

# President's Page

---

I can hardly believe it, I am the president of the Aerospace Medical Association, and, do you know what? It feels great! This represents a great honor and a very significant and satisfying highlight in my aerospace medicine career.

In 1985, I left Mexico, my family, and my friends to pursue my professional dreams in the USA. Back then I never expected that I would become the President of a leading international aerospace medicine organization. Leaving Mexico proved to be a great challenge for me; it was difficult to adapt to life in another country with a very different culture, away from my family. However, I believe that my decision was the right one and the journey has been worth it.

Becoming AsMA president is a dream come true and I appreciate the trust and confidence that you have given me to lead our beloved Association. I did not accomplish this alone, and I am very grateful to all of my professors, colleagues, and friends who took the time and effort to support my professional development. There are several individuals who, throughout the years, have taken a particular interest in mentoring me and guiding me in my career, and I feel it is very important to recognize you publicly: Dr. Luis Amezcua, Dr. Silvio Finkelstein, Dr. Stanley Mohler, Dr. Sarah Nunneley, Dr. William Collins, and Dr. Jon Jordan. From you I have learned many significant lessons, such as the value of commitment to high quality in everything we do, the value of treating everybody with respect and dignity, the importance of working together with others for a common goal, the virtue of recognizing our mistakes and doing our best to correct them, the wisdom of recognizing our limitations and working hard to improve them, and the great responsibility we have to mentor the next generation to ensure their success. Unfortunately, the complete list of names of those who have supported me is too large to include in this page, but you know who you are, and from the bottom of my heart I express to you my most sincere "Thank You." Most importantly, I want to recognize the unconditional support and love from my wife Sandi and my sons Evan and Adam, who have made it possible for me to spend a significant amount of time and effort dedicated to my professional activities.

AsMA is very unique professional organization and there are several aspects that make it different from all other medical societies and that contribute to our organizational strength. Compared to other professional medical organizations we have a relatively small group of individuals dedicated to aerospace medicine and allied disciplines around the world. Such a close network of colleagues and friends makes it possible for us to have an impact on a global scale. Our Association includes members with a wide variety of educational and professional backgrounds that promote our multidisciplinary nature and contribute to our valuable diversity. Our annual



**Melchor J. Antuñano, M.D., M.S.**

meeting provides an excellent forum not only for the exchange of scientific knowledge and experience, but it also creates the ideal atmosphere for effective networking and for cultivating friendships. The various standing and meeting committees provide members with a wide variety of opportunities to serve our organization. AsMA provides a home to several Constituent and Affiliate organizations with whom we share common goals and objectives. Thanks to the grassroots efforts and dedication of these sister organizations we have a greater impact at the local, regional, and international levels. Our outstanding awards program provides plenty of opportunities to recognize the efforts, dedication, and accomplishments of our colleagues.

Not too long ago, I had an interesting conversation with Dr. Russell Rayman about the real meaning and purpose of being a president of AsMA. We talked about a common goal shared by all presidents to do something important and beneficial for AsMA and, at the same time, leave a memorable legacy of their presidency. This should not cause sudden shifts in organizational goals and objectives that are not consistent with the long-term needs and health of AsMA. This past year represented a great learning experience for me as president-elect of AsMA. Under the exceptional leadership of our past-president Dr. Dave Schroeder, the Executive Committee developed a strategic plan that will provide a long-term vision and direction to improve our effectiveness and efficiency as a world-leading aerospace medicine organization. Equally important is to have a seamless transition of senior leadership to ensure the continuity of the strategic plan's goals and objectives. The fact is that presidents come and go every year but the organization is the only constant year after year. Therefore, my personal commitment to all of you is not to concentrate on short-term goals that can be easily accomplished during a one-year presidency, but to dedicate my efforts to support the long-term goals that will have a significant impact on the future of our organization.

*See PRESIDENT'S PAGE, p. 560.*

*PRESIDENT'S PAGE, from p. 559.*

This past year was very significant due to a series of aerospace events and accomplishments. Airbus started assembly of the first A-380, the newest and largest aircraft in the global transport fleet that will enter service in a few years. Boeing announced their decision to develop and produce the 7E7 Dreamliner, a more efficient transport. We witnessed with some sadness the retirement of "The Concorde", the first and only supersonic transport in commercial service. We hope that this gap will be filled soon with a new generation of supersonic transport. We shared the excitement of a new generation of aerospace pioneers who made it possible to break the sound barrier onboard "SpaceShipOne", the first privately built and operated aerospace vehicle that entered the competition for the "X Prize". China impressed the world with the successful launch of their first astronaut to space, and by doing so they joined the small elite of space-faring nations. NASA sent two robotic missions to Mars that put our human ingenuity to the test in dealing with unexpected technological problems millions of miles away from our home planet. Hopefully, these robotic missions will finally provide the answers to our questions regarding the possibility of life on other planets. President George Bush announced a new and extremely ambitious space initiative to return humans to the moon and to travel to Mars, while planning for the near-future retirement of the space shuttle fleet and the development of the next generation of manned space transport.

The flight centennial celebration provided a variety

of venues to increase public awareness about aviation and gave us an opportunity to appreciate how much aviation technology has evolved since those first pioneering flights. The irony is that despite all the advances in aviation technology over the last 100 years, the human being continues to be the potential limiting factor, and the scientific challenges that we face are even greater. The good news is that the future of our profession looks exciting and full of opportunities.

We need to be prepared to face future challenges and opportunities, and the best approach is to work together in support of our Association. The truth is that AsMA can use your help. You can: assist in the recruitment of new members; nominate colleagues to be recognized for their accomplishments through our awards program; pay your annual dues promptly; volunteer to participate in educational outreach activities to promote our scientific discipline; get involved in mentoring the next generation of colleagues; propose resolutions and position papers that address issues of relevance to our profession and our Association; submit manuscripts for publication in the ASEM journal; submit abstracts for presentation in the annual scientific meeting; actively participate in the business meeting and exercise your voting privileges; and perform volunteer work on any of the various committees that perform critical functions in support of AsMA. As a member of AsMA you are the most valuable and important asset, and our future depends on your willingness to become involved.

# Medical News

## AVIATION, SPACE, AND ENVIRONMENTAL MEDICINE

### Executive Director's Column



Rayman

### Spirit of Flight Award to AsMA

Very recently I received a most welcome telephone call from the Executive Director of the National Aviation Hall of Fame, Mr. Mike Jackson. He gave me the wonderful news that our Aerospace Medical Association had been selected by the National Aviation Hall of Fame for its Annual Spirit of Flight Award for 2004. Ceremonies for conferring this Award will be on Friday, July 16, 2004 at the Hall of Fame Headquarters in Dayton, OH. It is a black tie

affair with a large number of very prominent individuals from the aviation and space communities on the invitation list.

By way of background, the Hall annually honors outstanding American air and space pioneers, including one organization. The organizational award has been conferred annually since 1981 and is known as the Milton Caniff Spirit of Flight Award. After July 16, AsMA will be in excellent company with previous recipients, among them the USAF Thunderbirds, the Ninety-Nines, NASA Mercury Astronauts, the Tuskegee Airmen, the Doolittle Tokyo Raiders, and the Flying Tigers, to mention just a few. It is particularly gratifying that AsMA was selected in that we are the first group that is a supporter of aviation and space operations rather than an operator. I was also informed that we were in heavy competition with a number of other very deserving organizations. Nevertheless, 2004 is our year.

Regarding individual recipients, they constitute a veritable who's who in aviation and space. I would add that two past recipients were AsMA members: Harry G. Armstrong, who was enshrined in 1998, and John Paul

Stapp, who was enshrined in 1985. To my knowledge, these were the only two physicians so honored.

Finally, I would say that this Spirit of Flight Award is not meant for any individual or individuals, but rather to all members of AsMA who have contributed over the years to crew (and passenger) health and safety. The nomination package was prepared and submitted by John Frazier and Bill Alberty and I would ask that you give them a pat on the back and say thanks when you next see either one of them. More information will be published in our journal after the Awards Ceremony in July. 2004 truly is AsMA's year.

### JOURNAL IS NOW ONLINE!

You must register via  
[www.ingenta.com](http://www.ingenta.com), AND pay  
AsMA an additional \$20 fee.

## Your Executive Committee at Work: Letters Sent in Support of Military and NASA funding

### Aerospace Medical Association



President  
David J. Schroeder, Ph.D.  
2601 NW 23<sup>rd</sup> Street  
Oklahoma City, OK 73107-2209

320 South Henry Street  
Alexandria, VA 22314-3579  
Phone: 703-739-2240  
Fax: 703-739-9652  
[www.asma.org](http://www.asma.org)

March 22, 2004

Executive Director  
Secretary-Treasurer  
Russell B. Rayman, M.D., M.P.H.  
Association Home Office

President  
David J. Schroeder, Ph.D.  
2601 NW 23<sup>rd</sup> Street  
Oklahoma City, OK 73107-2209

### Aerospace Medical Association



320 South Henry Street  
Alexandria, VA 22314-3579  
Phone: 703-739-2240  
Fax: 703-739-9652  
[www.asma.org](http://www.asma.org)

Executive Director  
Secretary-Treasurer  
Russell B. Rayman, M.D., M.P.H.  
Association Home Office

March 22, 2004

The Honorable Michael Wynne  
OSD-ATL  
Acting Under Secretary, Acquisition, Technology & Logistics  
3015 Defense Pentagon  
Washington, DC 20301-3015

Dear Mr. Wynne:

The Aerospace Medical Association (AsMA) is an organization of approximately 3,300 members (Many are military flight surgeons.) engaged in clinical aerospace medicine and related research. We have an Annual Scientific Meeting during which papers are presented to keep our members abreast of current issues, particularly in aeromedical support of military aviation. By virtue of our meetings over the past several years, we discern a disturbing, decreasing trend in aerospace medicine research, particularly from military laboratories at Ft. Rucker, Alabama, Pensacola Naval Air Station, Wright-Patterson AFB, and Brooks City-Base.

Our members are concerned because of future operational needs such as fatigue countermeasures, night vision goggles, chemical – biological defense as well as the yet to be solved problems of G-loss of consciousness (GLOC) and spatial disorientation.

We believe our observations are well founded. According to our information, funding for the Army has been reduced 33% in the 1990s with continuing annual losses of 1-3 % per year; the Navy has seen a 53% decrease over the past 2 years; and USAF has been reduced between 20-34% annually over the past 4 years.

Consequently, the Aerospace Medical Association would urge you to take notice of our concerns and ensure adequate funding for these and related programs in order to ensure the best possible protection of our aviators during the coming decades. Thank you.

Sincerely,

*Russell B. Rayman, M.D.*

Russell B. Rayman, M.D.  
Executive Director

President of the United States  
The White House  
1600 Pennsylvania Avenue, NW  
Washington, DC 20500

Dear Mr. President:

The officers and members of the Aerospace Medical Association (AsMA) are encouraged by the revitalization of our nation's space program. We believe that a return to the Moon and a Mission to Mars will, in the long run, benefit not only our country, but the entire world. There is no doubt that we have the technological potential to accomplish these great endeavors. As aerospace medicine physicians and research scientists, we are particularly concerned about astronaut crew health and safety. Because our countermeasure research to date has focused on relatively short duration missions of several weeks to several months, there remains great uncertainty regarding the effects of microgravity upon astronauts flying long duration missions, perhaps as long as two to three years. Consequently, it is vital that an aggressive space medicine research program be incorporated into the planning process of these future missions to enable us to have reasonable certitude that our astronauts can complete the mission and return home safely. Therefore, the Aerospace Medical Association strongly urges your Administration to ensure adequate funding for life sciences research, particularly in the area of microgravity countermeasures. Thank you.

Sincerely,

*Russell B. Rayman, M.D.*  
Russell B. Rayman, M.D.  
Executive Director

RBR:jc

AEROSPACE MEDICAL ASSOCIATION  
THE INTERNATIONAL LEADER FOR EXCELLENCE IN AEROSPACE MEDICINE  
75th ANNUAL SCIENTIFIC MEETING, ANCHORAGE CONVENTION CENTER,  
ANCHORAGE, ALASKA, MAY 2 - 6, 2004

AEROSPACE MEDICAL ASSOCIATION  
THE INTERNATIONAL LEADER FOR EXCELLENCE IN AEROSPACE MEDICINE  
75th ANNUAL SCIENTIFIC MEETING, ANCHORAGE CONVENTION CENTER,  
ANCHORAGE, ALASKA, MAY 2 - 6, 2004

# Constituent Organization Presidents for 2004-5

## Hathaway is Incoming AsPS President

CDR Gail L. Hathaway, MSC, USN, has just succeeded to the Presidency of the Aerospace Physiology Society. She is currently the Special Assistant to the Deputy Chief, BUMED, Program Manager and Training Agent for Aerospace Physiology Programs and Survival Training, in Washington, DC.



CDR Hathaway was born and raised in Hutchinson, MN. A graduate of the

University of Minnesota, Duluth, she received her Bachelor of Arts degree in 1985 and Masters Degree in 1986. Additional educational achievements include completion of the Aviation Safety Officer Course at the Naval Postgraduate School, Monterey, CA.

In 1986, CDR Hathaway was commissioned a Lieutenant (junior grade) in the Medical Service Corps. After completion of Officer Indoctrination School in Newport, RI, she reported to Naval Medical Clinic, San Diego, for duty as an Industrial Hygiene Officer at NAS North Island and NEPMU-5. In 1988, she was selected for training as a student Naval Aviator and reported to Naval Aviation Schools Command, Pensacola, FL. Later that year, CDR Hathaway began training as a Naval Aerospace Physiologist and received her "Wings of Gold" in July 1989 as Naval Aerospace Physiologist number 161. She immediately assumed duties as the Assistant Department Head, Aviation Physiology Training Unit, NAS Pensacola.

In 1991, she reported to the 55th Wing, Ehring Bergquist Strategic Hospital at Offutt AFB, NE, as the Chief of Industrial Hygiene Services and Assistant Chief of Aviation Physiology Training. She was subsequently assigned to US Strategic Command in 1992, as the Director of Human Factors/Executive Assistant to the Command Surgeon.

In 1996, CDR Hathaway reported to Marine Aircraft Group 31 in Beaufort, SC, as the Group Aeromedical Safety Officer, where she deployed onboard the USS George Washington to Operation Southern Watch. She was transferred to the Bureau of Naval Personnel in 1999, as the Medical Service Corps assignment officer for Operational Specialties and Physician Assistants; the first "operational specialist" to hold this position. In 2001, CDR Hathaway was selected as the Executive Assistant to the Assistant Chief for Operational Medicine and Fleet Support at BUMED. She assumed her current position there in June 2002.

An Associate Fellow of AsMA, CDR Hathaway is also a member of the Naval Helicopter Association and Tailhook Association. She is Board Certified in Aerospace Physiology, and Associate Professor at both Embry Riddle Aeronautical University and the Uniformed Services University of Health Sciences.

CDR Hathaway's personal awards include the Joint Meritorious Service Medal, the Navy and Marine Corps Commendation Medal with

two gold stars and the Navy and Marine Corps Achievement Medal.

## Hiland is Incoming President of IAMFSP

CAPT David A. Hiland, MC, USN, is starting a 2-year term as the President of the International Association of Military Flight Surgeon Pilots. He is currently Commanding Officer, Navy Environmental Health Center, Portsmouth, VA. A native of Illinois, he attended the University of Illinois as a Naval



ROTC student. He earned his Bachelor of Engineering Degree and commission as an Ensign in 1969.

Following flight training, he was selected for A-7E Corsair training and reported to VA-25 aboard USS Ranger (CV-61) in 1971. After completing two combat cruises to South East Asia, CAPT Hiland was discharged from active duty in 1974.

He attended the Chicago College of Osteopathic Medicine as a Naval Scholarship student and was awarded his Doctor of Osteopathic Medicine degree in 1984. He was designated as a Naval Flight Surgeon in 1985, and later reported to the Commander, Carrier Air Wing Eight, aboard USS Nimitz (CVN-68) where he served as Senior Air Wing Flight Surgeon. In 1989 he was awarded a Masters Degree in Public Health from Johns Hopkins School of Public Health. He completed Aerospace Medicine Residency training in 1991, followed by a tour of duty as Senior Medical Officer aboard the USS Dwight D. Eisenhower (CVN-69).

He reported to the Bureau of Medicine and Surgery in 1993 and in 1996 he became the Director of the Aerospace Medicine Division, the Aerospace Medicine Specialty Leader, and the Director for the Navy's Dual Designator Program. He reported to the Navy Environmental Health Center (NEHC) in 1998, where he served as Director of Plans and Operations and interim Executive Officer. In this capacity, he led the development of the Forward Deployed Preventive Medicine Units (FD-PMUs) and orchestrated the establishment of the Navy's Chemical, Biological, Radiological, and Environmental (CBRE) training course for medical personnel.

In July 2000, he reported to the staff of Commander Naval Air Forces Atlantic where he oversaw 6 carrier medical departments. As Force Medical Officer, he led efforts to develop CBRE doctrine for the carrier medical departments and to implement advanced Biological Warfare identification capability. In June of 2003, Captain Hiland assumed duties as Deputy Chief, Bureau of Medicine and Surgery, Environmental Health (BUMED M11) and Commanding Officer, Navy Environmental Health Center, Portsmouth, VA.

CAPT Hiland is board certified in Aerospace Medicine, Occupational Medicine, and Family Practice. His military awards include the Legion of Merit, the Meritorious Service Medal, the Air Medal, and Vietnam

Campaign and Service Medals. He enjoys off-duty time as a flight instructor for the military flying club.

## McKeon to Serve as Army AvMed Association President

LTC Joseph F. McKeon, MC, USA, will serve 2 years as president of the U.S. Army Aviation Medicine Association. He is presently the Command Surgeon at the U.S. Army Safety Center, Fort Rucker, AL. Prior to that, he was the Chief of the Education Branch at the U.S. Army School of Aviation Medicine, also located at Fort Rucker.

A native of Washington, DC, he earned his B.S. in Engineering at the U.S. Military Academy, West Point, NY in 1979. He earned his M.D. from the Medical College of Virginia, Richmond, VA, in 1990 and then spent a year



in a Family Practice internship. In 1997, he earned his MPH at the School of Public Health, University of Texas Health Science Center at Houston. He then completed Aerospace and Preventive Medicine residencies at the USAF School of Aerospace Medicine

(USAFSAM) at Brooks AFB, TX, in 1999.

In his career in the military, he has served in a variety of posts, including: 1981-1982, Maintenance Platoon Leader and UH-1 Maintenance Test Pilot at the 205th Aviation Battalion in Hanau, Germany; 1983, Aircraft Maintenance Platoon Leader and CH-47 Test Pilot with the 295th Aviation Company in Mannheim, Germany; 1984, Chief of the Management Operations Branch at Fort Eustis, VA; 1991 to 1993, Chief of the Outpatient Clinic, E.R. Physician, and Flight Surgeon at Keller Army Community Hospital in West Point, NY; 1993, B Company, 168th Medical Battalion, at Yongsan Garrison, Seoul, Korea, serving first as Officer in Charge at the Yongsan Health Clinic, and then as Commander of an Area Support Medical Company; 1995-1996, Chief of the Acute Care Clinic and Outpatient Medicine at Munson Army Community Hospital, Fort Leavenworth, KS.

Dr. McKeon is board-certified in Preventive Medicine and Aerospace Medicine and is a Diplomate with the American Board of Preventive Medicine and the American Board of Medical Examiners. He is a member of the Aerospace Medical Association, the Society of U.S. Army Flight Surgeons, the American College of Preventive Medicine, the Association of Military Surgeons United States, the Order of Military Medical Merit, and a life member of the Army Aviation Association of America. His military awards include the Meritorious Service Medal with Third Oak Leaf Cluster, the Army Achievement Medal with Second Oak Leaf Cluster, the Armed Forces Expeditionary Medal, Army Aviator Wings, Army Flight Surgeon Wings, Expert Field Medical Badge, and Airborne Wings.

## Johnston to Head Space Medicine Branch

Smith L. Johnston, III, M.D., M.S., is the incoming President of the Space Medicine Branch for 2004-5. He has served the organization in many ways, including chairing their Awards Committee.

A native of Woodstock, GA, he received his Bachelor of Science in biology in 1976 and his Doctor of Medicine in 1981 from Emory University in Atlanta. From 1984 to 1990, Dr. Johnston completed his residencies in internal and aerospace medicine from Wright State University, where he received his Masters of Science in aerospace medicine.



Dr. Johnston is currently a Medical Officer and Flight Surgeon for NASA Medical Operations of the NASA Johnson Space Center in Houston, TX. He is responsible for the medical care of the Astronaut Corps and dependents, and for the mission support of NASA's Space Shuttle (STS) program. He has been the lead physician for the International Space Station (ISS) Emergency Crew Return Vehicle development and Crew Surgeon for over 20 STS missions including the STS-107 Columbia mission.

Dr. Johnston is a member of the Adjunct Clinical Faculty, University of Texas Medical Branch at Galveston, Dept. of Preventive, Occupational and Environmental Medicine. He is Medical Director for Injury Reduction Technology, Inc., INRTEK, Myrtle Beach, SC, and also serves on the Advisory and Oversight Committees for the National Science Foundation's American Polar Medicine Program, Washington, DC. Dr. Johnston has held staff positions with the Veterans Administration Medical Center Emergency Department and Dept of Internal Medicine, Kelsey-Seybold Clinic, Inc., in Houston, TX. He has over 13,000 hours of Major and Minor Emergency Room Staffing Time with current ACLS and ATLS Training.

In addition to over 50 scientific presentations and publications, Dr. Johnston is the recipient of numerous awards including the recent NASA Superior Service Award, STS-107 Flight Recognition Award, and the 40th Space Flight Awareness Honoree Award.

Dr. Johnston is Board Certified in Aerospace Medicine from the American Board of Preventive Medicine and is a Fellow of the Aerospace Medical Association.

## Morissette to Lead ANS

Colleen Morissette, R.N., C.F.R.N., E.M.T.-P., is the incoming president of the Aerospace Nursing Society. She is the first U.S. civilian nurse to hold this position. Ms. Morissette is currently the marketing manager for Vidacare Corporation, a new medical technology firm in San Antonio, TX, that specializes in emergency medical products. She is their clinical expert on intraosseous fusion and the subject matter expert on EMS including ground and air transport.

Ms. Morissette received her ASN from Anne Arundel Community College, MD, and her BSN from the University of Tampa, FL.

During her nursing career she has worked extensively in neonatal, pediatric, and adult critical care units. From 1993 to 1995, she was a critical care nurse at Pronurse in Chicago, IL. In 1993, she also worked for Wylers Children's Hospital, University of Chicago. From 1994 to 1995, she served at Rush-Presbyterian St. Lukes Medical Center in Chicago in the adult cardiomyopathy transplant unit. In 1996, she joined Care Flight Air Ambulance at Clearwater St. Petersburg Airport, FL.

She was a flight nurse with Bayflite in St. Petersburg, FL, one of the busiest rotor-wing, hospital-based programs in the country, from 1997-2003. She was employed by All Children's Hospital in St. Petersburg, FL, from 1991 to 2000, and Brooke Army Medical Center in San Antonio, TX, from 2002 until the present. In addition, she has been a team member on a number of ground, fixed wing, and rotor-wing transport teams. Ms. Morissette is an ACLS, PALS, and TNCC instructor and maintains her credentials as a Certified Flight Registered Nurse (CFRN).

Ms. Morissette received the Outstanding Civilian Service Award for her volunteer work with the American Red Cross and the Army Aeromedical Center at Fort Rucker, AL. She has been a member of the Aerospace Medical Association since 1997. She has presented numerous times at conferences and professional groups on the topics of Civilian Air Medical Transport, Trauma, and Critical Care.

## Neri is Incoming President of ASHFA

Captain David F. Neri, Ph.D., is the newly appointed President of the Aerospace Human Factors Association. He is currently a U.S. Navy Research Psychologist and Deputy Director of the Cognitive, Neural, and Social S&T Division at the Office of Naval Research in Arlington, VA.

He obtained his undergraduate degree magna cum laude from the University of Rochester, his Ph.D. in Experimental Psychology from the University of Connecticut, and completed a postdoctoral fellowship at the Laboratory for Circadian and Sleep Disorders Medicine at Harvard Medical School and the Brigham and Women's Hospital. In his initial assignment at the Naval Submarine Medical Research Laboratory, he conducted human factors research in visual psychophysics, color perception, and the application of color to visual displays. After transferring to the Naval Aerospace Medical Research Laboratory, he researched the effects of pharmacological and non-pharmacological countermeasures to the performance degradation associated with sustained aviation operations and the effects of combat on aviator work/rest schedules. The latter effort included collecting the only data of its kind from naval aviators onboard the carrier USS America during Operations Desert Shield and Desert Storm.

While at the Naval Health Research Center, he conducted basic research on the effects of sleep deprivation on performance. More recently he was assigned to NASA Ames

Research Center as the Principal Investigator and Team Leader of the Fatigue Countermeasures Group. At NASA his research focused on the effects of nighttime flying with its associated sleep loss, fatigue, and circadian desynchrony and the development of operationally useful countermeasures. He



also served as a co-investigator for experiments on two space shuttle flights [STS-90 (NeuroLab) & STS-95] investigating sleep, circadian rhythms, and cognitive performance in space and the efficacy of melatonin as a countermeasure for sleep disturbances. After

moving to ONR, his interest in biomathematical models of the effects of sleep loss and circadian desynchrony on performance led him to chair an international Workshop on Fatigue and Performance Modeling in Seattle in June, 2002. The proceedings of that workshop and related papers were published in a special supplement to *Aviation, Space, and Environmental Medicine* in March, 2004, for which he served as editor.

In his present position, Captain Neri is responsible for assisting the Division Director in developing, administering, and executing for the Navy an integrated program of basic research, applied research, and advanced technology development in the fields of cognitive, neural, and applied behavioral sciences. In July he will move to the Naval Bureau of Medicine and Surgery, Office of the Director of Research and Development, where he will assume the duties of Technical Director. He is the author or co-author of 27 peer-reviewed scientific papers, 4 book chapters, over 50 technical reports and proceedings papers, and over 80 abstracts and presentations at national and international meetings. His awards include five personal Navy awards, the NASA-wide "Turning Goals into Reality" award for 2000, a NASA-Ames Honor Award, the 2003 Arnold D. Tuttle Award of the Aerospace Medical Association, the William F. Collins Award of the Aerospace Human Factors Association, and the Ellingson Award of the AsMA Associate Fellows Group. A member of numerous professional organizations, he currently serves as a member of the Board of Associate Editors for *Aviation, Space, and Environmental Medicine* and is an active member and Associate Fellow of AsMA.

## Richardson to Lead USAF Flight Surgeons

Col. Romie N. Richardson, USAF, MC, is the new 2004-5 president of the Society of USAF Flight Surgeons. Since 2000, he has been the Program Director for the USAF Residency in Aerospace Medicine (Brooks City-Base, TX), the largest aerospace medicine training program in the world. As of June 2004 he will have graduated 79 RAMs from the Program.

Colonel Richardson earned his Bachelor of Science in Biology at Northeast Missouri State University, Kirksville, MO, in 1974. Commissioned into the Health Professions Scholarship Program (HPSP) he graduated with his D.O. degree from the Kirksville College of Osteo-

See RICHARDSON, p. 564.

*RICHARDSON, from p. 563.*  
pathic Medicine in 1978. He completed a rotating Internship at Charles E. Still Osteopathic Hospital, Jefferson City, MO, in 1979.

His first Air Force assignment was as Squadron Medical Element to the F-15s of the 7th Tactical Fighter Squadron at Holloman



AFB, NM. While at Holloman he had the unique opportunity to serve as the 49th Wing's physician in charge of medical support to the Northrup Strip, the contingency landing site for the initial flights of the new Space Transportation System (STS) flight program. He

supported the only landing of the Space Shuttle (STS III) in New Mexico.

Upon completion of his HPSP payback Dr. Richardson returned to his hometown of Brunswick, MO, where he was in private practice for three and a half years. Finding rural America a bit quieter than he'd remembered, he returned to Active Duty in March of 1987 with the 421st TAC Fighter Squadron and their F-16s as Chief of Flight, Medicine Hill AFB, UT.

In 1988 Richardson began the Residency in Aerospace Medicine, obtaining his MPH at Tulane University, School of Public Health and Tropical Medicine in New Orleans, LA. Graduating from the Residency in 1990 he was then assigned as the Chief of Aerospace Medicine (SGP) 3rd Medical Group, Elmendorf AFB, AK. While there he also led a medical recovery team into the Philippines, post Mt. Pinatubo eruption, and also served as the Commander for the 4404th Medical Group deployed in Dhahran, Saudi Arabia. A new concept was to be tested within the Air Force at that time—that of the Objective Medical Wing. As such Lt. Col. Richardson became the Squadron Commander of the first ever Aerospace Medical Squadron at the 3rd Wing at Elmendorf. In 1993 Lt. Col. Richardson was assigned as the Chief of Flight Medicine at the 96th Medical Group, Eglin AFB, FL. Here is where the Objective Medical Group concept became a reality, and he again became a Squadron Commander standing up his second Aerospace Medical Squadron.

In June of 1996 he was selected as the SGPA for HQ/AETC at Randolph AFB, TX, where he served until his selection in 1998 as the Deputy Commander USAF School of Aerospace Medicine at Brooks AFB, TX. He held this position until 1999 when he was made the Department Chair for Graduate Medical Education, and the Associate Program Director for the Residency in Aerospace Medicine (RAM). He became the Program Director in 2000. While in his current position he has presented at many national and international forums on aerospace medicine, and in spring of 2003 he was selected to lead a team of 72 Medics into Northern Iraq as part of Operation Iraqi Freedom.

He is a Fellow of both AsMA and the American College of Preventive Medicine, a Member of the International Academy of Aviation and Space Medicine, and a Founding Member of the American Society of Aerospace Medicine Specialists, another AsMA Constituent Organization.

His many military awards and decorations include the Meritorious Service Medal with 2

Oak Leaf Clusters, Air Force Commendation Medal, and Air Force Outstanding Unit Award with Silver Oak Leaf Cluster. He has also earned the National Defense Service Medal with Bronze Star, Southwest Asia Service Medal with Bronze Star, Humanitarian Service Medal, Air Force Longevity Service Award with 4 Oak Leaf Clusters, and Kuwait Liberation Medal.

## New President of ASAMS is Van Syoc

COL (Dr.) Dan Van Syoc is the incoming President of the American Society of Aerospace Medicine Specialists (ASAMS). He is currently the chief of the Clinical Sciences



Division (Aeromedical Consultation Service) at Brooks Air Force Base, TX. He has 20 years of active duty service in the USAF and came to his current position from Randolph AFB where he served as Chief of Aerospace Medicine for Headquarters Air

Education and Training Command.

A native of Iowa, Dr. van Syoc was born in 1953. He earned his B.S. from Iowa State University in 1975, his M.D. from the University of Iowa in 1980, and his MPH from the University of Oklahoma in 1990. He completed a Family Practice Residency in 1983, the same year that he joined the military, where he served in a variety of positions including Family Practice Physician and Flight Surgeon. He completed an Aerospace Medicine program at Brooks AFB, TX, in 1991. That same year, he became Chief of Aeromedical Services at Robins AFB, GA. Following that, he transferred to RAF Lakenheath, UK, where served first as Deputy Commander, Aeromedical Services, 48 MDG, and then as Commander, 48 AMDS. On his return to the United States in 1995, he joined the Flight Medical Branch, Clinical Sciences Division, at Brooks AFB, TX. In 1996, he became Chief, Professional Services, Clinical Sciences Division.

Dr. Van Syoc is a board-certified physician in Aerospace Medicine, Occupational Medicine, and Family Medicine. He is an Associate Fellow and Life Member of the Aerospace Medical Association (AsMA) as well as Chairman of the AsMA Education and Training Committee. He is past treasurer and Life Member of the Society of USAF Flight Surgeons, where he serves on the Board of Governors. He is also past Secretary and Treasurer of the AsMA Associate Fellows Group and was the secretary of ASAMS, of which he is a charter member. He is also a member of Working Group 115 of the Air Standardization Coordinating Committee, the American Academy of Family Physicians, the American College of Occupational and Environmental Medicine, the Texas College of Occupational and Environmental Medicine, and the Christian Medical and Dental Society.

His military awards include four Meritorious Service Medals, two Air Force Commendation Medals, an Expeditionary Medal, a Humanitarian Service Medal, a Joint Commendation Medal, an Air Force Achievement Medal, and a National Defense Medal.

## Whinnery to Head LSBEB

James E. Whinnery, Maj. Gen., USAF (Ret.), is the new President of the Life Sciences and Bioengineering Branch of AsMA.

A native of Amarillo, TX, Dr. Whinnery received a B.S. in chemistry from West Texas State University in 1968, a Ph.D. in biophysical



chemistry and an M.A.T. in chemistry from Texas Christian University in 1972, and an M.D. from the University of Texas Medical Branch, Galveston, in 1975. He then served as a special post-graduate fellow in the Clinical Sciences Division of the USAF

School of Aerospace Medicine (USAFSAM) and graduated from the primary course in aerospace medicine as a flight surgeon. He completed his post-graduate training in internal medicine at Wilford Hall USAF Medical Center in 1976, and returned to the USAFSAM as a research medical officer in the Biodynamics/Bioastronautics Laboratory. From 1977-81, he served as the only flight surgeon for both the 149th Tactical Fighter Group, Kelly AFB, TX, and the 147th Fighter Interceptor Group, Ellington AFB, TX.

In 1986, he became the second Air National Guard (ANG) Special Research Fellow at the Center for Aerospace Doctrine, Research, and Education, Maxwell AFB, AL, and a resident at the Air War College, while maintaining his position as squadron flight surgeon for the 187th Tactical Fighter Group, Alabama ANG, Dannelley Field, AL. In 1987, he became the first Advisor to the ANG Air Surgeon as well as Chief Aeromedical Scientist at the Naval Air Development Center in Warminster, PA. In 1990, he became the first ANG Assistant to the Command Surgeon, U.S. Air Forces in Europe. From 1991-3, he served as Air Surgeon of the National Guard, where he initiated the first ANG resident in aerospace medicine program, the first aerospace physiologist for the Guard, and was responsible for the health of over 120,000 airmen and women. He joined the faculty of the Department of Mathematics, Physical Sciences and Engineering Technology, at West Texas A&M University in 1995. When he retired from the USAF and the ANG in 2000, he was the Air National Guard Assistant to the Surgeon General, USAF, Bolling AFB, Washington, DC.

Dr. Whinnery has 1,000 flying hours in nearly all fighter aircraft and has ridden 6 different human centrifuges with more than 1200 runs to as high as +12 Gz. He has authored over 200 publications, presentations, book chapters, and articles, in addition to presenting many invited lectures and television appearances. He is a Fellow of the Aerospace Medical Association, the American College of Cardiology, and the American Institute of Chemists. His awards include the Legion of Merit, Meritorious Service Medal with four Oak Leaf Clusters, the Air Force Commendation Medal with one Oak Leaf Cluster, National Defense Service Medal with Bronze Star, Air Force Systems Command Flight Surgeon of the Year (1980), and Air National Guard Command Flight Surgeon of the Year (1986). He has twice received the AsMA Arnold D. Tuttle award (1981 and 1988) as well as the Theodore C. Lyster award (1996).



## The Australasian Society of Aerospace Medicine: A Brief History

by Dr. Gordon G. Cable  
MB BS DAvMed MRACs  
President, Australasian Society of Aerospace Medicine

The newly renamed Australasian Society of Aerospace Medicine has been in existence for over half a century. During this time the Society has seen many changes. On 25 November 1949, the inaugural meeting of the Special Group on Aviation Medicine of the British Medical Association of Australia was held in Melbourne, Victoria. A committee was formed to set out the objects of the Group and its by-laws. The fifteen doctors present at this first meeting were appointed Foundation Members of the Group.

Over the next several years, annual meetings of the Special Group were held, scientific papers were presented, a newsletter began in 1954, and membership grew to 164 by 1962. That year, by a vote of the members, the Special Group's name was changed to The Aviation Medical Society of Australia. In 1968, The Society held its first scientific symposium at the University of Adelaide, and in 1972 hosted the Second International Meeting on Aerospace Medicine in Melbourne. By 1972, membership had increased to 258, and due to a large number of members joining from New Zealand, the Society was renamed the Aviation Medical Society of Australia and New Zealand (AMSANZ), and was incorporated formally in 1978. The objects of the Society, as stated in the Society's Rules, were then, and remain today:

- "the cultivation and promotion of aerospace medicine and related disciplines,
- "the provision of an authoritative body of opinion in relation to aerospace medicine,

The above objects may be supported by various activities, including (but not limited to) the following:

- "the holding of periodic meetings of members;
- the collection and dissemination by or among members of scientific knowledge and the publication of articles related to aerospace medicine and related sciences and of its meetings;
- the conducting of essay or other appropriate competitions open to medical or science undergraduates;
- the endowment and support of research and development of aerospace medicine; and
- the co-operation, affiliation or holding of combined conferences with bodies having similar objects, within Australasia or elsewhere."

In 1979 the Patterson Trust Visiting Lecturer Trust Fund was officially established to sponsor the Society's educational activities.

It was named after Mr Douglas Patterson, then Chairman of National Airways Corporation of New Zealand, who had supported and contributed significantly to the Society's activities. The Patterson Trust continues to this day, and funds eminent experts in the field to attend both New Zealand and Australian Scientific Meetings.

In 1982, the newsletter was renamed Avmedia. Also, application was made to the Aerospace Medical Association for affiliation, which was approved in 1984. In 1985, it was recommended by the aviation medicine regulatory authorities in Australia and New Zealand that all Designated Aviation Medical Examiners should be members of AMSANZ. Total membership had grown at that time to about 630.

A milestone event was the 36th International Congress of Aviation and Space Medicine (ICASM), which was held in conjunction with the Society's Annual Scientific meeting in 1988 in Brisbane, Queensland. This was repeated more recently, when in 2002 AMSANZ successfully hosted the 50th ICASM in

Sydney. 1988 also saw the establishment of the John Lane Trust, which like the Patterson Trust, was intended to sponsor educational activities such as high-profile keynote speakers at Annual Scientific Meetings. Dr. John Lane was a foundation member of the Society, and is widely considered to be the father of aviation medicine in Australia. An ex-Royal Australian Air Force medical officer, the inaugural director of civil aviation medicine in 1948, a medical adviser to NASA, and a pioneer in transport restraint systems, Dr Lane died in January 1999, aged 81.

By 1991, the New Zealand Branch of the Society was beginning to seek greater autonomy. This culminated, in 1996, with the formal separation of the Australian and New Zealand branches of the Society into two distinct legal entities, but with very similar names - The Aviation Medical Society of Australia and New Zealand, and The Aviation Medical Society of Australia and New Zealand (New Zealand Inc.). This very confusing situation found resolution in 2003 when AMSANZ

See ASAM, p. 567

## USAARL dedicates Building to Honor MG Neel



The main building of the U.S. Army Aeromedical Research Laboratory (USAARL) campus was dedicated in honor of Major General Spurgeon H. Neel during a ceremony held on 2 April 2004 on Fort Rucker, AL. MG Lester Martinez-Lopez, Commanding General, U.S. Army Medical Research and Materiel Command (MRMC), was the host. Ms. Alice Neel, as the honored guest, unveiled the bronze plaque dedicated to her late husband. The USAARL building was named the Neel Aeromedical Science Center.

MG Neel, a former AsMA President and 2003 recipient of the Louis H. Bauer Founders



**BRONZE PLAQUE**--Ms. Alice Neel with MG Lester Lopez-Martinez (USAFSAM-RAM Class 1986, the only Army RAM general) stand before the bronze plaque dedicated to MG Neel.



Award (ASEM, 2003; 74:791-2), envisioned a research facility charged with providing direct aviation medical research support to all Army aviation and airborne activities. His goal was realized in 1962 with the creation of the U.S. Army Aeromedical Research Unit. MG Neel's vision grew into today's USAARL, one of six labs in MRMC. This lab is a center of excellence devoted to research in the field of aircrew protection and performance enhancement in the rotary-wing environment as well as in tactical combat vehicles, selected weapons systems, and airborne operations.

MG Neel is regarded as the Father of modern Army Aviation Medicine. He established a formal program for Board Certification in Aviation Medicine for Army Medical Officers and created the Army Aviation Medical Training and Research Programs.

He was a pioneer in the development of the principles of aeromedical evacuation of battlefield casualties. MG Neel was a Soldier, visionary, physician, and leader whose 40-year career spanned three major conflicts. MG Neel was involved in all phases of field and aviation medicine.

## AEROSPACE PHYSIOLOGY REPORT

### Training the Fleet to Survive -- New Initiatives in Naval Aviation Survival Training

by LT Anthony Artino, MSC, USNR, and  
LCDR Michael Prevost, MSC, USN

Navy Medicine has been providing aviation survival training to Navy and Marine Corps pilots, flight officers, and enlisted aircrew for more than 50 years. When most people think about Naval Aviation Survival Training, they think about the Dilbert Dunker and the altitude chamber (both were seen in the movie "An Officer and a Gentleman"). While the Navy still uses training devices to teach emergency procedures, there are some recent and ongoing initiatives that are changing the way it trains its aircrew. Below are listed some of these initiatives.

**Virtual Reality Parachute Descent Training:** All of the Navy's Aviation Survival Training Centers (ASTC) are using virtual reality trainers (VRT) to teach parachute descent training. The VRT can simulate parachute malfunctions (i.e., line over, riser twist or blown panels) and also allows students to practice steering the parachute into the wind and towards a suitable landing zone. The response from the fleet to the VRT trainers has been overwhelmingly positive.

Recently, the survival training program's VRTs received a complete software overhaul. The updated software enables students to train in canopy steering, correction of malfunctions and four-line release procedures. The new VRTs also employ more realistic graphics and visuals, which allow the system to simulate various environmental factors such as day, night, coastline, jungle, varying altitudes, parachute types and weather conditions. Finally, the system has a grading component that gives instructors the ability to measure student performance and provide post-training feedback. Overall, the system upgrades greatly enhance instructional realism, providing students with an improved learning experience.

**New Water Survival Training Facilities:** New water survival training facilities have been completed at NAS Norfolk, NAS Patuxent River, NAS Pensacola, and NAS Whidbey Island. The new facilities consist of classroom spaces and an indoor 33-m pool. The primary advantage of these new facilities is that the Navy can now house all of its water survival training devices in the same pool. This provides the opportunity to move away from individual device training and towards a scenario-based training format for water survival training. For example, a typical training scenario from ejection to rescue for an F/A-18 pilot would include: 1) Parachute Over Water Slide Trainer where he/she would practice parachute descent procedures and canopy avoidance; 2) Transition to the parachute drag trainer where he/she would practice releasing the canopy to avoid being dragged or submerged by a sinking canopy; 3) Retrieval and boarding of the lift raft, including use of the survival radio and other signaling devices; 4) Rescue simulation to include swimming over to the helicopter hoist trainer to be hoisted.

This approach allows training of water survival techniques in the context of realistic survival scenarios.

**Night Storm Scenario Training:** An extension of this scenario-based format for water survival training is the Night Storm Scenario training. The Night Storm Scenario is conducted in the dark and uses a fog machine, fire hoses and sound effects to simulate the sea state, rain, reduced visibility and noise associated with a storm at night. Students are taken through a scenario that involves using signaling equipment, managing injuries and a helicopter rescue under the worst-case scenario conditions of a severe storm at night. It has been a real eye-opener for students as they experience how difficult it can be to perform basic survival procedures under these challenging conditions. The Night Storm Scenario has received an overwhelmingly positive response from students.

**Reduced Oxygen Breathing Device:** A standard altitude chamber is simply a steel box with a vacuum pump attached. Air is pumped out to simulate reduced barometric pressure at altitude, thus producing hypoxia. The reduced oxygen breathing device (ROBD) uses a different concept called normobaric hypoxia. In this case nitrogen is injected into the breathing mixture to reduce the percentage of oxygen, not the pressure, in the inspired air. Recent research has shown that this type of hypoxia is not significantly different from altitude hypoxia, but with no risk of decompression sickness or barotraumas. The big advantage of the ROBD, however, is that it can be put in a flight simulator. The ROBD is a suitcase-sized unit. This allows instructors to train aviators to recognize the symptoms of hypoxia in the context of their normal crew duties. Aircraft specific hypoxia emergency procedures can be trained in the simulator using the ROBD. This represents a significant advancement when compared to standard altitude chamber training.

In February of 2004, the Navy trained its first aviator using the ROBD in lieu of the altitude chamber. An ROBD pilot curriculum is currently under evaluation, and thus far this new curriculum has received a positive response from fleet aviators. Concurrently, the Navy is working on the next generation ROBD, which promises to be a more robust, more mobile, and more accurate training device. If all goes well, ROBD training could be implemented fleet-wide by early 2005.

**Computer Based Training:** The Navy is in the process of developing Web-Based Training (WBT) modules for some of the refresher courses in survival training. Designed to be part of a modular concept of training, the WBT modules will interlock with ASTC-based training, the ROBD and simulator-based physiology (SIMPHYS). The R2/RP2 (Prop Refresher) curriculum has been selected for trial in a pilot program to evaluate the proof of concept. The Overview, Aviation Physiology, Stress and Sensory Physiology Briefs are slated for computer conversion. The basic con-

cept is that a student will contact the ASTC for a training quota and will be offered the WBT option. If the student wants it, they will be given a web address and password, and will then be on their own to complete the WBT prior to their scheduled completion date at the ASTC. Upon reporting to the ASTC, the student will have different choices (depending on facilities and availability) of what dynamic training they receive (ROBD/SIMPHYS, ROBD at the ASTC, or a traditional altitude chamber flight). Prior to the dynamic training, a physiologist will meet with the student, ask if there are any questions, and review any current mishaps that are applicable to the training. Aviation Life Support Systems, First Aid and Water Survival training would then progress traditionally.

**Simulator Physiology:** The SIMPHYS concept was piloted by the Navy in the late 1990s. SIMPHYS takes some of the training that is normally conducted in a classroom during survival training and brings it to the simulator. The SIMPHYS flight begins with a "pick your wingman" scenario in which the student chooses a wingman for the flight based on 72-hour histories, which are designed to point out several stress and human performance factors that could affect the wingman's performance during the upcoming flight. The flight is then briefed normally and begins with a day VFR flight to the ship. The flight includes varying terrains and sea states, conflicting air traffic, inadvertent IMC scenarios, in-flight emergencies, a nighttime formation flight on night vision goggles, cultural lighting and low light level conditions. During the flight, visual and vestibular illusions, human factors issues and sensory physiology concerns are discussed, demonstrated, and recovered from. With the introduction of the ROBD, a hypoxia scenario can be added. SIMPHYS will allow an aviator to complete a portion of their required survival training in the simulator with one-on-one instruction from an Aerospace Physiologist instead of the traditional classroom lectures at an ASTC.

**Modular Egress Training System (METS):** The METS is the newest version of the multi-place underwater egress trainer (helicopter dunker). The advantage of the METS is its modularity. By replacing panels or moving/removing seats, the dunker can be configured to represent a variety of aircraft, including helicopters and fixed wing aircraft. Equipment (i.e. life rafts, equipment panels) can be mounted inside of the METS. The METS provides a more versatile egress-training platform that will provide Navy and Marine Corps aviators/aircrew more realistic underwater egress training.

In addition to these initiatives, the Navy is undertaking a major review and revision of all of its Aviation Survival Training curricula this year to ensure that it is providing the fleet with the most up-to-date and relevant information. These revisions, along with all of the training initiatives discussed above, are de-

See *PHYSIOLOGY*, p. 567

signed to move the survival training program away from unrealistic, instructor-based training and towards realistic, student-centered, scenario-based training. Ultimately, these enhancements will benefit the war fighter by improving both in-flight performance and post-flight survivability.

ASAM, from p. 565.

changed its name to the Australasian Society of Aerospace Medicine (ASAM). On the other side of the Tasman Sea, the New Zealand Society still remains The Aviation Medical Society of Australia and New Zealand (New Zealand Inc.) as an entity in its own right.

As it stands today the Australasian Society of Aerospace Medicine has about 840 members from many different countries. Avmedia, which has now become the Journal of the Australasian Society of Aerospace Medicine, is produced twice a year, and for the first time in 2004 will evolve into a peer-reviewed publication. And in 2005 the Society is pleased to be able to host, for the first time, a combined meeting of the Australasian Society of Aerospace Medicine and the Asia Pacific Congress of Aerospace Medicine. This will be an exciting event indeed, brining together many experts in the field of Aerospace Medicine from around the region.

From its origin as a small Special Interest Group 54 years ago, the Australasian Society of Aerospace Medicine has developed into a large professional Society, which aims to promote the science of Aerospace Medicine, and support the vitally important aerospace industry in the region. ASAM will continue to have an important role, as it is clear that aerospace technology will continue to advance and challenge human physiology as we move further into the new century.

## This Month in Aerospace Medicine History-- June 2004

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

### Fifty Years Ago

*Establishment of the Bauer Lecture.* "In an unprecedented action, the Executive Council of the Aero Medical Association at the twenty-fifth anniversary meeting in Washington, D. C., established an annual lecture in honor of the society's founder, first president, and veteran editor of The Journal of Aviation Medicine, Dr. Louis H. Bauer... At the twenty-sixth annual meeting of the Aero Medical Association in Washington in 1955, and each year thereafter, the Louis Hopewell Bauer Lecture will be presented by a distinguished person who has achieved eminence in the aeronautical or medical sciences. The recipient of this signal honor will be chosen because of his scientific leadership and high attainments in his special field of endeavor, and for his significant contributions to mankind" (2).

*Pilots, psychology and retirement* (Los Angeles, CA). "Psychiatric problems of aging involve consideration of not only the chronologic age but also the mental and the physiologic age and particularly the emotional age. Together, the composite picture reflects the functional age of the individual and must be considered

in the framework of reference of the particular job that he is required to do. In our culture great emphasis is placed on youth and on the matter of staying 'young.' This is particularly a reflection of the emotional immaturity that is widespread in our society, one of the principal factors in such being the prevalence of maternal over-protection. Another factor is the high degree of technologic development in our civilization which the human nervous system has trouble in meeting, leading at times to regression to earlier levels of adaptation...

Management as well as the pilots has a large stake in providing a suitable transition for the older pilots to jobs requiring judgment, maturity, and experience but less active participation in arduous flying chores. A well-defined plan for retirement at a suitable age, flexibly determined in the individual case, is important for maintaining morale and good motivation in the active pilot group" (4).

*Endolymph and nausea* (University of Vienna, Vienna, Austria). "Coriolis-accelerations elicit typical vestibular nystagmus in human subjects as revealed by the electro-nystagmogram. In the experiments the Coriolis-accelerations were produced by bending or raising the head during a rotation with constant angular velocity (turning chair). By this, with respect to man, an objective evidence is furnished for the supposition that the Coriolis-acceleration produces an additional endolymph flow in the semi-circular canals. Consequently it becomes obvious that the sensations of tilting as well as the symptoms of nausea are caused by excitation of the semicircular canal system" (5).

### Twenty-five Years Ago

*Human-powered flight.* The first man to cross the English Channel in a human-powered aircraft was Bryan Allen, on June 12, 1979. He pedaled his way to the Kremmer Prize, flying the Gossamer Albatross from Folkestone, England, to Cap Gris-Nez, France, in 2 hours, 55 minutes (7).

*Stress and submariners* (Naval Submarine Medical Research Laboratory, Groton, CT). "The case histories of 261 submariners disqualified psychiatrically for further submarine duty revealed that the major symptomatology was emotional in nature, with character pathology second in frequency. The latter pathology resulted in disqualification much earlier than the former, a fact indicative of effective neurotic defenses. The submariners who show these slow-developing neurotic symptoms appear to be reacting maladaptively to the stresses of the 60-d submarine patrols. Some etiological factors appear to be related to the role a man occupies within the crew, to the nature of the mission itself and, perhaps, to the length of the submarine patrols" (6).

*Hypothermia and human performance* (RAF Institute of Aviation Medicine, Farnborough, England). "Performance of three tests was studied during induced cycles of deep body temperature between limits of 37.8°C and 38.9°C. During heating phases skin temperature was 38.8°C and during cooling it was 36.1°C. A verbal transformation test, performed at the midpoint of each temperature cycle, showed no significant effect from the large differences in skin temperature and subjective comfort between heating and cooling. The test was considered to be insufficiently difficult. A pursuit rotor test and a colour/word interference test, performed at the end of the heating and cooling phases, showed mean decrements in performance of

15% and 4%, respectively. These results are related to the measured levels of deep body and skin temperature and to subjective assessments of comfort" (1).

*Heavy clothing and evaporation* (Centre de Recherches du Service de Santé des Armées, Lyon, France). "The purpose of the study is to define a method of evaluation of physiological strain resulting from protective garments worn in warm conditions by the armored vehicle crew. A technique is developed evaluating evaporative transfer through clothing by continuous weighting of the active man (accuracy  $\pm 3/g$ ). An index is defined (Iw) as the ratio of steady-state evaporative rate in clothed conditions to steady-state evaporation of nude subject in the same conditions of work and heat stress. The Iw index is significantly related to physiological strain determined by increased body heat content and reduced tolerance time. The results are compared to other previous findings concerning evaporative transfer through clothing and physiological strain indexes. The technique shows that evaporation through heavy clothing is not negligible. It is suggested that usual static measurements using physical models underestimate the evaporative heat transfer through clothing layers" (3).

### REFERENCES

1. Allan JR, Gibson TM, Green RG. Effect of induced cyclic changes of deep body temperature on task performance. *Aviat Space Environ Med* 1979; 50(6):585-9.
2. Benford RJ. Editorial comment: The Louis Hopewell Bauer Lecture. *J Aviat Med* 1954; 25(3):203-4.
3. Henane R, Bittel J, Viret R, Morino S. Thermal strain from protective clothing of an armored vehicle crew in warm conditions. *Aviat Space Environ Med* 1979; 50(6):599-603.
4. Moriarty JD. Psychiatric problems in aging, with reference to aero medicine. *J Aviat Med* 1954; 25(3):221-6.
5. Schubert G. Coriolis-nystagmus. *J Aviat Med* 1954; 25(3):257-9.
6. Weybrew BB, Noddin EM. Psychiatric aspects of adaptation to long submarine mission. *Aviat Space Environ Med* 1979; 50(6):575-80.
7. www.infoplease.com/ipa/A0004537.html

## Call for Papers

### July 22-27, 2005, Las Vegas, NV. 11th International Conference on Human-Computer Interaction

The 11th International Conference on Human-Computer Interaction (HCI2005) is requesting submissions for the upcoming meeting. It is being held under the auspices of 7 distinguished international boards of 171 members from 25 countries. The conference objective is to provide an international forum for the dissemination and exchange of scientific information on theoretical, generic, and applied areas of HCI, usability, internationalization, virtual reality, universal access, and cognitive ergonomics. There will be six modes of communication: plenary presentation, parallel sessions, demonstrations and poster sessions, tutorials exhibitions and meeting of special interest groups. All submitted abstracts will be peer-reviewed by three independent referees.

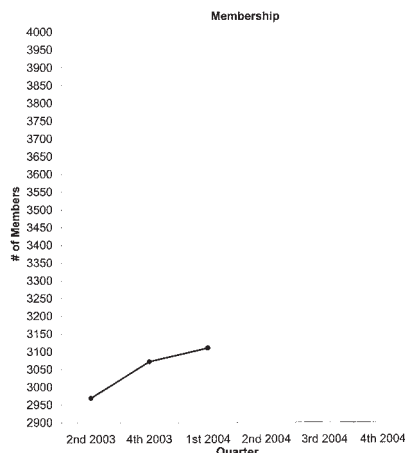
Deadline for Papers is October 1, 2004; deadline for posters/demonstrations (for late-breaking scientific news) is April 1, 2005.

Further info: [hci2005.engr.wisc.edu](http://hci2005.engr.wisc.edu).

## I WANT YOU

...to get one new member in 2004. AsMA membership has been fairly level for the past several years, but we can do better. If each of us gets just one member in 2004, this will double our active rolls. This is achievable. Either get a new member among your colleagues or consider buying a membership as a gift for a student or colleague. Our membership will be published in this column quarterly so we can all track our progress. Our start line as of June 2003 is 2,969. As of March 2004 we stood at 3,110. As an interim target, let's get 4,000 members by 2005!

**Russell B. Rayman, M.D.**  
Executive Director



### AVIATION MEDICINE COURSES AT OTAGO UNIVERSITY, NEW ZEALAND.

Enrolments are being accepted for the following 2004 courses:

**Postgraduate Certificate in Aeromedical  
Evacuation (1 year part time)**

**Postgraduate Certificate in Civil Aviation Medicine  
(1 year part time)**

**Postgraduate Diploma in Aviation Medicine (3 yrs P/T)  
Masters in Health Sciences (endorsed in Aviation  
Medicine) and PhD Degrees**

All courses are distance taught, internationally recognised and part time, and can be undertaken in any country in the world.

For more information, contact us:

Visit our web site at [www.otago.ac.nz/aviation\\_medicine](http://www.otago.ac.nz/aviation_medicine)

The Programme Manager Maureen Gordon on +64-4-

3855590 or email via [deptmed@wnmeds.ac.nz](mailto:deptmed@wnmeds.ac.nz)

The Academic Programme Coordinator, Dr Robin

Griffiths, on +64-21-620148 or email via

[rgriffiths@wnmeds.ac.nz](mailto:rgriffiths@wnmeds.ac.nz) or [rgriffith@attglobal.net](mailto:rgriffith@attglobal.net)

### 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 Home Office and at the Annual Meeting.

## FAA Seminar Schedule

June 21-25

July 9-11

August 6-8

September 13-17

November 5-7

November 15-19

Oklahoma City, OK

Denver, CO

McLean, VA

Oklahoma City, OK

Tampa/Ft. Lauderdale, FL

Oklahoma City, OK

Basic

Aviation Physiology/HF

Ophth/Otolaryn/Endocrin

Basic

Neuro/Psychol/Phys

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.*

### 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

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

### 2004-05 MEETINGS CALENDAR

**June 21-23, 2004, Baltimore, MD.** The 2004 Defense Medical & Procurement Conference Developing Business. Building Alliances, sponsored by the U.S. Army Medical Research and Materiel Command at Ft. Detrick. Info: 703-807-2027.

**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: [alysncalder@doctors.org.uk](mailto:alysncalder@doctors.org.uk).

**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](mailto: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](http://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](mailto:jodie@icebergevents.com.au).

**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](mailto:cpalomeque@grupodestinos.com.mx); [alaguna@grupodestinos.com.mx](mailto:alaguna@grupodestinos.com.mx).

**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](http://hci2005.engr.wisc.edu)

**September 15-18, 2005, Gold Coast, Queensland, Australia.** Conjoint Meeting of the Australasian Society of Aerospace Medicine (ASAM) and the Asia Pacific Federation of Aerospace Medical Associations (APFAMA). This meeting represents the Annual Scientific Meeting of ASAM, together with the 5th Asia Pacific Congress of Aerospace Medicine (AP-CASM). Contact: Anne Fleming, ASAM Secretariat, +61 3 98991686. [fleminga@bigpond.net.au](mailto:fleminga@bigpond.net.au); [www.asam.org.au](http://www.asam.org.au).

### Point your mouse to the AsMA home page at:

**[www.asma.org](http://www.asma.org)**  
It's frequently updated with  
important, new  
information about your  
Association. This News section is now online, too!

### July Feature: AsMA Award winners

### Join the Aerospace Nurses Society!

Dedicated to the advancement of aerospace nursing....

Dues are just \$10. Membership is open to allied health professionals for \$5 a year.

For further information, contact:

Diane Fletcher, ANS Treasurer

3104 Stonewood Drive

Ocean Springs, MS 39564

(228) 818-0281

[gregordi@cableone.net](mailto:gregordi@cableone.net)

## A Message from Harriet

I attended my first AsMA meeting in 1963, but I didn't join the Wing at that time because I didn't know it existed. Besides, John and I had brought our baby daughter with us and we were busy with her. We missed the 1964 meeting because our second daughter was a newborn and I didn't feel up to traveling. By the time the next meeting rolled around, I had fortunately learned about the Wing, and I eagerly joined in.

When I tell people that I'm a member of the Wing of AsMA they look puzzled. Why do I belong to an organization that meets only once a year?

My Wing membership links me with the aviation community, a community that I value and care about deeply. Because I'm a Wing member I have a better understanding of such issues as aviation safety, crew rotations, and the necessity for medical kits on aircraft.

Wing membership has also given me international friends. I have friends in Japan, England, Australia, Israel, Canada, France, and other far-away places. These countries used to be colorful images on a map and now they represent global friendships. When I see my Wing friends our conversation picks up where it left off. We talk about aviation medicine, our spouses' careers, our own careers, hobbies, children and grandchildren, health challenges, international cuisine, and more.

The Wing is a non-profit social and educational organization, according to our bylaws. It has two purposes: To support the specialty of aviation, aerospace, and environmental medicine and to promote increased sociability among the members of AsMA and their families. Over the years I have benefited from these purposes and I look forward to each Wing meeting.

In this age of international terrorism I value my Wing membership even more. Wing members stay in touch with each other with cards, phone calls, and e-mail. We support each other in good time, challenging times, and the times in between. I'm glad that I belong to the Wing and am honored to be your new President.

## Finding the Words – Harriet Hodgson

As our new President, Harriet Hodgson brings to her role a wealth of Wing and AsMA experience. A long time member, she has served in many positions within the Wing – Chair of Hospitality, Publicity, Arrangements Committees, Luncheon Co-Chair, as well as Tours and Favors Chair. She is also very active in the Minnesota Medical Association Alliance serving as President in 2004, and has been honored by numerous health care organizations in Minnesota for her work in helping to solve public health problems. In 2003 she was cited in *Who's Who of American Women*, and also received the Olmsted County Minnesota, Lyle Weed, M.D., Healthy Community Award "in recognition for leadership in helping solve

public health problems through work and service."

A renowned health and wellness writer, and member of the Association of Health Care Journalists, Harriet has had numerous books published, has appeared on dozens of television programs including CNN, and has been featured on MPR, CBS, and WCCO on radio. Harriet titled one of her books, "Alzheimer's: Finding the Words." It is a wonderful book about how to deal with a loved one afflicted with the disease, and is filled with her own recollections of her experiences with her mother. To those of you who may be facing similar circumstances, I highly recommend this book. Harriet is a wonder at "finding the words," and I know that she will keep us well informed and on track in our planning for our next meeting to be held in Kansas City.

Currently, Harriet writes for *Freelance Health/Wellness*. She is also the Editor/Writer for the *Alliance E-News*, the monthly newsletter of the Minnesota Medical Association Alliance, as well as Contributing Writer for the *American Medical Association Alliance Communication Guide*, the *AMA Alliance Today*, and *Minnesota Medicine*.

As if these professional activities did not keep Harriet busy enough, she also finds time to indulge in her favorite pastimes – cooking and decorating. I know from personal experience that Harriet is a most accomplished cook, and with her background in art education she is always looking for new and creative projects. Says Harriet, "I have become quite addicted to HGTV – three years ago I was making mosaic flowerpots from chipped antique plates. I have also taken up knitting again. My mother taught me to knit when I was in high school and I did a lot of it when I was first married, even knitting a coat for my daughter Helen, when she was little. I am now knitting a sweater. I thought that my skills might be gone after so long an absence, but I sat on the couch, closed my eyes, and asked myself, 'How did I used to cast on.' Presto – those tactile skills returned and my stitches are so even they almost look machine-made."

Harriet and her husband, John are also avid travelers. Says Harriet, "We love to travel and I have made a list of places we would love to see. John wants to go to Iceland (just because he's curious), and I want to tour British canals. We'd also like to see more of the good old USA," which is most fortunate for the Wing since we all look forward to seeing Harriet in Kansas City.



HARRIET AND JOHN HODGSON

## What the Wing Means to Me

I asked several of our international members, who travel such great distances to join us for our annual meetings, just what does the Wing mean to them. Here is a sampling of their answers:

"I stumbled into the Wing hospitality room quite by accident at my first AsMA meeting as a new bride in 1979. It was my first time in Washington, too. I'll never forget the enthusiastic welcome from so many soon-to-be great friends. The Wing tours opened up the city for me and allowed me to experience some places that Dave has yet to visit. The Wing brought me friendship from all over the world. The conventions are the one chance a year that I get to see my husband in action, and to experience and support his work. There is no organization more enriching. The biggest thrill was to repay the Wing as Arrangements/Tours Chair with Debbie Anzalone as President when AsMA came to Toronto."

**Els Salisbury, Ottawa, Canada**

"I am a Wing novice having only attended one conference before Alaska which was in Montreal two years ago. I immediately felt part of a happy family and soon forgot that I was a new girl. I remember being one of Lady Mary's "little helpers" (or was it Queen Mary!) in handing out the favors. What a great ice breaker and an opportunity to meet so many new friends. I was only sorry that work and family commitments prevented me from renewing friendships in San Antonio last year. By the time you read this, the Alaska meeting will be over. I hope that I will have had the chance to make up for lost time, and the opportunity to extend the same hand of friendship which was presented to me."

**Sue Pike, United Kingdom**

"The Wing – My best friends for over 40 years who became as family for better or worse. The Wing – The name we designed together for an association which is a member of big bird flying higher and higher. Love to all."

**Eliakima (Eka) Glazer, Israel**

"Since almost all my life I have been exposed to organizations at the international level, which I enjoy very much, I look forward to renewing my friendships with people from the four corners of the world during our encounters. Interestingly, the first such global endeavor was the time spent in the U.S. (Ohio and New Mexico)."

**Olga Finkelstein, Argentina and Montreal, Canada**

"To me, the Wing is a wonderful and very friendly way to meet charming ladies, and to enter the American culture. Without them, I would not have enjoyed my trips to the AsMA meetings as much."

**Florence Coriat, France**

"The Wing has always been about friends for me. After attending fifteen Wing meetings as an international member I now have many: Worldwide  
 Interesting and  
 Noteworthy friends who are worth their weight in  
 Gold."

**Judith Donaldson, Australia**

## 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**

**Richard A. Scheuring, D.O.**, formerly in an Aerospace Medicine residency at Wright State University, Dayton, OH, now holds the position of Clinical Systems Physician at Wyle Life Sciences and Systems, UTMB, JSC-NASA, Houston, TX. He recently graduated from Wright State University with an M.S. in Aerospace Medicine.

**Col. Michael W. Lischak, USAF, MC, CFS**, recently retired from the USAF. He was serving as Chief of Aerospace and Dental, PACAF, and now is the Medical Director, Corporate WORX, Columbia-St. Mary's, West Allis, WI. He is a Certified Physician Executive (CPE) of the American College of Physician Executives.

**David Emonson, M.B.B.S.**, has recently resigned from the Australia's Civil Aviation Safety Authority and returned to full time duty with the Royal Australian Air Force Specialist Reserve. He has taken up the appointment of Associate Professor of Military and Veterans' Health and Chief of Operations within the newly established Centre for Military and Veterans' Health located at the Queensland University Medical School, Brisbane, Australia. The mission of CMVH is to improve the quality of health care of serving Australian Defence Force Personnel and Veterans through education, research and strategic think-tank.

## New Members

Baraniak, Sean M., ENS, USN, Miami, FL  
 Hoehne, Terry G., Col., USAF, MC,  
 Scott AFB, IL  
 Kapur, Hari S., Lt.Col., USAFR, MC,  
 Montgomery, AL  
 Kotwal, Russ S., MAJ, MC, USA,  
 Galveston, TX  
 Mihata, Ryan G. K., 2Lt., USAF, MSC,  
 Silver Spring, MD  
 Morrison, Dennis P., Ph.D., Bloomington, IN  
 Patton, Robyn T. K., Maj., USAF, MC, FS,  
 Avondale, AZ  
 Peterson, William S., LT, MC, USNR, FS,  
 Ridgecrest, CA  
 Serrado, Jorge M., Ph.D., Boston, MA

## International New Members

Banasarnprasit, Sethanai, M.D., Bangkok,  
 Thailand  
 Bemden, Stephane Vanden, BAF, MC, FS,  
 Vlaams-Brabant, Belgium  
 Chahine, Carol J., DMD, Montreal, Canada  
 Chang, Wei-Kang, Capt., ROCAF,  
 Taipei, Taiwan  
 Choi, Yun Young, B.S., Seoul, Korea  
 Cridge, Christine E. L., M.B., B.S.,  
 Gosport, Hants., United Kingdom  
 Dias, Carlos, Maj. Gen., PAF, MC,  
 Portela, Portugal  
 Lim, Dale, MBBS, Singapore, Singapore  
 Siedenburgh, Jorg, M.D., Hoofddorp,  
 The Netherlands  
 Tolton, Rani G., M.D., Brockville,  
 ON, Canada

## In Memoriam Jerome Lederer

We have just learned that Jerome F. "Jerry" Lederer died in Laguna Hills, CA, of congestive heart failure. He was an aerospace risk-management specialist and former director of safety for the U.S. National Aeronautics and Space Administration (NASA). He was an associate of many aerospace pioneers such as Amelia Earhart, Jimmy Doolittle, Charles Lindbergh, Igor Sikorsky, Wernher von Braun, and Orville Wright.

Born in 1902 in New York, NY, Lederer graduated from the New York University Guggenheim School of Aeronautics with a B.S. in mechanical engineering with aeronautical options in 1924 and earned his mechanical engineering degree in 1925. From 1926-1927, he worked as the only aeronautical engineer for the U.S. Mail Service. During this period, he worked on redesigning the de Havilland 4 bi-planes to prevent the fires that followed crashes. While engaged in doing this, he published his first aviation safety bulletin and became friends with Charles Lindbergh. The day before Lindbergh's historic nonstop flight across the Atlantic, Lederer inspected Lindbergh's plane, The Spirit of St. Louis, at Roosevelt Field, NY.

In 1927, Lederer became a consultant to airplane manufacturers and an insurer. In 1929, he was employed as chief engineer for the company that later became Aero Insurance Underwriters, one of the world's largest aviation insurance companies at the time. Until 1940, he evaluated aviation risks, reduced losses through safety audits and educational programs, and disseminated aviation safety information through newsletters.

From 1940 to 1942, he served as director of the Civil Aeronautics Board Safety Bureau, the predecessor of the U.S. National Transportation Safety Board, and was responsible for safety rulemaking and accident investigation. While in that post, he put through a regulation requiring flight data recorders in all transport airplanes. In 1942, he was appointed director of training and head of the administrative section of the Airlines War Training Institute, and from 1944-1945, he was operations analyst for the Second Air Force, Air Transport Command, U.S. Army Air Forces. He was appointed to the U.S. Strategic Bombing Survey in Europe late in World War II.

He organized the Flight Safety Foundation after an accident in 1946, in which a fire erupted in the fuselage insulation of a Lockheed Constellation near Reading, PA, that killed five crewmembers and injured one. His goal was to disseminate safety information to all, regardless of commercial interests or national borders. In 1948, he also organized the first civilian aircraft accident investigation course conducted by a private organization. In 1950, he served concurrently as director of the Cornell-Guggenheim Aviation Safety Center, an organization dedicated to improving accident survivability in planes and helicopters.

During his tenure at the Flight Safety Foundation, Lederer was a member of President Dwight D. Eisenhower's Aviation Facilities Investigation Group, which organized the agency now known as the Federal Aviation Administration and modernized air traffic control. He was also a member of the International Civil Aviation Organization's panel on integrating jet aircraft into the world's air transportation system. He served as an adjunct professor at the Institute of Safety and Systems Management, University of Southern California; as a member of the Advisory Council for the Institute of Nuclear Power Operations; as president emeritus of the Flight Safety Foundation; as president of Air Mail Pioneers; and was a Fellow and long-time member of the Aerospace Medical Association.

Lederer wrote the book "Safety in the Operations of Air Transport," published hundreds of papers and articles, and presented numerous lectures and speeches. He received more than 100 awards, including: the 1999 Edward Warner Award from the ICAO Council; the 2003 Cliff Henderson Award for Achievement from the National Aeronautics Association; the NASA Exceptional Services Medal; the FAA Distinguished Service Medal; the Daniel Guggenheim Medal; the Amelia Earhart Medal; the Von Baumhauer Medal of the Royal Dutch Aeronautical Society; the Airline Medical Directors Award; the K. E. Tsiolkovsky Medal from the Soviet Federation of Cosmonauts; and the Aerospace Life Achievement Award of the American Institute of Aeronautics and Astronautics. He was selected as a Laurel Legend for 2002 by Aviation Week & Space Technology magazine and received an honorary doctorate in science from Embry-Riddle Aeronautical University.

## Home Office Information

Phone: (703)739-2240  
 Fax: (703)739-9652 or  
 (703)739-9875

[www.asma.org](http://www.asma.org)

Russell Rayman, Exec. Dir.

Ext. 103; rrayman@asma.org

Jackie Carter, Admin. Assistant

Ext. 104; jcarter@asma.org

## Membership Department

Gloria Carter, Membership Dir.

Ext. 106; gcarter@asma.org

Sheryl Kildall, Assist. Membership

Ext. 107; skildall@asma.org

## Journal Department

Pamela Day, Managing Editor

Ext. 101; pday@asma.org

Rachel Trigg, Editorial Assistant

Ext. 102; rtrigg@asma.org

## INDEX TO ADVERTISERS

Aerospace Medical Association

Information for Authors . . . Cover III

ETC . . . . . Cover IV

52nd ICASM Meeting . . . . . ii

Otago University . . . . . 568