

Minutes of the Aerospace Medical Association Business Meeting San Antonio, Texas, May 6, 2003

1. **Call to Order:** Dr. Thibeault called the meeting to order at 12:45 pm.

2. **Recognition of Past Presidents:** Past Presidents were recognized.

3. **In Memoriam:** AsMA members who died during the preceding year, including those involved in the Columbia Space Shuttle accident, were remembered.

4. **Report of the President:** Dr. Thibeault made a few remarks regarding his year.

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

A. Report of the Executive Director:

Ladies and gentlemen, it is my pleasure to report to you our activities during the preceding calendar year. Calendar year 2002 was a good year for the Aerospace Medical Association. We did well financially, our membership is holding steady, and we accomplished much in our outreach program. At the May meeting, 4 resolutions were approved on hypoxia recognition training and response for aircrew, medical school training in aerospace medicine, training in aviation/aerospace medicine for medical advisors to air medical transport units, altitude decompression sickness recognition training and response for aircrew, and uniformity in development of medical standards for commercial spaceflight. These resolutions were sent worldwide to interested agencies. The second edition of Medical Guidelines for Airline Travel was written and will be published this year as a supplement and placed on our website.

A position paper on Medical Guidelines for Space Passengers was prepared and published by a Task Force very much liberalizing our previous position. Feedback from outside individuals and organizations has been exceptionally favorable. In addition, a paper describing night vision goggles with particular emphasis upon safety considerations was recently published in the our journal. Position papers on psychotropic drugs and aviation and on the Age-60 Rule are currently in the pipeline and will be reviewed sometime this year. AsMA took an active role in the FAA Aviation Physiology Education Task Force and responded to an NPRM on sports flying. A team of speakers attended the Oshkosh Fly-In with lectures given in Aerospace Medicine by Drs. Hastings, Silberman, and Jennings. AsMA members contributed to the National Research Council Publication - Safe Passage. AsMA endorsed the publication and sent letters of support to NASA Administrator, Mr. Sean O'Keefe. The Home Office responded to a number of media inquiries regarding deep venous thrombosis and also participated in a seminar on this subject sponsored by the CDC and APHA. Speakers were also sent to a number of medical schools that requested lectures on various aspects of aerospace medicine.

This past year, AsMA welcomed 3 new Affiliates: the Canadian Aerospace Medicine and Aeromedical Transport Association, the Slovenian Aerospace Medical Association and the Association of Aviation, Space, Naval, Extreme, and Environmental Medicine of Russia. Efforts are now being made to organize regional aerospace medical societies in Africa and the Middle East.

These and other efforts will be pursued vigorously during this year. Our outreach efforts not only bring us new members, but also establish our credentials worldwide.

These are your major outreach initiatives for 2002. 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, 2002, our total income was \$ 1,150,947.00 and total expenses were \$ 1,110,448.00 for a net gain of \$ 40,500.00.

C. Report of the General chair of the 74th Annual Scientific Meeting: Advance registration was 1,146 On site registration as of 11 AM today was 411 giving us a total registration of 1,557. There were 58 Exhibits, 38 Technical and 20 Scientific.

6. GOVERNANCE - (SCHROEDER)

A. Committees

- Bylaws - Hadbavny

There were four proposed Bylaws changes (as printed in the February issue). A motion carried approving proposed changes 1, 2 and 4. Bylaw proposal number 3 regarding the Nominating Committee Chair was tabled because as it is currently worded, the

immediate Past President would be the Chair never having served on the Committee. This will be further studied for submission at the next meeting.

- Finance - Weien

With a \$40,500.00 gain, this is an average year financially.

- Nominating - McMeekin

Dr. McMeekin submitted the slate of officers for vote. A motion approving the new officers passed.

7. EDUCATION AND RESEARCH - (R. JENNINGS)

A. Committees

- Aerospace Human Factors - Nesthus

A position paper on night vision goggles was published recently in the Journal. The Committee is now working on developing a Human Factors slide show for the Website.

- Aviation Safety - DeJohn

The Age-60 Rule position paper has yet to be finalized, although it is expected to be presented at the November Council Meeting.

- Education and Training - Van Syoc

The Committee is exploring a journal CME and accreditation for ABPM modulars. The aerospace medicine slide show on the Web is being updated.

- History and Archives - Mohler

- Science and Technology - Shender

Dr. Len Goodman will follow Dr. Shender as the Chair.

8. MEMBER SERVICES - (G. MERCHANT)

A. Committees

- Awards - Gross

The 7-year rule for award eligibility was rescinded and the 3-year rule for the retention of award nominations was retained. The new chair will be Verba Moore.

- Corporate and Sustaining - Sides

The Bellagio Conference is still under consideration by the Rockefeller Foundation. It hoped that a decision regarding funding by the Foundation would be forthcoming within the next several weeks. [Ed. Note: We have since learned that the proposal was denied. Other venues are being considered.]

- Membership - Callan

9. REPRESENTATION AND ADVOCACY - (ANTUNANO)

A. Committees

- Air Transport Medicine - Bagshaw

The SSRI paper is still being worked. It is hoped that it can be put to a vote by the November Council Meeting. The Committee is also working on Guidelines for Air Evacuation of Patients by Commercial Air vs. Air Medical Transport.

- Communications - Shappell

The new Chair is Dr. Scott Shappell.

- Resolutions - Manning

One Resolution was presented recommending that anticonvulsants be carried in airline medical kits. There was considerable discussion by a few members regarding legal implications and minor wordsmithing of the whereas portion of the resolution. By the time it came to a vote, a number of attendees had left, leaving less than the required quorum. As a result, a vote could not be taken. It was recommended that the Executive Committee prepare a letter in the same context of the Resolution and forward it on to the appropriate regulatory agencies and airlines. It was announced that the new Chair of the Committee would be Dr. Tom Faulkner.

10. INTERNATIONAL SERVICES - (BAGSHAW)

A. Committee

- International Activities - Pongrantz

There were French, German, and Spanish language panels at this meeting. It was announced that Dr. Pooshan Navathe (New Zealand CAA) will be the new Chair.

11. **Unfinished and New Business:** There was no unfinished or new business.

12. **Adjournment:** The meeting was adjourned at 2:00 P.M.

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

A Note from the Scientific Program Committee / New Membership Chair

CDR Andy Bellenkes, MSC, USN

The 74th Annual AsMA Scientific Program has come and gone, and by all accounts, it was a splendid congress indeed. As Scientific Program Chair, I want to express my deepest gratitude to you all. If this meeting was indeed a success, then it was due to all of you. Whether you were a presenter, a session Chair, a non-presenting author or co-author of a paper, and/or an active member of one of AsMA's many committees and activities, you should know that your giving of your time, expertise, and efforts all came together to create what many have said was one of the best annual meetings ever.

I also am deeply indebted to my wonderful Program Committee core team, with some of whom you, as authors, may have corresponded during this past year. The core team included: Deputy-Chair (Chair-Select for 2004): Dr. Carol Manning; Slide Session Chair: CDR Andrew Bellenkes; Panel Session Chairs: COL John Crowley, Dr. Alex Wolbrink; Poster Session Chairs: Dr. Gabor Hardicsay, Dr. Jeff Myers; History Presentation/Posters Chair: Dr. Stan Mohler; International Session Chairs: Dr. Michael Bagshaw, COL Hans Pongratz, Dr. Jean-Pierre Crance, Dr. Eduard Ricaurte; AsMA HQ Team: Dr. Russ Rayman, Ms Pam Day, Ms Heather Crain, Ms Jackie Carter, Ms Gloria Carter, and Ms Sheryl Kildall

Dr. Carol Manning now takes the helm as Scientific Program Chair for the 75th Annual meeting...this next time, in Anchorage, Alaska. Dr. Manning has her core Program Committee in place, and is already hard at work putting together next year's program. Although about a year away, it is not too early to begin thinking about presenting a paper, poster, or creating a panel. The AsMA website will begin accepting abstracts later this Summer, so please do consider submitting a presentation...and doing so as early as possible.

Finally, you may have heard that Col Warren Silberman and I are now co-chairs for the AsMA Membership Committee. We are going to be working very hard with our Membership team to increase the rolls of AsMA members, both from the U.S. and abroad. In this regard, may I ask you all to become a part of this endeavor...an invaluable part of our team.

Each of you knows so well the importance



PROGRAM COMMITTEE REPORT--CDR Andy Bellenkes, Chair of the Scientific Program Committee and incoming Membership Committee chair presents his report to the attendees at Opening Ceremonies.

of AsMA in your professional life and development. You also know of the wealth of benefits offered by AsMA to its members. I therefore ask you to please bring this message to your colleagues...those who may not know about AsMA or who do know of it but may not have yet decided about becoming a member. If each of you can recruit at least just one member during this next year, then our association will continue to flourish not only in numbers, but also in the wealth and diversity of aeromedical and human factors expertise for which AsMA is already so well known.

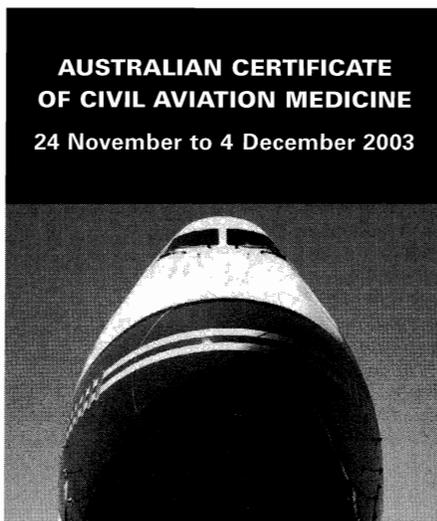
We are already the cornerstone; let us now continue to build. If you have questions or comments about the 'Recruit a Colleague' effort, please do not hesitate to contact me at: ahbellen@nps.navy.mil or (831) 656-2581.

In closing, let me again thank all of you for making our meeting in San Antonio such a success. I am very much looking forward to seeing you all in Alaska!

News from Italy

The Italian Aviation and Space Medical Association (Associazione Italiana di Medicina Aeronautica e Spaziale A.I.M.A.S.) held its 16th National Congress in May 2002 celebrating 50 years of activity (1952-2002). Prof.

Aristide Scano, who was for many years president of the association, was elected "president emeritus" in honor of his extraordinary scientific and associative work. The new President is Prof. Pasquale Collarile, M.D., former head of the Italian Air Force Medical Corps.



AUSTRALIAN CERTIFICATE OF CIVIL AVIATION MEDICINE 24 November to 4 December 2003

An exciting two week program held in Melbourne, Australia, open to medical graduates. Prerequisite in Australia for appointment as a Designated Aviation Medical Examiner.

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MEETINGS CALENDAR

September 15 - 18, 2003, Hamilton Island (tropical island off the coast of Queensland, Australia). Aviation Medicine Society Australia & NZ (AM-SANZ) annual conference and scientific meeting. Contact: Jodie Parker, Iceberg Events, P.O. Box 780 Mt. Ommaney Q 4074 Australia; Phone: 61-7-37155000; e-mail: jodie@icebergevents.com.au.

September 17-19, 2003, Catania, Italy. 2nd International Conference--The Impact of Environmental Factors on Health: Environmental Health Risk 2003. Organized by Wessex Institute of Technology, and University of Catania, Italy. Info: www.wessex.ac.uk

September 18-20, 2003, Berlin, Germany. 5th Congress of Medicine and Mobility and 41st Annual Meeting, German Society of Aerospace Medicine. Info: www.rg-web.de; www.dglrm.de.

September 22-24, 2003, Jacksonville, FL. 41st Annual SAFE Symposium, Adam's Mark Hotel. Dedicated to ensuring personal safety and protection in land, sea, air and space environments. Info: e-mail safe@peak.org; www.safeassociation.com;

October 5-9, 2003, Madrid, Spain. 51st International Congress of Aviation and Space Medicine. Organized by The Spanish Society of Aerospace Medicine under the auspices of the International Academy of Aviation and Space Medicine. Info: Viajes Vie-Congresos. Hermosilla 30, 28002 Madrid, Spain; 34-914264750; icasm03@vie.es.

October 8-11, 2003, Seattle, WA. Civil Aviation Medical Association Annual Meeting. Theme: Neuropsychiatric Issues in Aviation. Info: Jim Harris (405) 840 0199; JimLHarris@aol.com.

October 16-17, 2003, London, UK. International Aviation Conference: Air Quality in Passenger Aircraft, sponsored by the European Commission and Royal Aeronautical Society Aviation Medicine Group. Info: BRE Events, www.bre.co.uk/aviation. e-mail: events@bre.co.uk.

October 18 -19, 2003, Houston, TX. Wings Over Houston Airshow Festival. Info: www.wingsoverhouston.com; (713) 266-4492.

October 22-25, 2003, Mexico City, Mexico. XX International Meeting of Aerospace Medicine, Gala Hotel and Resorts, Playa del Carmen, Q.R., sponsored by the Mexican Association of Aviation Medicine. Theme: Medical And Surgical Therapeutics Of The Modern Medicine ; Its Application In Aviation. Info: Grupo Destinos, attn: Claudia Palomeque, (52-55) 55-75-18-60; cpalomeque@grupodestinos.com.mx.

October 24 - 25, 2003, Perrysburg, OH. 3rd Annual Hyperbaric Medicine Conference Sponsored by The Toledo Hospital and the Undersea & Hyperbaric Medical Society, Midwest Chapter. Holiday Inn French Quarter, Perrysburg, OH. Contact: Linda Bueno (419) 291-4649; e-mail: linda.bueno@promedic.org

LSBEB AWARD WINNERS FOR 2003

The A. Howard Hasbrook Award Joseph Pelletiere

Dr. Joseph Pelletiere received the 2003 LSBEB A. Howard Hasbrook Award for his research and development of human neck tensile loading criteria that have been transitioned to the performance based specifications for the Joint Strike Fighter. The annual award is sponsored by U.S. Aviation Underwriters.

For several years Dr. Pelletiere has been conducting groundbreaking studies into the tolerance of the human neck to tensile loading. This innovative research has led to the development and subsequent application of new injury criteria for the aerospace environment. Some of these results have been transitioned over to the performance-based specifications of the new JSF aircraft.

Dr. Pelletiere is continuing research in this area to ensure that the aerospace community has the best available information upon which to make design decisions. While others have investigated neck injury, only a few have ventured into the realm of specifically studying how dynamic tensile loading of the neck is caused by helmet systems in the aerospace environment.

The results of this new research are being provided to developers to help ensure that safer systems are created. Results of this research have been presented to the life support community where helmet manufacturers are consulting with the Air Force Research Laboratory, Biodynamics and Acceleration Branch, on the best way to use these new insights. The helmet work and the neck tolerance work are closely correlated such that the results from one area feed into and affect the other area. Properly applied these results will increase helmet safety during crash and ejection.

Professional Excellence Award Leonid Hrebien

Dr. Leonid Hrebien received the 2003 LSBEB Professional Excellence Award, sponsored by Autofluglibelle, for his more than 22 years of superior contributions to acceleration research, academic management, teaching and service to the Aerospace Medical Association. Throughout his career, he has published 58 ar-



HASBROOK AWARD—Dr. Barry Shender (left), LSBEB President, presented the 2003 A. Howard Hasbrook award to Dr. Joseph Pelletier (center), while Dr. Ted Knox (right), LSBEB Awards Chair, standing in for the award sponsor, US Aviation Underwriters, looks on.

ticles in aerospace medicine, primarily on acceleration effects and participated in 11 invited aerospace medicine panels.

Dr. Hrebien started at the U.S. Naval Air Development Center, Warminster, PA, as a research engineer, and within 5 years rose to be manager of the Environmental Effects Research Branch. His main research focus has been on determining the effects of high +Gz stress on the cardiovascular system and determining methods to improve G-tolerance. Key projects included "Cardiac excitability, cardiac arrhythmias, and tolerance to sustained acceleration", "Measurement and prediction and improvement of G-tolerance", and "Enhanced aircrew physiological stress assessment techniques." Under his direction, investigations were conducted concerning basic physiologic consequences of exposure to +Gz stress including blood pooling, detecting high-G blackout and changes in perception. During his tenure at NADC, he was nominated for the 1983 NSF Alan T. Waterman Young Investigator Award (National Science Foundation) (Citation: For Outstanding Achievements in Research on Cardiovascular Stress Physiology in a High Acceleration Environment) and received the Best Navy Paper Award at the 1984 Air Force/Navy Science & Engineering Symposium.

In 1989 he left NADC to become Executive Officer and Associate Professor Electrical and Computer Engineering Department at Drexel University in Philadelphia, PA. From 1996-2000 he was the Associate Dean and Director of the Drexel College of Engineering Office of Student Services. At Drexel, he was the Principal Investigator on the Smart Integrated Protective System with Homeostasis Control project in support of the NAVAIR Aircrew Integrated Life Support System program. He was also the PI for several biomedical digital signal processing projects including Heart Rate Variability, EEG State Analysis and Development of a Software Dynamic EMG Analyzer. Under his stewardship at Drexel, he graduated 4 Ph.D. and 10 MS students in acceleration research topics.

Dr. Hrebien was Guest Editor of the March 1991 Issue on "High-G Environments" of IEEE Engineering in Medicine Biology Magazine, President of the AsMA Life Sciences and Biomedical Engineering Branch in 1989-1990, AsMA Science and Technology Chairman 1995-1998, member of the AsMA Scientific Program Committee since 1982, Journal



PROFESSIONAL EXCELLENCE—Dr. Barry Shender (left), LSBEB President, and Dr. Pete Stumpen (right), representing Autofluglibelle, present the 2003 Professional Excellence Award to Dr. Leon Hrebien (center).

Manuscript Reviewer for "Aviation, Space and Environmental Medicine", and is an AsMA Fellow.

Research and Development Innovation Award Richard Vann

Dr. Richard Vann received the 2003 LSBEB Research and Development Innovation Award, sponsored by David Clark Inc., for his part in work on understanding and avoiding decompression sickness (DCS) in astronauts during extravehicular activity (EVA) in space. This accomplishment followed years of study of the fundamental nature of inert gas exchange and bubble formation in animals and humans in relation to DCS during hypobaric and hyperbaric exposures. Recognition of the beneficial and detrimental effects of physical activity on DCS risk proved to be the key insight for designing an EVA countermeasure to DCS. The beneficial effects of activity were realized by exercising during oxygen breathing prior to decompression to space suit pressure to increase tissue perfusion and accelerate nitrogen elimination. The detrimental effects of activity pertained to ground-based EVA simulations in which bubble formation was induced by anti-gravity stresses in the legs, stresses that are absent in the micro-gravity of space. A 2-hour oxygen prebreath protocol was tested successfully in a multicenter ground-based trial in which anti-gravity stresses were avoided and nitrogen elimination was accelerated by exercise during oxygen prebreathing. To date, this protocol has been used during 34 EVAs from the Space Station. This is an example of how basic knowledge of environmental physiology has direct application to a practical problem in the space program.

Ross McFarland Student Award Mikael Gronkvist

Mikael Gronkvist, who hails from Linkoping, Oetergotland, Sweden, received the LSBEB Ross McFarland Student Award for 2003 for writing the best student paper accepted by the AsMA Scientific Program committee and ranked by an ad hoc awards

See McFARLAND AWARD, p. 913.



R & D INNOVATION AWARD—Dr. Barry Shender (left) and Jack Bassick (right) representing David Clark, the sponsor of the 2003 R&D Award, present the award to Dr. Richard Vann of Duke University (center).

McFARLAND AWARD, from p. 912.

committee of LSBE. Mr. Gronkvist conducted a study using 12 male subjects in a human centrifuge at +5 through +8 Gz to see whether the addition of a Counter Pressure Jerkin (CPJ) in combination with the Swedish full-coverage anti-G suit was necessary to achieve adequate G protection when using positive pressure breathing against G (PBG), or whether it merely reduces breathing effort. His results showed that the use of a CPJ during PBG reduces the breathing effort, but does not significantly affect G-tolerance.

Mr. Gronkvist is employed at the Institution of Aviation Medicine, the Defence Research Agency where he works in the effects on respiration of increased gravity (+Gz) and the use of anti-G ensembles. He is also a Ph.D. student in the department of Biomedical Engineering at the University of Linköping and hopes to finish his thesis within a year.



MCFARLAND STUDENT AWARD—Dr. Barry Shender, LSBE President (left) and Bill Ercoline representing, Veridian, the sponsor of the Ross McFarland Student Award, present Mikael Gronkvist (center) the award for the best student paper at the Annual Meeting.



PRESIDENT'S GAVEL—Dr. Barry Shender, outgoing LSBE President, hands over the gavel to the incoming President, Dr. Ulf Balldin.

Aerospace Human Factors Association Awards

Henry L. Taylor Founder's Award Henry L. Mertens

Henry W. Mertens, Ph.D., recently retired after a 39-year career as a research psychologist at the FAA Civil Aerospace Medical Institute in Oklahoma City. Henry is a Fellow of both the Aerospace Medical Association and the Aerospace Human Factors Association. He is a Member of the Human Factors and Ergonomics Society, and an Adjunct Associate Professor in the Department of Psychiatry and Behavioral Sciences at the University of Oklahoma



TAYLOR AWARD--AsHFA President, Thomas Nesthus, presents Henry W. Mertens with the 2003 Henry L. Taylor Founder's Award in recognition of outstanding contributions in the field of Aerospace Human Factors.



ROScoe AWARD--AsHFA President, Thomas Nesthus, presents Edward S. Eveland with the 2003 Stanley N. Roscoe Award for the best Aerospace Human Factors Doctoral Dissertation.

Health Sciences Center. Henry received the Aerospace Medical Association's Raymond F. Longacre Award in 1999. His Taylor Award presentation was entitled "History and Rationale of Color Vision Standards for Civilian Pilots in the U.S."

Stanley N. Roscoe Award Edward Eveland

Edward Eveland, Ph.D., graduated from Wright State University. His winning dissertation was entitled "Neck Muscle Response to Changes in Helmet Loading Under +Gz Acceleration--Gender Differences". He currently works at Wright-Patterson AFB, OH.

William E. Collins Award David Neri & Douglas Wiegmann

Two articles tied for outstanding human factors publication of the year. The authors and journal articles that won top honors as the William E. Collins Award were as follows: David Neri, Raymond Oyung, Laura Colletti, Melissa Mallis, Patricia Tam, and David Dinges for "Controlled Breaks as a



COLLINS AWARD--AsHFA President, Thomas Nesthus, presents the 2003 William E. Collins Award to Douglas Wiegmann and David Neri for their tie-winning "Outstanding Human Factors Publication (journal articles) of the Year".

Fatigue Countermeasure on the Flight Deck" (Aviat Space Environ Med 2002; 73:654-64); and Douglas Wiegmann for "Agreeing with Automated Diagnostic Aids: A Study of Users' Concurrence Strategies" (Hum Factors 2002; 44; 44-50).

CAPT-select David Neri (Ph.D.), works for the Office of Naval Research in Arlington, VA. Dr. Douglas Wiegmann is a professor at the University of Illinois-Aviation Research Laboratory in Savoy, IL.

PRESIDENT'S PAGE, from p. 899. Kirk Nailing will be the new chair. Carol Manning is foregoing the pleasure of handling resolutions and the "whereas" statements at the annual business meeting as chair of the Resolutions Committee. The new chair will be Thomas Faulkner. Barry Shender, who has, through his powers of persuasion and gentle prodding, generated an amazing string of Science and Technology Watch articles for the journal in his role as chair of the Science and Technology Committee, has turned the position over to Len Goodman. I have already mentioned the new co-chairs of the Membership Committee and want to thank Daniel Callan for his support as chair. He helped ensure that our membership has maintained greater stability over the past few years. Thanks also to Jay Dudley who, as chair of the Communications Committee, helped improve our website.

In closing, I would like to provide another interesting insight into Alaska. To the best of my knowledge, Alaska may be the only state where a flying fish that collided with an Alaskan Airlines B737 led to a delayed flight to provide time for a mechanic to check the aircraft for damage. According to the *Alaska Almanac* in 1988, during its departure from the Juneau airport in 1987, the aircraft encountered a bald eagle that was clutching a fish in its talons. The frightened bird dropped the fish, which collided with the aircraft and resulted in the mechanical investigation at the next airport. By all accounts, the bald eagle was unscathed.