11th International Conference on Human-Computer Interaction. Further info: HCI International 2005, School of Industrial Engineering, Purdue University, Grissom Hall, 315 N. Grant St., West Lafayette, IN 47907; hci2005.engr.wisc.edu.

2004 FAA Seminar Schedule

August 6-8	McLean, VA	Ophth/Otolaryn/Endocrin
September 13-17	Oklahoma City, OK	Basic
November 5-7	Tampa/Ft. Lauderdale, FL	Neuro/Psychol/Phys
November 15-19	Oklahoma City, OK	Basic

For further info, call your regional flight surgeon. To schedule a seminar, call the FAA Civil Aerospace Medical Institute AME Programs Office at (405)954-4830.

Opening Ceremonies of the 75th AsMA Annual Scientific Meeting, Anchorage, AK



OPENING CEREMONIES--(Left) The Air Force Band of the Pacific, Elmendorf AFB, AK, under the direction of MSgt. Jeff Brayfield played music as members filed into the Atwood Concert Hall, Alaska Center for the Performing Arts, Anchorage, AK. (Right) Dimond High School Junior ROTC Unit Color Guard presented the colors under the leadership of Col. Ayala.



MEMBERS AT OPENING CEREMONIES--Members were treated to a PowerPoint slide show depicting the history of the AsMA in honor of our 75th Anniversary. Afterwards, they heard reports from the President, Dr. David Schroeder, the Scientific Program Chair, Dr. Carol Manning, the Nominating Committee, with Dr. Jeff Davis presenting for Dr. Roger Landry, the Arrangements Committee, Dr. Bob Rigg, and the 50th Bauer Lecture by Dr. Peter Hackett.

FUN RUN--Lorenzo M. Vargas, M.D., FAsME, Lima, Peru, participated in the Seymour Fun Run in Anchorage, on May 3, 2004. He turned 75 years old during our meeting.



REGISTRATION-- (Left) Sheryl Kildall and Gloria Carter assist members with registration and membership questions during the meeting. They registered nearly 1200 attendees in advance of the meeting. (Right) Members line up to register at the Egan Center, Anchorage, AK.

Annual Lecturers

This year the Aerospace Medical Association was privileged to have two excellent speakers giving our annual keynote lectures.

50th Annual Louis H. Bauer Lecture

Peter Hackett, M.D.
Interim Clinical Director,
Colorado Center for Altitude Medicine and Physiology,
University of Colorado Health Sciences Center, Grand
Junction, CO.

Educational sponsorship-Wyle Laboratories, Inc., El Segundo, CA

Dr. Peter Hackett, a world authority on high-altitude medicine and physiology, gave an interesting and sometimes funny talk on "Pushing the Limits: The Human Body at Extreme Altitude, or Getting High for Science." The lecture was given during Opening Ceremonies of the Aerospace Medical Association 75 Annual Scientific Meeting in Anchorage, AK, May 3, 2004.

Dr. Hackett's research on altitude illness has appeared in over 100 articles and he founded the Himalayan Rescue Association in Kathmandu, Nepal, in the mid-1970s. In 1981, he reached the summit of Everest, climbing solo from the South Col to the peak. In 1982, he established a medical camp at 14,000 feet on Denali to study and assist climbers there who were suffering from cold and altitude-related illnesses.

Dr. Hackett spoke of hypoxia and how it could be used for "blood doping" for athletes to acclimatize, vasogenic edema, and of his adventures both on the slopes of Denali, and in climbing Mt. Everest, including one episode where he experienced a hallucination due to hypoxia. He mentioned that acute mountain sickness (AMS) is common, and that the usual treatment is dexamethasone and a slow descent. He said that slow ascents and acclimatization are aids in preventing AMS. In addition he noted that there may be genetic links to susceptibility to AMS and high altitude pulmonary edema (HAPE).

39th Annual Harry G. Armstrong Lecture

David F. Dinges, Ph.D.
University of Pennsylvania
School of Medicine
Philadelphia, PA

Educational sponsorship-Environmental Tectonics Corporation, Southampton, PA

Dr. David Dinges delivered the 39th Armstrong Lecture on May 6, 2004, the last day of the AsMA Annual Meeting in Anchorage, AK. An internationally recognized expert on sleepiness and fatigue, sleep deprivation, disturbed sleep and circadian rhythms, the effects of prolonged waking and shift work, and on countermeasures for sleep deprivation, Dr. Dinges is a tenured professor of psychology in psychiatry, Director of the Unit for Experimental Psychiatry, Chief of the Division of Sleep and Chronobiology in the Department of Psychiatry, and Associate Director of the Center for Sleep and Respiratory Neurobiology at the University of Pennsylvania School of Medicine.

Dr. Dinges spoke of "Ensuring human behavioral capability at the frontiers of space and time." He covered topics such as the boundaries of space, how the environment of space is inhospitable to humans, and how scientific knowledge of the human brain is growing quite fast. He talked about how brain function affects behavior and performance and how there is a group interaction between sleep, circadian rhythms, and stress. Today's society expects more things from fewer people, and that more will be done with less. This can lead to problems with fatigue, creating a risk environment.

In order to keep humans in the loop, we need countermeasures for fatigue. The approach that is called for is one of monitoring, detecting, and intervention. It must be recognized that the "sleep switch" is on a 24-h cycle with a predictable biology and that fatigue can cause "microsleeps" which intrude into wakefulness during sleep deprivation. This was supported by a film clip showing a fatigued truck driver nodding off at the wheel, as well as a recording of a subject taking part in a sleep-deprivation experiment. Dr. Dinges also reminded us that we need a systematic way to implement countermeasures. All in all, this informative lecture provided a brief overview of the broad topic of sleep and fatigue.



BAUER LECTURE--Dr. Peter Hackett accepts a plaque from AsMA President, Dr. David Schroeder.



ARMSTRONG LECTURE--Dr. David Dinges accepts a plaque from Dr. George Anderson, representing the sponsor, ETC.

The British Society of Neuro-Otology

Annual Scientific Meeting

Mon 27 September 2004

*Held in association with, and hosted by
 the RSM, 1 Wimpole Street, London,
 W1G 0AE*

BSNO



The ROYAL
 SOCIETY of
 MEDICINE

The meeting will comprise of two invited speakers, an opening lecture by Dr John Golding, University of Westminster on Motion Sickness, and a closing lecture by our overseas speaker Professor Paul van den Heyning, from the University of Antwerp on Surgical Aspects of Vertigo and Tinnitus. Most time will be allocated to Free Communications (oral and posters).

This conference will appeal to any professional involved in the diagnosis and treatment of patients with vertigo, dizziness, balance disorders and falls. Particularly neurologists, ENT surgeons, audiological physicians, geriatricians, as well as audiologists and physiotherapists involved in the management of dizzy patients.

For abstract information please contact:

a.bronstein@imperial.ac.uk Prof Adolfo M. Bronstein, Professor of Clinical Neuro-otology, Head, Department of Movement & Balance, Division of Neuroscience & Psychological Medicine, Imperial College London, Charing Cross Hospital, London W6 8RF

For further information please contact Jennifer Lake,
 Tel: +44 20 7290 3919 or browse our website at
www.rsm.ac.uk or Email: jennifer.lake@rsm.ac.uk

Honors Night Photo Gallery



PASSING THE GAVEL--Dr. David Schroeder passes the gavel to incoming President, Dr. Melchor Antuñano.



2004 FELLOWS--The following Fellows were selected during the 75th AsMA Annual Scientific Meeting: Richard E. Bachman, Daniel K. Berry, Andrew J. Breuder, Bob S. K. Cheung, Nicholas A. Davenport, Thomas B. Faulkner, Dwight Holland, Raymond E. King, Pooshan D. Navathe, Susan E. Northrup, Hugh J. O'Neill, Chrysoula Papadeli, Chandler A. Phillips, James H. Raddin, Douglas J. Robb, and Phillip E. Whitley. Those present at the Honors Night banquet are pictured here with Fellows Chair, Dr. Daniel B. Lestage (far left) and AsMA President, Dr. David Schroeder (far right).



PAST PRESIDENT'S PLAQUE-- Incoming President, Dr. Melchor Antuñano presents Dr. David Schroeder with the Past President's Plaque.



PAST PRESIDENT'S PIN--Incoming President, Dr. Melchor Antuñano, pins Dr. David Schroeder with the Past President's Pin.



HONORS NIGHT PRESIDENTS--The Antuñanos and the Schroeders.



HONORS NIGHT--Members and guests put on their finery to attend the Honors Night reception, banquet and awards ceremonies. Pictured above are just a few of the nearly 500 attendees.

AEROSPACE MEDICAL ASSOCIATION HONORS NIGHT AWARDS--2004



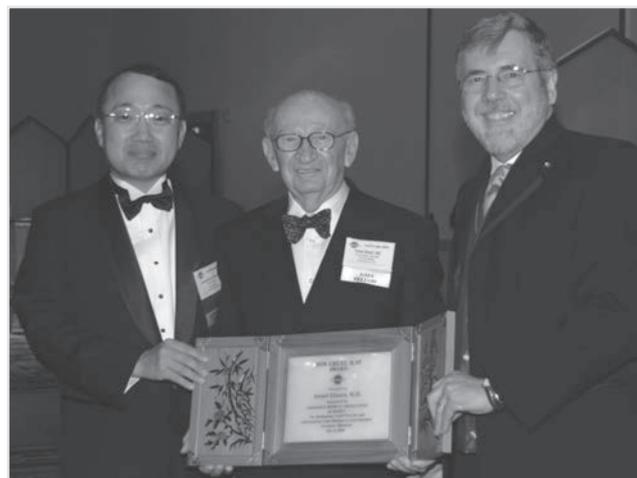
Schroeder

David J. Schroeder, Ph.D., 2003-2004 President of the Aerospace Medical Association, presented awards to 14 outstanding physicians, nurses, and researchers during the Honors Night ceremonies at the 75th Annual Scientific Meeting at the Anchorage Hilton Hotel, Anchorage, AK. Verba Moore, M.D., Chair of the Awards Committee, read the citations. The names of the awards' sponsors and representatives, when present, are printed in parentheses.

Two President's Citations were also presented during the ceremonies.



JOHN PAUL STAPP AWARD
Henning E. von Gierke, Dr.Eng.
(Stanley R. Mohler, M.D. accepts)
(George Anderson, M.D., Environmental Tectonics Corp.)



WON CHUEL KAY AWARD
Israel Glazer, M.D.
(Jeong-Hyun Kim, M.D., Aerospace Medical Association of Korea)



RAYMANOND F. LONGACRE AWARD
Royden W. Marsh, M.D.
(Aeromedic Innovations)



MARY T. KLINKER AWARD
Martha A. Stowe, B.S.N., M.A.
(Aerospace Medical Association)



ERIC LILJENCANTZ AWARD
Barry S. Shender, Ph.D.
(Aerospace Medical Association)



SIDNEY D. LEVERETT, JR. ENVIRONMENTAL SCIENCE AWARD
Barry S. Shender, Ph.D.
(George Anderson, M.D., Environmental Tectonics Corp.)



THEODORE C. LYSTER AWARD
Jon Jordan, M.D., J.D.
(John Kaumeyer, Ph.D., Lockheed-Martin Space Operations)



BOOTHBY-EDWARDS AWARD
Nestor B. Kowalsky, M.D., C.M., M.S.
(Audie Davis, M.D., Harvey W. Watt & Company)



ARNOLD D. TUTTLE AWARD
Ulf I. Balldin, M.D., Ph.D., Dr.h.c.
(Gus Yiakas, Wyle Laboratories)



HARRY G. MOSELEY AWARD
Nicholas L. Webster, M.D., M.P.H.
(William Brath, M.D., Lockheed-Martin Corporation)



KENT K. GILLINGHAM AWARD
Malcolm Braithwaite, M.B.B.S., D.Av.Med., OBE
(David Newman, AMST)



JOHN A. TAMISIEA AWARD
Michael A. Berry, M.D., M.S.
(John Hastings, M.D., Civil Aviation Medical Association)



JULIAN E. WARD MEMORIAL AWARD
Thomas Clarke M.D.
(Romie Richardson, M.D., accepts on his behalf)
(Society of USAF Flight Surgeons)



LOUIS H. BAUER FOUNDER'S AWARD
James Brinkley
(Jefferson C. Davis Wound Care and Hyperbaric Medicine Center)



President's Citation

The 2004 President's Citation was awarded to Drs. James M. Vanderploeg and Henry L. Taylor. Dr. Vanderploeg developed the online system for voting for our Nominations Committee, which has streamlined the process, in addition to developing our first website, many years ago.

Dr. Taylor (picture left, receiving his citation from Dr. Schroeder) has retired from Council after many years of loyal service. He helped to found the Aerospace Human Factors Association and has worked tirelessly to promote aerospace human factors within the association and the scientific community.



Vanderploeg

SPACE MEDICINE BRANCH REPORT

Send information for publication on this page to: **Smith L. Johnston, III, M.D.**
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The SMB's Young Investigators Award

The Young Investigators Award is a competition intended for those making their first major efforts into Aerospace Medicine Research.

To compete for this award, contestants must be making their first presentation of a scientific paper or poster at an AsMA meeting (excluding cases presented at Grand Rounds as a student resident); they must appear as first author on the paper; and they must prepare and submit a manuscript for judging. Finalists compete in a second phase of competition at the AsMA Meeting involving further evaluation of their presentation and interviews. The potential applicability of the findings to Space Medicine and the degree of involvement of the student in the project are major considerations. The finalists in this year's competition, selected from 220 contestants, are a highly qualified and diversified group (listed later in this article).

The winner of the 2004 SMB YIA is Major John M. "Sprocket" Olson, Ph.D. His paper is entitled "Tactile Display Landing Safety, Situational Awareness, and Workload Reduction Improvements for the Space Shuttle." He earned his Ph.D. in Industrial and Systems Engineering, Occupational Safety and Ergonomics from Auburn University, working on this USAF/USN/NASA sponsored project as his doctoral dissertation. The project had its beginnings more than a decade ago after he was a Distinguished Military Graduate of the U.S. Air Force Academy with a Bachelor's in Engineering. He began working to unravel problems experienced with various aircraft using his engineering skills, hence the nickname "Sprocket." Unsatisfied, he entered flight training and ultimately Test Pilot school (where he graduated with Honors) in his effort to understand the flight crews' perspective on these problems. Finally, he was solving these problems, but he yearned for more. He saw aircraft flying faster, higher, and

placing more demands on flightcrew and a future extending this envelope into Space. He responded by pursuing this project, which has potential Human Factors applications to future USAF and Human Spaceflight. Completing this goal required years of dedication and the balancing of his USAF career, academics, research, and family. He gives due credit for this success to his wife Georgetta. Major Olson is currently the Chief of Test and Operations Division, Space Vehicle Operations for Detachment 12 at Kirtland AFB, NM. Like many of us, this Young Investigator would like to become an Astronaut when he grows up. Godspeed "Sprocket"!

It seems that our Young Investigators are better educated and more talented with each year. This year's group of finalists includes several with multiple degrees in different disciplines! And at the same time, they seem to be getting younger—Elizabeth Kiniorski could be our youngest ever at only 20 years of age!

The first runner up was Marlene Grenon, MD, a cardiovascular surgery resident (McGill Univ.) and graduate student (MIT) from Quebec, Canada. The 2nd runner-up was Jorge Serrador, Ph.D., with a joint project from Harvard Medical/ Johnson Space Center (JSC). The other finalists included: Wing Commander Robert Scott, MBBS, from the UK; Tim Broderick, M.D., with a joint effort from Univ. Cincinnati/JSC; Narelle Berry, B.Sc., B.App.Sci., and Gordon Cable, M.B.B.S., D.Av.Med., both from Australia; Carla Liskauskas Ramos, M.D., and Dr. Vania Melhado, each from Brazil; Elizabeth Kiniorski, State University of New York; Dr. Rainer Kowoll, Lt.Col. Christopher Wonhas, M.D., and Jochen Hinkelbein, M.D., all from Germany; Melissa Redmond, BA, EMT-P, Wyle Labs/JSC; Dr. Ray Oyung, NASA/Ames Research Center; Major Anthony Tvaryanas, M.D., USAF-SAM, Brooks City-Base, TX; Capt. Christopher Bird, M.D., Whiteman AFB, MO; Miyo Yokota, Ph.D., Geo-Centers, Natick, MA; and Marie-Dominique Colas-Benayoun, M.D., from France.



YOUNG INVESTIGATOR AWARD--Dr. Jeff Myers presents the Young Investigators Award to John Olson, Ph.D.



STRUGHOLD AWARD--Dr. Smith Johnston presents the Strughold Award to Dr. Fred Kelly.

I would like to thank the members of the YIA committee: Drs John Darwood, Lloyd Tripp, Smith Johnston, Jeff Jones, Rich McCluskey, Art Arnold, Lu Moreno, and General Annette Sobel.

Jeff Myers, M.D.
 YIA Chair

Remember!
 Council Meetings are open to all members of the AsMA. Your input and attendance are always welcome. Our next meeting will be on November 17, 2004, in Alexandria, VA.



SMB PRESIDENT'S GAVEL--Current President Gen. Annette Sobel transfers the gavel to incoming President Dr. Smith Johnston.



SMB LUNCHEON SPEAKER--Dr. Otto Appenzeller accepts the Speaker's Award from Gen. Sobel for his inspiring presentation about high altitude physiology.

AEROSPACE NURSING SOCIETY NEWS

Send information for publication on this page to: **Eileen Hadbavny**
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Charleston SC, 29407-3317
e-mail: hadbavny@usit.net

Aerospace Nursing Society Announces the Louise Marshall Scholarship

The Aerospace Nursing Society (ANS), a constituent organization of the Aerospace Medical Association (AsMA), announces the Louise Marshall Nursing Scholarship. This scholarship was initially endowed by the late Colonel Louise A. Marshall, a former Air Force Flight Nurse and member of the Aerospace Medical Association.

Louise A. Marshall was born in 1928. In 1950 she received her R.N. Diploma from Ft. Wayne Lutheran School of Nursing. She attended Flight Nurse School in 1952, Army Nurse Administration School in 1958, Medical Support for Missile Operations in 1963. She received her BSN from Wayne State University in 1963. As a major, Louise A. Marshall was the Assistant Chief of the Flight Nursing Department at USAF School of Aerospace Medicine at Brooks AFB, San Antonio, TX. Col. Louise A. Marshall was a member of the Aerospace Medical Association from December 13, 1963 to November 1977. She was also a member of ANA and Sigma Theta Tau.

The Marshall Scholarship, up to \$1000, will be awarded annually to a member of the ANS who is pursuing a career or advanced education in nursing. The use of funds from this scholarship is not restricted to academic fees and books.

Eligibility: The applicant must be a member of AsMA and ANS who is in an undergraduate or graduate nursing program or working towards certification in a nursing specialty. For those pursuing Specialty Certification, the scholarship application can be sent prior to completion, but if selected, the scholarship will be awarded only after successful completion of examination within one year of application. This scholarship will not be awarded for continuing education to maintain certification already received.

Deadline for applications: 15 February. Applications (form available for download from ANS web site: www.aerospacenursingsociety.org) will be awarded based on review of eligible applications by a panel of nursing leaders with the ANS. Notification will be made and scholarship will be awarded no later than the May ANS Annual Business Meeting, held in conjunction with the Aerospace Medical Association Annual Scientific Meeting.

Scoring: The following scale will be used by the scholarship selection committee in selecting the scholarship winner:

1. Years Membership in AsMA/ANS - 1 point for each year of membership up to 3, then 1 point for every 2 years of membership thereafter for a max of 15 points.
2. Educational Level: Undergraduate-15 points; Graduate studies-15 points; Specialty Certification-15 points
3. Narrative - Up to 20 points - to include why you have selected this area of nursing study. Please describe how this scholarship, if awarded, will be used; also include other

funding sources of your educational pursuits. Narrative not to exceed 300 words.

4. To complete the application the following must be attached: a letter from the educational institution to include enrollment status and the number of semesters/quarters completed toward total number required to complete degree. If pursuing Specialty Certification, provide type of specialty, date of exam, and submit a copy of certification certificate when completed.

Completed form must be returned by 15 February. Mail to the ANS Awards Chair: Lt. Col. (Ret) Charles R. Tupper
2326 Blue Shutter Road
Edisto Island, SC 29438-6620
chatupper@comcast.net

Hoefly Award: Daniel R. Roper

The Aerospace Nursing Society (ANS) 2004 BG E.A. Hoefly award was presented to Capt. Daniel R. Roper, USAF, NC. Lt.Gen. Peach Taylor, USAF, MC (the Air Force Surgeon General) presented the award at the annual ANS luncheon. Capt. Roper was recognized for his outstanding contributions to clinical nursing. He has been a long-term member of the Aerospace Medical Association and the Aerospace Nursing Society. He is currently stationed at Holloman AFB, NM, where he is responsible for the ongoing medical and contingency training for medics and emergency response personnel. He recently completed his Ph.D. with honors. In his spare time he obtained a private pilot's license, completed the National Emergency Medical Technician Course, completed the Nursing Service Management and Health Professions Course, and is an Associate Faculty member at New Mexico State University. In addition, he is a certified flight nurse.

Capt. Roper serves as the Post Vice-Commander for the local Veterans of Foreign Wars (VFW). He is also on the Salvation Army Board of Directors, helping to provide meals for the homeless. He is a Federal Emergency Management (FEMA) evaluator and is active in training local emergency response providers.



HOEFLY AWARD--Lt. Gen. Peach Taylor presents the award to Capt. Daniel R. Roper.

Iversen Award: Myron Christopher

The Aerospace Nursing Society (ANS) 2004 Edward Iversen SR Allied Health Professional of the Year Award was presented to Chief Master Sergeant Myron Christopher. Lt. Gen. Peach Taylor, USAF, MC, presented the award at the annual ANS luncheon. Chief Christopher is a member of the 315th Aeromedical Evacuation Squadron, 315th Air Wing, Charleston AFB, SC. He is a dynamic leader and manager who effectively mentors, nurtures, and challenges over 70 enlisted personnel. He is an aeromedical evacuation technician examiner with over 2500 flight hours. He has served as a technical resource for C-17 operational capabilities as it applies to the transportation and care of patients. He is recognized as an expert in aeromedical supply kits, responsible for creating and evaluating the effectiveness of kits utilized in AMC aeromedical evacuation missions. He is a deacon of his church and gives numerous personal hours working with less fortunate individuals to improve their self-confidence and self-esteem.

Air Transport Cases Studies Needed

The Aerospace Nursing Society is planning to sponsor an "Air Transport Grand Rounds Panel" at the AsMA meeting in May 2005. Virginia Schneider and Penny Pierce have agreed to help coordinate this presentation format. Nurses are needed with air transport experiences to help develop this clinically-focused panel. Discussions can include: pre-flight or in-flight care, as well as outcomes and lessons learned. To be included in this panel, summaries of case studies must be submitted in time for peer review at the annual Scientific Program meeting held in November, thus the abstract deadline date of October 28, 2004, must be met. Please contact Ginny Schneider at Virginia.Schneider@denewc.af.mil or Penny Pierce at ppierce@umich.edu as soon as possible to get this project underway.



IVERSEN AWARD--Lt. Gen. Peach Taylor presents the award to Chief M.Sgt. Myron Christopher.

ANS continued from previous page

World War II Memorial Dedication

Your page editor had the privilege of coordinating a bus trip to Washington, DC, from Charleston, SC, for 22 WW II Veterans and family and friends to attend the events in Washington, DC, for the Dedication of the WW II Memorial. Although I didn't personally speak with the WW II flight nurses, I did see some of them there as well as one or two WASP pilots. The events were spectacular, and the WW II Memorial magnificent. If you get a chance to visit D.C. this summer I would encourage you to do so, as there will be special events during the summer. During the bus trip, the veterans had a chance to share stories and memories of the good times, as well as some of the bad, but most could not get over the many strangers approaching them and thanking them for their service.

One of our travelers could still wear his 1943 Navy Sailor uniform (Cracker Jack style) and commented: "The trip to the WW II Memorial was a great experience, a thrill and a wish come true. At 78, I often thought I wouldn't make it to DC to view it. As I [was a] most active WW II combat frogman, it was most fitting to see the memorial and to receive the thanks and gratitude of the people. I needed that after so many years and so much suffering. It was delightful as I approach the end of my life to see so many people proud of my service to my country. I know I'm sure proud of what I did for the U.S.-in two wars." *Andrew Nelson III, USN -- WW II and Korea.*

Another veteran commented that you haven't lived until you have heard 150,000 people singing out loud our national anthem and God Bless America. There weren't many dry eyes among them.

It was truly an honor for me to coordinate this trip and share in this moment for those of the greatest generation. A little bit of my flight nurse experience came into play as I kept them well hydrated and fed while pacing the aisle of the bus! I guess I really miss the real thing--once a flight nurse, always a flight nurse.

Membership reminder: Don't forget to check out the ANS web site at www.aerospacenursingsociety.org. Recruit nurses and technicians to join AsMA and the ANS. If you recruit three AsMA members you earn a free membership. So keep recruiting and never pay dues again!

Minutes of the 2004 Society of NASA Flight Surgeons Annual Meeting

1. The annual luncheon meeting of the Society was held in the Aft Room of the Captain Cook Hotel in Anchorage, AK. Lunch was served at 12:00 noon. All the Officers were present.

2. President Phil Scarpa called the meeting to order at 12:30, welcoming everyone to Alaska and the Annual meeting. His opening remarks sketched out the activities of the officers of the society over the preceding year. Also he highlighted the challenges of returning to flight following the STS-107 disaster and the new space exploration initiative that the

President of the United States delivered to the nation in January 2004.

3. Secretary Joe Ortega presented the treasurer's report (see attached report). The society is in much better fiscal condition than last year due to sales of merchandise and especially donations from Wyle Labs and Lovelace Sandia Health Systems. He reminded the membership that the Society has very little dues income to sustain the organization due to over 96% of the membership being life members.

4. There was no old business.

5. Dr. Scarpa then discussed some new business of considering whether the society should become a Constituent Organization of AsMA. We briefly discussed the pros and cons of this action and agreed that the new officers will consider this further in the coming year.

6. Dr. Smith Johnston presented the Nominating Committee report and election results for the year. Ballots were distributed via email this year. The new 2nd Vice President is Dr. Art Arnold. The new Secretary Treasurer for 2004-06 will be Dr. Sean Roden.

7. Dr. Scarpa then presented the results of the Awards Committee deliberations.

a. The President's Award for special service to our profession and our Society went to David Tipton, M.D.

b. The Honorary Member went to the Johnson Space Center Dental Support Team (Dr. Mike Hodapp, Dr. Dean Deckerlegand, and Ms. Tricia Lopez).

c. The Lovelace Award went to the Crew of the Space Shuttle Columbia, STS-107. The award was accepted by SNFS member and representative of the families of STS-107, Jon Clark, M.D. He thanked the Society for honoring the crew and encouraged our continuing efforts in caring for space travelers.

8. This year's speaker was Jeffrey R. Davis, M.D., of Johnson Space Center's Space and Life Sciences Division. He discussed the ongoing efforts at NASA to accomplish the January 2004 national vision of returning to the Moon and Mars in the next 2 decades.

9. Once again we thanked our sponsors for this year -- Wyle Laboratories and Lovelace Sandia Health Systems-- for their continued support.

10. Dr. Scarpa then handed the gavel to incoming president Joseph Kerwin, M.D. Dr. Kerwin presented Dr. Scarpa with the past president's plaque. He invited the entire membership to email him directly in order to update our voting email list and improve com-



LOVELACE AWARD--The Society of NASA Flight Surgeons' Lovelace Award was presented to the Crew of STS-107 (posthumously). Dr. Jon Clark accepted the award on behalf of the crew from Dr. Scarpa Philip and Mr. David Vulcano of Lovelace Sandia Health Systems, sponsor of the award.

munications within our group. He adjourned the meeting at 12:50.

11. New Officers for 2004-2005

President: Joseph P. Kerwin, MD
Vice President: Smith L. Johnston, MD
2nd Vice President: Art Arnold, MD
Secretary-Treasurer: Sean Roden, MD
Historian: George A. Martin, MD
Member-at-large: Philip Stepaniak, MD

H. J. Ortega Jr., MD
SNFS Secretary-Treasurer, 2002-4

Aerospace Human Factors Association Awards

ROSCOE AWARD--

Michael Stephens received the 2004 Stanley N. Roscoe Award for the best aerospace human factors related doctoral dissertation. The awards ceremony took place during the 75th Aerospace Medical Association Annual Scientific Meeting in Anchorage, AK, in May 2004.



PAST PRESIDENT'S CERTIFICATE--2004-2005 AshFA President CAPT David Neri, USN, (right) presents the AshFA's Past President's Certificate to Douglas Weigmann.



COLLINS AWARD--Dr. Glenn Wilson received an honorarium from Rick Evans representing General Dynamics, sponsor for the AshFA William E. Collins Publications Award.

WING NEWS & NOTES

Send information for publication on this page to: **Dale Orford**
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480-837-7919; dorford@cox.net

Rules, Regulations, and Other Regalia of Organized Living

It seems that everywhere we turn today there are new rules or regulations to keep us all in line, and to help to organize every facet of our lives. From endless queues at airports, where we tread shoeless while relinquishing those pesky nail clippers and forgotten crochet hooks, to mountains of health care forms and prescription drug cards, and undecipherable tax codes, we are truly an organized lot. This all speaks very well for the Wing.

From a flawlessly run registration process, to wonderful receptions and lunches, and extremely interesting tours, our North to Alaska team provided us with a meeting we will not soon forget. It can be a daunting task to organize and execute a meeting, especially when done from a distance, but Lady Mary Baird and her team more than met the challenge.

Anchorage welcomed us with bright, sunny, and warm weather, but it is the warmth of the Anchorage people which we will all remember for years to come. We were treated to two tours of the surrounding area - first to Alyeska along the Turnagain Arm, and secondly, to the Alaska Native Heritage Center. We learned where the Turnagain Arm got its name - it seems that Captain Cook wasn't any better than most men in asking for directions! Although the snow cover on the mountains was still quite thick, we did catch a glimpse of the incredible ice-blue of the underlying glaciers. We also were fortunate to spy a couple of Dal sheep perched precariously atop the rocky mountain face.

At the Native Heritage Center, we were taught how the various indigenous peoples lived and coped with their harsh environment. We were able to see examples of their dwellings, and learned from the Center's young Native guides what daily life was like in the days before European contact. Inside the Center, we were entertained by a troupe of dancers and drummers presenting traditional dances. At the end of their performance, the audience was asked to join them on stage and share in the dance. One of our own members, Matthew McMeekin, happily accepted, and it was evident that he greatly enjoyed doing so.

Our visit to Anchorage and the AsMA meeting was a whirlwind of activities, greeting



TURNAGAIN ARM--Eka Glazer enjoys the view along the Turnagain Arm

and sharing time with old friends and new members, and exploring the many sights of this wonderful Alaskan city.

The Business of Bylaws By Harriet Hodgson

Bylaws are funny things. Most Wing members think about bylaws when they need them and push bylaws to the back of their minds the rest of the time. But Vy Hansen, Past President of the Wing and former bylaws chair, reminded us that we review our bylaws every 5 years. So Lady Mary Baird put the bylaws on the board agenda for the Anchorage meeting.

At the meeting our parliamentarian, Helen Lestage, noted that bylaws should be kept to a minimum. "They're basic," she said. "You don't want to get too specific and say the exact amount of dues, for example." Board members reviewed the bylaws and no changes were recommended. To be on the safe side, I asked Helen to review them again. Had we missed something?

Helen thought the bylaws were excellent as written. At the turnover board meeting, however, we realized our standing rules needed to be revised. Standing rules had been passed down from one president to another, and over the years, some rules had gotten muddled. We are reviewing the standing rules now and will report our findings at the Kansas City, Missouri, meeting.

"Why bother me with bylaws business?" you may ask. We "bother" because we care about the future of the Wing. Bylaws are the skeleton of an organization and clear bylaws



NATIVE HERITAGE CENTER--Mariette Jones (right) and her mother-in-law, Janice (left), at the Native Heritage Center.

make our organization stronger. Our bylaws follow the standard format. The Wing purpose is defined in Article II: To support the specialty of aviation, aerospace, and environmental medicine by facilitating cooperation among its practitioners and by increasing public understanding and appreciation of its importance.

The second part of this article, promoting social contact among AsMA members and their families, is my favorite part. We are an aerospace medicine family and, while I don't need bylaws to connect me with family members, I'm glad we have them. I'm glad to be part of this aerospace medical family and to have made so many lasting friends.

Thanks

Thank you to Grace Park Lee for her generosity in supplying a beautiful floral arrangement for the Hospitality room. It added a very lovely touch of springtime to our Anchorage meeting.

Join the Wing!

The Wing of the Aerospace Medical Association was formed in 1952 "to support the specialty of aviation, aerospace, and environmental medicine by facilitating cooperation among its practitioners and by increasing public understanding and appreciation of its importance." A second purpose of the Wing is "to promote sociability among its members and their families." Each year at the scientific meeting, AsMA spouses meet new friends from every corner of the world, sharing in the many cultural experiences and educational opportunities of the host city. Dues are \$20 per year. For further information, contact: Judy Waring, 4127 Kenyon St., Seattle, WA 98136; (206) 933-0884; e-mail: judywarig@comcast.net



NATIVE DANCE--Matthew McMeekin (center stage) joins in the dance.

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

Capt. David E. Rayman, USAF, an A10 pilot with two deployments to the Persian Gulf Area, has been selected for the USAF Fighter Weapons School (Top Gun) at Nellis AFB, NV.

Capt. Christina M. Waite, USAF, MC, has been assigned to the Flight Medicine Clinic, Beal AFB, CA.

LT Bettina M. Sauter, MC, USNR, formerly a student flight surgeon at the Naval Aeromedical Institute, Pensacola, FL, has been assigned as Flight Surgeon, Carrier Airwing 8, Oceana NAS, Virginia, Beach, VA.

Col. L. Mark Johnson, USAF, MC, CFS, recently returned from a deployment to Southwest Asia. He is now Commander of the 347th Medical Group at Moody AFB, GA.

Moo-Hoon Lee, M.D., Ph.D., Seoul, Korea, formerly the Surgeon General of the Republic of Korea Air Force, recently retired after 29 years of service and now holds the civilian post of Medical Director, Aeromedical Service Team at Korean Air.

Col. Donald R. Yoho, Jr., USAF, MC, CFS, San Antonio, TX, formerly the Commander of the 10th Aerospace Medicine Squadron at the USAF Academy in Colorado, is now the Director of the Aerospace Medicine Residency program at the USAF School of Aerospace Medicine at Brooks City-Base.

David F. Dinges, Ph.D., Philadelphia, PA, who was named this year's winner of the Decade of Behavior Research Award from the Federation of Behavioral, Psychological, and Cognitive Sciences, recently took part in a congressional briefing at which he presented his findings on the effects of sleep deprivation on the brain's ability to sustain acceptable levels of attention and alertness and on the body's ability to fight off infection and disease.

Obituary Listing

We recently learned that **Laurimer Moorefield, O.D.**, of Inman, SC, passed away on February 19, 2004.

New Members

Anderson, Michael J., Niceville, FL
 Baden, Katrina N., Eugene, OR
 Banderet, Louis E., Ph.D., Milford, MA
 Bangale, Anil T., M.D., Ft. Worth, TX
 Barber, Kimberly L., Maj., USAF, NC, Beaver Creek, OH
 Bayuse, Tina M., Pharm.D., Seabrook, TX
 Breffelh, Robert A., Juneau, AK
 Brisson, Paul A., M.D., Schenectady, NY
 Burkett, Edwin K., M.D., Warrisburg, MO
 Canon, Dennis L., M.D., Canyon, TX
 Claus, Paul, M.D., Rochester, MN
 Cook, Curtiss B., M.D., USAFR, Scottsdale, AZ

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.home-stead.com/ASMA/AFGHOME.html

Cooper, James F., M.D., Bryan, TX
 Cramer, William E., M.D., Silver Spring, MD
 Elsayed, Al M., Col., USAF, MC, Fairfield, CA
 Ewing, Geoffrey L., Capt., D.O., Crestview, FL
 Fink, Wolfgang, Ph.D., Montrose, CA
 Gerber, Phyllis A., M.D., Jamaica, NY
 Goel, Atul Kumar, Lt.Col., USAF, MC, Raleigh, NC
 Grotsky, Cheryl L., Capt., Ogdensburg, NY
 Guth, Todd A., LT, MC, USNR, Jacksonville, FL
 Hardy, Andrew H., Maj., USAF, MC, Eagle River, AK
 Hooge, Kathryn K., M.D., Los Altos, CA
 Horak II, Richard L., M.D., New Bern, NC
 Irvin, Stephen B., M.D., Kinston, NC
 Johanson, Ronald A., Lt.Col., Turlock, CA
 Johnson, Douglas E., CPT, MC, USA, Ulysses, KS
 Lehr, Steven W., Capt., USAF, NC, O'Fallon, IL
 Lewandowski, Eric A., D.O., Holt, MI
 MacPherson, Glen D., M.D., Enid, OK
 Matin, A. C., Ph.D., Prof., Stanford, CA
 May, Christopher H., M.D., Irving, TX
 McDaniel, Huey B., M.D., USAFR, Reno, NV
 McKinley, Richard A., B.S., Fairborn, OH
 Meyers, Rebecca A., Las Vegas, NV
 Miley, Angela D., Maj., USAF, NC, San Antonio, TX
 Mitchell, John P., Col., USAF, M.D., Davis, CA
 O'Neal, Ethel L., LCDR, MC, USN, Portsmouth, VA
 Olson, John M., Maj., USAF, BSC, Albuquerque, NM
 Pereira, Susan A., Capt., M.D., Dixon, CA
 Pilby, Jennifer M., B.S., Anchorage, AK
 Preston, Joseph K., Maj., USAF, MC, San Antonio, TX
 Price, James W., Maj., USAFR, MC, Madisonville, KY
 Reinertson Randal, M.D., Ann Arbor, MI
 Riley, Lyrad K., Major, M.D., APO AE
 Rineer Scott K., CDR, MC, USN, Lutz, FL
 Rubin, Aaron M., 2Lt., USAF, MSC, Rockville, MD
 Rubin, Richard, Maj., USAF, MC, Brooks City-Base, TX
 Schaefer, Stephanie M., USAF, MC, APO AE
 Stahl, Kenneth D., M.D., Weston, FL
 Szathmary, Kimberly J., Maj., USAF, Altus, OK
 Thomas, Craig R., Col., USAFR, MC, Fairbanks, AK
 Walker, Daniel R., M.D., APO AP
 Wenstrom, Chris J., White Cloud, MI
 Wilkinson, Joe B., M.D., San Antonio, TX
 Woods, George M., M.D., Anchorage, AK
 Yates, James E., M.D., Talkectna, AK

Young, Wes, M.D., Aiea, HI
 Zielinski, Tanya A., M.D., Dallas, TX

International New Members

Aiba, Kiyohiko, Tokyo, Japan
 Al-Mamun, Abul Kalam Moha, Capt., Bangladesh Air Force, Dkaka, Bangladesh
 Barrientos, Patricia, M.D., Bogota, Colombia
 Chou, Chung-Long, M.D., Ph.D., Taipei, Taiwan
 Chu, Pei-Yi, Capt., Taipei, Taiwan
 Clarke, Lena, Ph.D., Noordwijk, Netherlands
 Dhingra, Ashok Kumar, FLT Surg., UAEAF, MC, Abu Dhabi, United Arab Emirates
 Hunter, Clare R., M.B., B.S., Ibbworth, Tadley, United Kingdom
 Jarosz, Andrzej P., M.D., Warszawa, Poland
 Kawachi, Satoshi, M.D., Suginami-ku, Tokyo, Japan
 Kaya, Mehmet, Captain, Mt. Endhoven, Netherlands
 Kowoll, Ranier, Ph.D., Berlin, Germany
 Krishnan, Gopala, M.D., Munnekolala, Karnataka, India
 Kuijpers, Maybritt Inger, Viborg, Denmark
 Lahin, Timo O., Capt., Tikkakoski, Jyvaskylan, Finland
 Lee, Richard Y., M.D., Taipei, Taiwan
 Macri, Marian, M.D., Ph.D., Bucharest, Romania
 Malik, Shoaib A., M.D., Sargodha Punjab, Pakistan
 Meerhoff, Scholastica R. H., Captain, Amersfoort, Netherlands
 Min, Tae-Hyung, Col., ROKAF, MC, Gyeryong Chungnam, Republic of Korea
 Miwako, Numata, M.D., Ph.D., Tokyo, Japan
 Mukherjee, Medhatithi, M.B., B.S., M.D., Jamnagar Gujarat, India
 Othman, Zuki, M.B., B.Ch., Jalan Bayam, Malaysia
 Pascoe, Glenn D., Amerley, Australia
 Quimosing, Leandro M., Col., PAF, Muntinlupa City, Philippines
 Roelcke, Sabine, M.D., Reutlingen, Germany
 Santos, Norberto M., M.D., Lisobn, Portugal
 Sen, Ahmet, Capt., TUAFA, MC, Eskisehir, Turkey
 Skinner, Christopher R., M.D., FRCPC, B.Eng., Ottawa, Ontario, Canada
 Van Nistelroodij, Raoul, Valp, Netherlands
 Veranis, Sotiris, LT, HAF, MC, Thessaloniki, Greece
 Wongcheantham, Banet, Bangkok, Thailand

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