

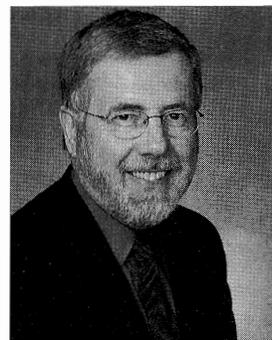
# President's Page

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I completed this column shortly after the conclusion of the 74th Annual Scientific Meeting of the Association in San Antonio. As is typical, we had an opportunity to meet with our professional colleagues, to see a number of the senior leaders in aerospace medicine, and to be introduced to new members and first time attendees. Despite all of the turmoil in the world the last few months and the budgetary constraints experienced by many members, some 1,500 individuals attended the meeting. Congratulations to Dr. Claude Thibeault, the home office, and Andy Bellenkes, chair of the scientific program committee, committee members, members of the constituent organizations, presenters, exhibitors, and corporate sponsors for an excellent meeting. In keeping with the theme of the meeting - Celebrating One Hundred Years of Flight and Aerospace Medical Support - we had an opportunity to attend sessions that outlined historical aerospace events. The 49th Annual Louis H. Bauer Lecture, provided by Dr. Tom Crouch, Senior Curator, Division of Aeronautics, National Air and Space Museum, provided numerous insights into what led to the Wright brothers' first successful flight. One of the points he made during his presentation was that their fourth and longest flight of the day, 852 feet in 59 seconds, pales in comparison with NASA's Pioneer space exploration vehicle that is nearing the edge of the solar system and traveling some 470 miles in 59 seconds. This is a rather amazing accomplishment in the first 100 years of flight.

Andy Bellenkes (Chair), Dr. Carol Manning (Deputy chair), Dr. John Crowley (Panels chair), and Dr. Jeffrey Myers (Posters chair), provided a well-rounded scientific program that reflected the wide-spread interests of the association's membership. I would like to thank each of them, as well as the members of the scientific program committee and each of the presenters who contributed their time and effort to make the meeting a success. Attendees had an opportunity to understand issues associated with space medicine, aeromedical standards and certification, aviation safety, aeromedical evacuation, pharmacological and non-pharmacological fatigue countermeasures for the DoD, accident investigation, human factors in homeland defense, the physiology and safety of amusement park rides and racing, and a number of other topics. One of the final components of the program was Dr. Story Musgrave's [NASA Astronaut (retired)] excellent overview of events associated with his astronaut experiences during the 38th Annual Harry G. Armstrong Lecture.

There are many other members of the association who contributed to the success of the meeting including the Chair (Dr. Romie Richardson) and Deputy Chair (Dr. Joseph Anderson) of the Arrangements committee. Dr. James R. DeVoll (Chair) and members of the Registration committee provided excellent support for attendees. What you might not know is that while the home office



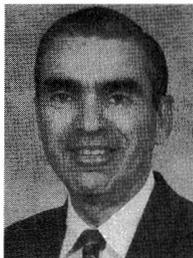
**David J. Schroeder, Ph.D.**

prepares the registration packets for the advanced registrants, members of the registration committee are responsible for their prompt distribution as well as gathering information and preparing name tags for the on-site registrants. Mr. Walt Galanty and his team from Accurate Image Marketing, Inc. completed the advance and on-site arrangements for the numerous luncheons and committee meetings throughout the meeting. While there are always glitches in a convention of our size, the problems were minimal and easily resolved. I think that this was one of the smoother and more successful meetings. Please take a few minutes to send an e-mail to the individuals that you feel contributed to the overall success of the meeting.

The Executive Committee and Council agreed during their meeting on Sunday that we would move forward to having the journal available on-line. Additional details should be available later this year. Dr. Sally Nunneley, Ms. Sarah Pierce-Rubio, Ms. Pam Day, and Ms. Heather Crain are to be commended for their work on the journal. During this past year we transitioned to the electronic submission and review of journal articles. At present, nearly 100% of the manuscripts in the review process are being handled electronically. While the transition involved a significant initial investment for the Association, we are already seeing dividends in reduced costs associated with printing and mailing of manuscripts, as well as an overall reduction in the time required to review, revise, and approve the manuscripts. During the meeting of the editorial board, Dr. Nunneley indicated that the average time from submission of an article to publication is around 6-7 months. This is significantly shorter than a number of other scientific journals. Even more importantly, a majority of this time is associated with author's revising their manuscripts. Given the short turn-around time, more members need to give first consideration to publishing their articles in our journal.

The 2004 meeting represents a landmark date - the 75th meeting of our Association. The first meeting of the  
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### Executive Director's Column



Rayman

### Severe Acute Respiratory Syndrome

At the time of this writing, Severe Acute Respiratory Syndrome (SARS) is headline news with approximately 4000 cases and 300 deaths reported worldwide. It is believed to be caused by a corona virus with nonspecific symptoms similar to the flu. Individuals with temperature greater than 100.4°F, cough, shortness of breath, difficulty breathing or hypoxia are suspected cases. There must also be travel within 10 days to an area with documented or suspected community transmission or close contact within 10 days of onset of symptoms with a person known to be a suspected case of SARS.

Practitioners of aerospace medicine have a particular interest in this growing epidemic because air travel can serve as a conduit for transmission. Although it is highly doubtful that the virus can be transmitted through aircraft ventilation systems due to the use of

highly efficient air filters, transmission is believed to be caused by person-to-person contact or by contact with contaminated objects, which can occur just about anywhere including the interior of an aircraft. A recent statement by the Atlanta based Centers for Disease Control and Prevention (CDC) reinforced claims that the overall efficiency of in-use filters is adequate. At this time, the World Health Organization (WHO), the CDC, and the various airline regulatory authorities as well as the airlines are studying the epidemiology of this illness in order to implement rational procedures to minimize or prevent the disease from spreading.

Because this illness is so recent and so little is known about its epidemiology, the above agencies are coming forward with recommendations based upon what is known. Undoubtedly, there will be changes as more information is accumulated. We are now seeing various strategies being implemented around the world in order to contain this disease. Among them are health and travel advisories, passenger information health news notices, advice on travel kit contents including surgical masks and disposable gloves, and isolation and quarantine procedures. There is universal agreement that frequent hand washing is a critical means to contain disease transmission. And finally, the air medical transport community is publishing guidelines for safe patient movement. There is extensive SARS information, frequently updated, at the CDC (<http://www.cdc.gov>) and WHO (<http://www.who.int/cn>) websites.

The first reported case of SARS was in

early February, and while much has been learned about the disease, we still do not know if and when this epidemic will wane. Furthermore, scientists are continuing to search for treatment and a vaccine. Undoubtedly, new information will be forthcoming in the next several months that will prompt changes in strategy. We in the aerospace medicine community will continue to participate in this battle.

### New Fellows Selected for 2003

The following Fellows were selected during the 74th AsMA Annual Scientific Meeting:

Anthony J. Batchelor, M.D.  
Fred Buick, Ph.D.  
Fabien C. Coriat, M.D.  
Joseph P. Dervay, M.D.  
Donald F. Doerr, BSEE  
Mark A. Ediger, M.D.  
Mitchell A. Garber, M.D.  
Anatoly Grigoriev, M.D.  
Ronald W. Hansrote, M.D.  
Michael R. Hawkins, M.D.  
Richard A. Jensen, M.D.  
Thomas E. Nesthus, Ph.D.  
Richard E. Oswald, D.O.  
Michael R. Valdez, M.D.  
Daniel L. Van Syoc, M.D.  
Alex M. Wolbrink, M.D.

#### Honorary Fellows:

Laurel B. S. Clark, M.D. (posthumously)  
David M. Brown, M.D. (posthumously)

### 2003-2004 Committee Chairs

#### Committee:

Aerospace Human Factors  
Air Transport Medicine  
Aviation Safety  
Awards  
By-Laws  
Communications  
Corporate & Sustaining  
Education & Training  
Finance  
History & Archives  
International Activities  
Membership Co-Chair  
Membership Co-Chair  
Nominating  
Resolutions  
Science & Technology  
Fellows  
Associate Fellows Group  
Scientific Program  
Deputy Program Chair  
Arrangements

#### Chair:

Thomas E. Nesthus, Ph.D.  
Michael Bagshaw, M.B.,Ch.B.  
Charles A. DeJohn, D.O.,M.P.H.  
Verba Moore  
M. Kirk Nailling  
Scott Shappell  
Marian B. Sides, Ph.D.  
Daniel L. VanSyoc, M.D.  
Robert W. Weien, M.D.  
Stanley R. Mohler, M.D.  
Pooshan Navathe M.D.  
Andy Bellenkes  
Warren Silberman, M.D.  
Roger F. Landry, M.D.  
Tom Faulkner, M.D.  
Len Goodman, Ph.D.  
Daniel B. Lestage  
Susan Northrup, M.D.  
Carol A. Manning, Ph.D.  
Scott Shappell  
Robert Riggs, M.D.

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# 2003 Award Winners of the Aerospace Medical Association

During the Honors Night at the 74th Annual Scientific Meeting of the Aerospace Medical Association, 14 awards for outstanding contributions in aviation and space medicine were presented. The 2003 Annual Meeting was held May 5-8 at the Henry B. Gonzalez Convention Center, San Antonio, TX.

The presentations were made by Claude Thibeault, M.D., 2002-2003 president of the Aerospace Medical Association. The winners were recommended by the Awards Committee, chaired by Leroy P. Gross, M.D., and approved by the Executive Committee of the Aerospace Medical Association.



## BOOTHBY-EDWARDS AWARD

**J. Richard Hickman, M.D.**

*Established in memory of Walter M. Boothby, M.D., pioneer aviation medicine researcher, and Howard K. Edwards, M.D., clinical practitioner of aviation medicine, this award is presented annually for outstanding research and/or clinical practice directed at the promotion of health and prevention of disease in professional airline pilots. (The separate Boothby and Edwards Awards were given annually 1961-73, and then alternately until 1985.) Sponsored by Harvey W. Watt and Company.*

J. Richard Hickman, M.D., is the 2003 recipient of the Boothby-Edwards Award, which is given annually for outstanding research and/or clinical practice directed at the promotion of health and prevention of disease in professional airline pilots. The award was established in memory of Howard K. Edwards, M.D., who was clinical practitioner of aviation medicine and Walter M. Boothby, M.D., who was a Mayo Clinic physician (1918-1949) dedicated to improving the health of aviators. Dr. Hickman is a modern-day Mayo Clinic physician who has also dedicated his life to the health and safety of professional aviators from both a research and clinical perspective.

As the current chair of the Division of Preventive and Occupational Medicine at Mayo Clinic, a Senior Aviation Medical Examiner, and board-certified physician in preventive/aerospace medicine, cardiology, and internal medicine, Dr. Hickman has been central to the success of Mayo Clinics's aerospace program that now sees more than 500 pilots annually, one-third of which are complex medical cases requiring special issuance authorization to be flight eligible.

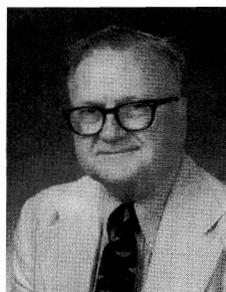
Dr. Hickman received his A.B. from West Virginia University in 1965 and his M.D. from the Medical College of Virginia, Virginia Commonwealth University in 1968. He then completed an internship and a residency in internal medicine at the Medical College of Virginia. In 1974, he earned an M.P.H. from Johns Hopkins University where he was recognized as a Distinguished Graduate. After two years at the USAF School of Aerospace Medicine, he completed a fellowship in cardiovascular disease at the University of Alabama.

Serving as chief of the Clinical Sciences Division at the USAF School of Aerospace Medicine at Brooks AFB from 1978 to 1981, Dr. Hickman pioneered the application of long-term cofactor and evidence-based research for deriving objective physical outcomes on which

many current flight certification standards are now based. This long-term epidemiological model using Bayesian strategies for screening asymptomatic pilots and astronauts has since been applied to flight standards for a number of NATO projects and other civilian aerospace purposes.

Dr. Hickman served as lead author for two landmark NATO Working Group manuscripts analyzing the cardiovascular effects of long-term repetitive exposure to sustained high +Gz acceleration, and also collaborated on many epidemiological research studies regarding aircrew selection and retention standards for the USAF, NASA, the Veteran's Administration, and NATO. He has authored more than 50 peer-reviewed manuscripts and contributed repeatedly to the world's leading aerospace medicine texts.

Throughout his career, Dr. Hickman has been recipient of many awards, including the Aerospace Medical Association's Julian C. Ward Memorial Award (1978) for outstanding resident in aerospace medicine and the Theodore C. Lyster Award (1987) for achievement in the field of aerospace medicine. He has also received the Malcolm C. Grow Flight Surgeon of the Year Award (1970), Texas Air Force Physician of the Year (1986), and the NATO Scientific Achievement Award (1990). He has mentored countless trainees who hold sentinel positions in the field of aerospace medicine and continues to serve as a tireless advocate for pilots throughout the world.



## LOUIS H. BAUER FOUNDERS AWARD

**Spurgeon H. Neel, Jr., M.D.**

*This award was established to honor Louis H. Bauer, M.D., founder of the Aerospace Medical Association. It is given annually for the most significant contribution in aerospace medicine. Sponsored the Jefferson C. Davis Wound Care and Hyperbaric Medicine Center.*

MG Spurgeon H. Neel, Jr., USA(Ret) is the Aerospace Medical Association's 2003 recipient of the Louis H. Bauer Award in recognition of his lifetime of outstanding contributions to the field of aerospace medicine. MG Spurgeon Neel has been a leader in aviation medicine for nearly 50 years, since becoming the U.S. Army's first Aviation<sup>®</sup>Medicine Specialist. It

*See NEEL, p. 792*

NEEL, from p. 791

was his foresight in envisioning the need for special research in aviation medicine that was responsible for the establishment of the U.S. Army Aeromedical Research Laboratory at Fort Rucker, AL. He developed the principles of rotary wing aeromedical evacuation, and was the driving force behind Army Aviation Medicine through Vietnam. He went on to mentor a new generation of Aerospace Medicine Specialists as a professor in the Master of Public Health Program at the University of Texas, where he is now Professor Emeritus in Occupational and Aerospace Medicine. Many of his former students have risen to leadership positions in the military and in aerospace medicine.

MG Neel received his undergraduate degree from Memphis State University in 1939; his M.D. from the University of Tennessee in 1942; his M.P.H. from Harvard School of Public Health in 1958; and an MSBA from George Washington University in 1965. In 1943, after completing his internship at the Methodist Hospital in Memphis, TN, Neel entered on active duty with the Army Medical Corps.

In 1954, he became the the Army's first Aviation Medical Officer, and in 1955 he served on the Dept. of the Army board which conducted a design competition to select a new air ambulance which ultimately became the ubiquitous UH1 (Huey).

MG Neel was later a pioneer in the development of principles of aeromedical evacuation of battlefield casualties. He wrote the policies, procedures, and organizational structure which became the foundation of the rotary wing aeromedical evacuation systems which were so highly successful in Vietnam and remain in use to this day.

In 1956 he established the Aviation Branch with the Office of the Surgeon General, and became its first chief. He later designed the Aviation Medical Officer Badge and was the first recipient. He continued to be the driving force in Army Aviation Medicine through his rise in rank to Major General and served as Deputy Surgeon General of the Army, 1969-73. His final assignment was Commanding General of Health Service Command, 1973-77.

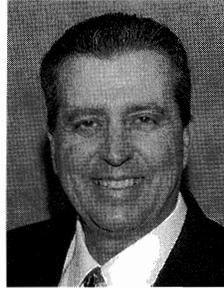
A former President of AsMA from 1972-73, he remains active in the association to this day. He attends most meetings and was the Awards chair in the mid 1990's. MG Neel received the AsMA's 1977 Theodore C. Lyster Award. The U.S. Army Aviation Medicine Association named their Army Flight Surgeon of the Year award for him.

He is a Fellow of the American College of Physicians, American College of Preventive Medicine, and the Royal Society of Health (London), and a member American Medical Association, International Academy of Aviation and Space Medicine. A member of Association of Military Surgeons of the U.S., he received their Seaman Award in 1950 and Gary Wrattan Award in 1967. In 1976 he was inducted into the U.S. Army Aviation Hall of Fame. He is a Diplomate, American Board of Preventive Medicine.

He is one of the most decorated Army medical officers. His military awards and decorations include the Distinguished Service Medal with oak leaf cluster, Legion of Merit with 4 oak leaf clusters, Joint Service

commendation medal, USAF commendation medal, and purple heart. He has received the European-African-Middle Eastern Campaign Medal with 2 battle stars from WWII, the Korean Service Medal with 1 battle star from the Korean War, and the Republic of Viet Nam Service Medal with 4 battle stars from the Vietnam War, among many others.

His nearly 50 years of leadership in aerospace medicine represent a truly outstanding level of personal commitment to the specialty. His mark can be seen on much of what we call aviation medicine today.



#### KENT K. GILLINGHAM AWARD

William Ercoline, M.S.

*This award was established and sponsored by the AMST Group of Companies in Austria and the United Kingdom, to honor the memory of Kent K. Gillingham, M.D., Ph.D. The award is presented annually to an individual who has made a significant contribution in the field of spatial disorientation and situational awareness related to flight.*

William R. Ercoline, M.S., received the 2003 Kent K. Gillingham Award, which is given annually to an individual who has made a significant contribution in the field of spatial disorientation and situational awareness related to flight. Considered the Air Force's top expert in the area, he has been a researcher, lecturer, technical manager, and prolific author and presenter on spatial disorientation research. He worked closely with the late Dr. Kent Gillingham and has helped continue the legacy established by Dr. Gillingham at Brooks AFB.

Mr. Ercoline is currently a research scientist for Veridian Engineering at the Air Force Research Laboratory at Brooks City-Base, TX. He is responsible for studies involving the assessment and evaluation of spatial disorientation countermeasures as applied to flight training effectiveness and sensory integration. His research includes the evaluation of psychological and physiological stresses and human factors design on cognitive and physical performance in operational aerospace and related high-workload environments. He provides technical guidance to the USAF Flight Symbology Development Group and the multi-service Flight Symbology Working Group, and serves as a consultant to both USAF and civilian mishap investigation boards.

At the USAF School of Aerospace Medicine and the USAF Advanced Instrument School, Mr. Ercoline routinely lectures about the study of spatial disorientation countermeasures. Each year his lectures motivate at least one of the USAFSAM aeromedical residents to pursue a thesis dealing with spatial disorientation. He usually reviews around five master thesis proposals each year by students attending human factors graduate programs throughout the country. In addition to

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spatial disorientation, his research studies include a variety of topics associated with laser eye protection and fatigue countermeasures.

In 1967, Mr. Ercoline earned a B.A. in physics from California University of Pennsylvania and in 1978 he earned an M.S. in physics from the Air Force Institute of Technology, Wright-Patterson AFB, OH. He has been involved with spatial disorientation issues since his flying days with the USAF in the early 1970s. While on active duty as a military pilot in the 1980s, he consulted on several aircraft mishap investigation boards. He was eventually recruited to help develop a new concept of ground-based spatial orientation training device, now called the Advanced Spatial Disorientation Trainer. The five profiles used for training were designed and implemented by Mr. Ercoline in 1995.

While under the direction of the Veridian Engineering contract to the U.S. Air Force Research Laboratory, Mr. Ercoline's research quantified an in-flight illusion now known as the Gillingham Illusion. In 2001, he was awarded the Sidney D. Leverett Environmental Science Award of the Aerospace Medical Association for his article on the new illusion, which was published in *Aviation, Space, and Environmental Science*.

Mr. Ercoline has been an invited lecturer on spatial disorientation countermeasures to aeromedical organizations in the U.S., Russia, United Kingdom, The Netherlands, and Germany. His expertise has been sought by many organizations and government agencies to evaluate proposals and develop long-range government plans for spatial disorientation research. He recently edited the translation of a Russian book describing research findings on the psychophysiology of pilot performance. In 2000, he co-chaired the first spatial orientation symposium sponsored by the U.S. Air Force, the U.S. Army, and the OSD.

Since the 1980s, Mr. Ercoline has authored or co-authored nearly 70 articles on spatial disorientation. He retired as a Lieutenant Colonel from the USAF (1967B1988) with approximately 4000 flight hours in the C-130E, T-38A, T-37B, and T-41A aircraft, including a combat tour in Southeast Asia. He is a board member of the Brooks Heritage Foundation and the Challenger Learning Center in San Antonio, TX.



**WON CHUEL KAY AWARD**

**Silvio Finkelstein, M.D.**

*Established by the Korean Aerospace Medical Association in honor of Won Chuel Kay, M.D., the former Surgeon General of the Korean Air Force, founder and first Medical Director of Korean Airlines and first President of the Korean Aerospace Medical Association. This Award is presented annually to a member who has made outstanding contributions to international aerospace medicine. The award was established and is sponsored by the Korean Aerospace Medical Association.*

The 2003 recipient of the Won Chuel Kay Award, Silvio Finkelstein, M.D., is the epitome of the international flight surgeon and one of the most important figures in international aviation medicine with a career spanning more than 40 years. As Chief of the Aviation Medicine Section of the International Civil Aviation Organization (ICAO), he became widely known for his leadership, elaboration, and coordination of international aviation medicine policy and educational programs. His unique combination of knowledge, diplomacy, stamina, dedication, and caring that allowed Dr. Finkelstein to foster significant development of aviation medicine on an international level.

Dr. Finkelstein is a native of Buenos Aires, Argentina, now residing in Canada. His career in aviation has spanned the last 45 years, beginning in 1958 when he earned his M.D. degree from the University of Buenos Aires. He received his Masters of Science degree from Ohio State University in 1965.

He spent five years of his clinical aviation medicine career with the Argentine Government as Flight Surgeon in the Civil Aviation Official Air Base with duties including health maintenance programs for aviation personnel, aeromedical indoctrination, and aeromedical evacuation of the sick and injured. During the academic phase of his career, he spent more than 7 years with two institutions in the U.S.--Ohio State University and the Lovelace Foundation in Albuquerque, NM. His duties at the Lovelace Foundation included education and research particularly in the areas of respiratory physiology, exposure to hypobaric environments, aging in aviation personnel, and environmental medicine.

Dr. Finkelstein has an extraordinarily long list of accomplishments in the international aerospace medicine community. His association with ICAO began in 1971 when he became involved in regulatory and international management aviation medicine as an aviation medical officer. He was so successful that he was promoted to Chief, Aviation Medicine Section in 1975 and held this position for over 20 years. He has become extremely well known internationally and commands the respect of the entire aerospace medicine community.

Specifically, he has formulated ICAO policy in the areas of medical standards and education. Dr. Finkelstein conducted a review resulting in the updating and upgrading of international aviation medical standards which apply to the world's airlines. Furthermore, he planned, organized and taught in numerous educational seminars that first implemented held in approximately 70 ICAO contracting states. Dr. Finkelstein worked assiduously for 10 years and finally succeeded in persuading ICAO to adopt a smoking ban on all flights. Through his efforts, most airlines worldwide no longer permit smoking inflight.

Though he retired from ICAO in 1994, he has continued to serve as a highly sought-after consultant in aviation medicine, both civil and military, throughout the world. He has been extremely active in the International Academy of Aviation and Space Medicine and served as their President in 1991. He has also served as President of the Ibero-American Association of Aviation and Space Medicine, President of the Civil Aviation Medical Association, and a Vice-President of

*See FINKELSTEIN, p. 794*

FINKELSTEIN, from p. 793.

AsMA. He has been awarded honorary membership in 11 national aerospace medical associations. Dr. Finkelstein may well be the best known flight surgeon in the international community.

His honors and awards are numerous and include AsMA's 1978 John A. Tamisiea Award, 1985 Harry G. Moseley Award, and the 1995 Eric Liljencrantz Award. He received the 1992 Airline Medical Directors Association Annual Award and the 1993 Wilbur Franks Award from the Canadian Society of Aerospace Medicine.

He has been invited to give many major international lectures in aviation medicine, including the 1996 Allard Lecture delivered to the 44th International Congress of Aviation and Space Medicine, AsMA's 1993 Bauer Lecture (which, due to illness, was delivered by Dr. Claude Thibeault), the 1987 John C. Lane Lecture, and the 1994 Amezcua Lecture.

He has authored or co-authored numerous articles and book chapters including the ICAO Manual of Civil Aviation Medicine. He has also written the chapter on International Aviation Medicine and the foreword to the new third edition of DeHart's definitive text on the "Fundamentals of Aerospace Medicine," is the IAASM representative to ICAO's general assembly and serves as advisor and course developer for the Polish Institute of AVMED and Advisor for the Chilean Air Force DGAC AvMed Services.

It is obvious that Dr. Silvio Finkelstein has had a major impact on hundreds of international aerospace medicine practitioners and has contributed greatly to the development of the discipline.

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#### ARNOLD D. TUTTLE AWARD

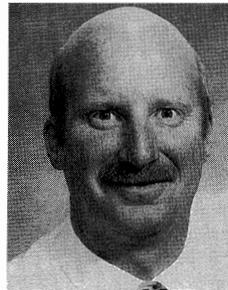
##### David F. Neri, Ph.D.

*Established in memory of Col. Arnold D. Tuttle, USAF, MC. Awarded annually for original research that has made the most significant contribution toward the solution of a challenging problem in aerospace medicine and which was published in Aviation, Space, and Environmental Medicine. Sponsored by Wyle Laboratories.*

Commander David F. Neri, MSC, USN, is the recipient of the 2003 Arnold D. Tuttle Award for his role as lead author of the article "Controlled Breaks as a Fatigue Countermeasure on the Flight Deck" (*Aviat Space Environ Med* 2002; 73:654:664). CDR Neri is a U.S. Navy Research Psychologist and currently Deputy Director of the Cognitive, Neural, and Biomolecular Science and Technology Division at the Office of Naval Research, 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 post-doctoral fellowship at the Laboratory for Circadian and Sleep Disorders Medicine at Harvard Medical School and the Brigham and Women's Hospital.

CDR Neri's assignments have included the Naval Submarine Medical Research Laboratory where he conducted applied research in visual psychophysics and color perception and the Naval Aerospace Medical Research Laboratory where he studied the effects of sustained operations on performance and the effects of combat on aviator work/rest schedules during the Gulf War. At the Naval Health Research Center he conducted basic research on the effects of sleep deprivation. Most recently he was assigned to NASA Ames Research Center where he served as Principal Investigator and Team Leader of the Fatigue Countermeasures Group. While at NASA his research focused on the effects of nighttime flying with its associated sleep loss, fatigue, and circadian desynchrony and on the development of operationally useful countermeasures. He also served as a co-investigator for experiments on two space shuttle flights (STS-90 [NeuroLab] and STS-95) that investigated sleep, circadian rhythms, and cognitive performance in space and the efficacy of melatonin as a countermeasure for sleep disturbances.

CDR Neri has co-authored 25 peer-reviewed scientific papers, 3 book chapters, and over 50 technical reports and proceedings papers. Awards include five personal Navy awards and the NASA-wide "Turning Goals into Reality Award" for 2000. He is an Associate Fellow of the Aerospace Medical Association.



#### HARRY G. MOSELEY AWARD

##### Scott A. Shappell, Ph.D., and Douglas A. Wiegmann, Ph.D.

*Established in memory of Col. Harry G. Moseley, USAF, MC, in recognition of his material contributions to flight safety. It is given annually for the most outstanding contribution to flight safety. Sponsored by Lockheed-Martin Corporation.*

Scott A. Shappell, Ph.D. and Douglas A. Wiegmann, Ph.D., are the 2003 co-recipients of the Harry G. Moseley Award, which is given annually for the most outstanding contribution to flight safety. Drs. Shappell and Wiegmann have significantly contributed to aviation safety with their development and implementation of the Human Factors Analysis and Classification System (HFACS) worldwide. Scientists have consistently reported that from 60% to 80% of all military and civil aviation accidents can be attributed to human error. However, until the development of HFACS there were few attempts to utilize a systematic approach to classifying the human factors associated with accidents. As officers in the U.S. Navy, Drs. Shappell and Wiegmann developed HFACS for the U.S. Navy and Marine Corps as an accident investigation and data

*See SHAPPELL/WIEGMANN, p. 795.*

SHAPPELL/WIEGMANN, from p. 794.

analysis tool. Outcomes from the application of this approach have allowed the Naval Safety Center to identify areas requiring further intervention and to assess the effectiveness of those interventions. The successful application of HFACS in the U.S. military has led to the subsequent employment of HFACS by other military organizations throughout the world as an adjunct to preexisting accident investigation and analysis systems. The HFACS framework has been applied to hundreds of military aviation accidents, enhancing both the quantity and quality of human factors information gathered during accident investigations. Their efforts have yielded objective, data-driven intervention strategies that have improved aviation safety by reducing accidents due to specific types of human factors problems.

Drs. Shappell and Wiegmann's contributions have not been limited to military aviation. Other organizations such as the FAA and NASA are now using HFACS in an attempt to capitalize on gains realized by the military. To date, HFACS has been used to analyze all commercial and general aviation accidents between 1990-1999 (over 20,000 accidents). This sophisticated program of research, sponsored by the FAA and NASA has been highly successful and has demonstrated that HFACS can be reliably used to analyze the underlying human factors of both commercial and general aviation accidents. Through the efforts of Drs. Shappell and Wiegmann, human error trends in the accident data have been uncovered, thereby shaping several of the safety programs currently supported by the FAA and NASA.

HFACS has provided an opportunity for scientists and investigators to consider a broader systems-oriented view of aviation accidents and incidents. This taxonomic approach also provides the necessary data for forming a data-driven approach to developing interventions and subsequently evaluating their effectiveness at reducing accidents. This is a major step forward in our understanding of human error in aviation.

Dr. Shappell is currently the Human Factors Research Branch Manager at the Civil Aerospace Medical Institute of the FAA in Oklahoma City, OK. He manages research programs on advanced air traffic control systems, behavioral stressors, and aircrew performance. In addition, he continues to conduct studies of both civil and military aviation accidents using the HFACS system he co-authored with Dr. Wiegmann. Before joining the Civil Aerospace Medical Institute, then Lieutenant Commander Shappell (he has since been promoted to Commander as a Naval Reservist) served as the Human Factors Branch Chief at the U.S. Naval Safety Center and as a human factors accident investigation consultant for the Joint Service Safety Chiefs. Prior to the Naval Safety Center, he served as the Force Aerospace Psychologist for the Commander, Naval Air Forces, U.S. Atlantic Fleet.

In 1983, before receiving his commission in the U.S. Navy, Dr. Shappell earned his B.S. (summa cum laude) in psychology at Wright State University, Dayton, OH. He followed with a Ph.D. in neuroscience from the University of Texas Medical Branch, Galveston, TX, in 1990.

Dr. Shappell is a Fellow of the Aerospace Medical

Association and Past President of the Aerospace Human Factors Association. He is also a member of the American Psychological Association, the Human Factors and Ergonomics Society, and the Association of Aerospace Psychologists. In addition, he serves as a consulting/associate editor for the International Journal of Aviation Psychology and Aviation, Space, and Environmental Medicine, and is a regular peer-reviewer for Military Psychology, Human Factors, and Air Traffic Quarterly.

Dr. Wiegmann is currently an assistant professor and associated head of the Aviation Human Factors Division within the University of Illinois' Institute of Aviation. He received his Ph.D. in experimental psychology in 1992 from Texas Christian University and received postdoctoral training in aviation psychology from the Naval Aerospace Medical Institute. Prior to coming to the University of Illinois, he served as an aviation psychologist for the U.S. Navy and was an accident investigator for the U.S. National Transportation Safety Board.

Dr. Wiegmann has authored numerous articles and conference presentations on topics related to human performance and aviation safety. He is also co-developer of the HFACS system, which has been adopted by aviation organizations throughout the world. He has twice received the U.S. Navy and Marine Corps Commendation Medal for his significant work in the area of human error research. He was also awarded the 2002 William E. Collins Award for the outstanding publication in the field of human factors and the Flight Safety Foundation's 2002 Admiral Louis de Florez award for significant contributions to aviation safety. In addition to being a board certified human factors professional, Dr. Wiegmann is also a private pilot. He is an active member of the Aerospace Medical Association, the Human Factors and Ergonomics Society, and the Association for Aviation Psychology. He is currently President-Elect of the Aerospace Human Factors Association.



**MARY T. KLINKER AWARD**

**Diane L. Fletcher, M.S.N.**

*Established by the Flight Nurse Section in 1968, this award became an official AsMA award in 1972. In 1978 it was renamed in memory of Mary T. Klinker, who was killed in a C-5A crash while performing a humanitarian mission. The award is given annually to recognize significant contributions to, or achievements in, the field of aeromedical evacuation. Sponsored by Novartis Pharmaceuticals.*

Lt. Col. Diane L. Fletcher, USAF, NC, is the 2003 recipient of the Mary T. Klinker Award. This award is given annually to recognize significant contributions to, or achievements in, the field of aeromedical evacuation.

*See FLETCHER, p. 796.*

FLETCHER, from p. 795.

Lt. Col. Fletcher's extensive aeromedical experience has greatly enhanced the development of systems for aeromedical evacuation in the rapid deployment tempo of today's Air Force. She was Commander of an aeromedical evacuation flight in Ali Al Salem AB in Kuwait during Operation Desert Fox and solved numerous logistic and operational challenges to meet the medical needs of deployed troops. As a Battlestaff mission director during the Kosovo crisis, she solved communication, planning, and logistic issues essential to support the deployed forces. One of the logistic issues she identified was that of deployed medical maintenance and tracking. She is currently researching Automated Identification Technology to be used not only for deployed equipment, but by all aeromedical evacuation units to help track equipment service and maintenance status to enhance readiness. She was also the first aeromedical expert to be assigned to the Air Mobility Battlelab (AMB), which incorporates intelligence data, formulates doctrine, develops tactics, and conducts operational demonstration and evaluation of new procedures and systems for mobility assets.

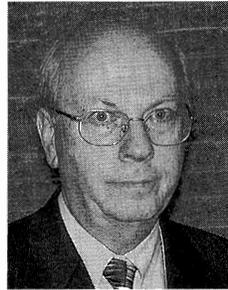
Assigned as the Chief, Aeromedical Evacuation Concepts of the AMB from 1999 to 2002, she provided the aeromedical dimension to project outcomes. She was responsible for research, planning, maturation, and transition of AMB technologies for the Air Force to advance the core competency of Rapid Global Mobility. She successfully fielded an aeromedical communication system for team patient care in noisy aircraft. In record time, she completed a bioterrorism readiness program on CD that was sent to over 200 medical and air evacuation units following the 9/11 terrorist attacks. She also developed guidance for transporting contaminated patients, thus greatly enhancing the preparedness of aeromedical units worldwide.

Lt. Col. Fletcher is currently the Senior Nurse Executive for the 81st Medical Operations Squadron, Keesler Medical Center, Keesler AFB, MS. She oversees nursing operations for 614 personnel and 7 flights. She collaborates with the Undergraduate Nursing, Medical Technician, and Graduate Medical Education programs and is responsible for overall nursing administration for clinical practice, education, training, research, and process improvement. She formulates plans, policies, and procedures for provision of nursing care and develops, implements, and ensures compliance with standards of nursing care and practice. She also mentors and provides career counseling for all assigned nurses.

In 1981, Lt. Col. Fletcher earned a B.S. in nursing from Valdosta State University, Valdosta, GA. She received a M.S. in medical surgical nursing from Southern Illinois University at Edwardsville in 1990. She received a direct commission in the United States Air Force in 1983. Her flying assignments include the 57th Aeromedical Evacuation Squadron and 86th Aeromedical Evacuation Squadron. She served as a flight nurse during Operation Desert Shield/Storm with the 2nd Aero-medical Evacuation Squadron, Rhein Mein, Germany.

Lt. Col. Fletcher has received numerous awards including a Meritorious Service Medal with three oak leaf clusters, Aerial Achievement Award with one oak leaf

cluster, Air Force Commendation Medal with three oak leaf clusters, Armed Forces Expeditionary Medal, and Humanitarian Service Medal. She is an Associate Fellow of the Aerospace Medical Association, Former President of the Aerospace Nursing Section of AsMA, and a member of the American Nurses Association, and Association of Practitioners in Infection Control. Lt. Col. Fletcher is a Chief Flight Nurse with more than 3500 flight hours in C-9, C-130, and C-141 aircraft.



#### THEODORE C. LYSER AWARD

Claus Curdt-Christiansen, M.D.,  
D.Av.Med.

*This award was established to honor the memory of Brig. Gen. Theodore C. Lyster, the first Chief Surgeon, Aviation Section, United States Signal Corps. It is given annually for outstanding achievement in the general field of aerospace medicine. Sponsored by Lockheed-Martin Space Operations.*

Claus Curdt-Christiansen, M.D., D.Av.Med., is the 2003 recipient of the Theodore C. Lyster Award, which is presented annually in recognition of outstanding achievements in the general field of aerospace medicine. Dr. Curdt-Christiansen is widely recognized and respected for his numerous contributions ranging from harmonization of the medical requirements for license holders in Europe and other regions to the prevention of drug abuse in the aviation workplace to the use of laser emitters in the vicinity of airport. His remarkable achievements and outstanding qualities as an educator, lecturer, editor, and team leader have made him an esteemed member of the aeromedical community.

Currently, Dr. Curdt-Christiansen is the Chief of Aviation Medicine Section, International Civil Aviation Organization at its headquarters in Montreal, Canada. In this capacity, with minimal human and financial resources at his disposal, he has convened several international study groups with the objective of updating the international Medical Standards and Recommended Practices for personnel licensing. Under his guidance, significant medical provisions have been developed and adopted by the ICAO. In addition, research into color perception has been initiated. He co-authored and edited the Manual on Prevention of Problematic Use of Substances in the Aviation Workplace, published in 1995, and the Manual on Laser Emitters and Flight Safety, now ready for publication.

Dr. Curdt-Christiansen was born in Denmark in 1940 and graduated from Copenhagen University in 1968 with his medical degree. From 1974 to 1979, he was a resident at the Clinic of Aviation Medicine, University Hospital of Copenhagen. He was elected as a member of the Flight Safety Council of Denmark from 1975 to 1979 and in 1977, he completed the diploma course in aviation medicine at the RAF Institute of Aviation Medicine, Farnborough, England. He served as Head

*See CURDT-CHRISTIANSEN, p. 797.*

*CURDT-CHRISTIANSEN, from p. 796.*

of Aviation Physiology Section, National Defence Research Institute of Sweden from 1979 until 1982. For the next five years, he was a Flight Surgeon in the Royal Saudi Air Force in Jeddah.

In 1988, Dr. Curdt-Christiansen became the Chief Medical Officer of the Civil Aviation Administration of Denmark where he contributed significantly to the harmonization of the European Joint Aviation Authority regulations. He was also the representative of Denmark on the Medical Subcommittee of the JAA from 1990 to 1994, serving as the vice-chairman and secretary of the subcommittee for two years. From the very beginning of his work with the JAA, he was a driving force in the development of the new regulations for European license holders.

Dr. Curdt-Christiansen is a Fellow of the Aerospace Medical Association, a member of the International Academy of Aviation and Space Medicine, and a guest lecturer at the USAF School of Aerospace Medicine at Brooks AFB, TX. From 1989 to 1990, he was the president of the Nordic Aerospace Medical Association. He has also served on the editorial board and as a reviewer for *Aviation, Space, and Environmental Medicine*. He has presented and published papers on many topics including regulatory aviation medicine and appeal procedures, history of international color perception requirements, upper age limits for pilots, electroencephalography for aircrew selection, and intervals between routine medical examinations of pilots. Dr. Curdt-Christiansen has military and civilian flight training with 400+ hours as pilot-in-command.



**JOHN PAUL STAPP AWARD**

**Daniel W. Repperger, Ph.D., P.E.**

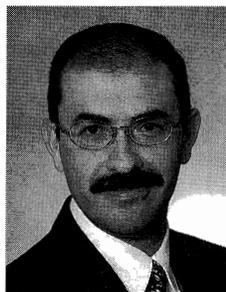
*This award was established and sponsored by Environmental Tectonics Corporation to honor Col. John Paul Stapp, USAF(Ret.). The award is given annually to recognize outstanding contributions in the field of aerospace biomechanics and to promote progress in protection from injury resulting from ejection, vibration, or impact.*

Daniel W. Repperger, Ph.D., P.E., received the 2003 John Paul Stapp Award, which is awarded annually to recognize outstanding contributions in the field of aerospace biomechanics and to promote progress in protection from injury resulting from ejection, vibration, or impact. During his 30-year career, Dr. Repperger has made fundamental contributions to aerospace biomechanics and human protection in high-G, high-turbulence, and weightless environments. He has defined unique interfaces involving neuromuscular biomechanics employing control theory methods, which have resulted in innovative technology and new knowledge regarding human performance.

Dr. Repperger received his B.S.E.E. and M.S.E.E. degrees from Rensselaer Polytechnic Institute, Troy, NY,

in 1967 and 1968. After receiving his Ph.D. degree in electrical engineering from Purdue University, West Lafayette, IN, in 1973, he became a National Research Council Postdoctoral Fellow at the Air Force Research Laboratory at Wright-Patterson AFB, OH. In 1975, he joined the federal government as a civil servant at the Air Force Research Laboratory where he continues to work at the present time. In 1985, Dr. Repperberger developed patented technology for a force-reflecting "haptic" control stick, which can assist and help protect pilots in a high-turbulence (vibration) environment by using virtual force to augment the pilot's neuromuscular control. This assists pilots both in tracking control and disturbance rejection. These unique interfaces involve neuromuscular biomechanics and employ control theory methods, which have application to the medical rehabilitation of spastic individuals.

Dr. Repperger has authored over 300 technical communications including 30 inventions/patents, 65 journal publications, 4 book chapters, 230 conference papers, and 17 technical reports. He is a Fellow of the Institute of Electrical and Electronic Engineers, a Research Fellow of the Air Force Research Laboratory, and Fellow of the American Institute of Medical and Biological Engineering. He also serves on numerous professional organizations as an officer as well as on publications boards of five international journals as an Associate Editor. In 1998, Dr. Repperger's career achievements in aerospace technology were recognized when he received the Life Sciences and Bioengineering R&D Innovation Award. He has been elected a Distinguished Member of the IEEE Control Systems Society and has received the IEEE Third Millennium Medal. He is an adjunct professor (Electrical Engineering and/or Biomedical Engineering) at Wright State University, the Air Force Institute of Technology, University of Dayton, and the Ohio State University.



**ERIC LILJENCANTZ AWARD**

**Melchor J. Antuñano, M.D., M.S.**

*This award was established in memory of CDR Eric Liljencrantz, MC, USN, whose brilliant career in aviation medicine was cut short by his death in an airplane accident in 1942. It is given annually to honor excellence as an educator in aerospace medicine, or basic research into the problems of acceleration, altitude, or weightlessness. Sponsored by GlaxoSmithKline Pharmaceuticals.*

Melchor J. Antuñano, M.D., M.S., received the 2003 Eric Liljencrantz Award, which is presented annually to honor excellence as an educator in aerospace medicine, or basic research into the problems of acceleration, altitude, or weightlessness. As manager of the FAA's Civil Aerospace Medical Institute Aeromedical Education Division, Dr. Antuñano has taken a leading role in the education of thousands of aviation medical examiners,

*See ANTUÑANO, p. 798.*

ANTUÑANO, from p. 797.

FAA flight crews, and civil aviation pilots. His academic knowledge, understanding of modern education techniques, and aggressive implementation of new programs underscore his excellence as an educator. Through Dr. Antuñano's efforts, new courses have been designed, current courses updated, and computer technology implemented into the educational process.

Dr. Antuñano is currently the director of the U.S. Federal Aviation Administration Civil Aerospace Medical Institute in Oklahoma City. He provides executive direction and is responsible for the administration of FAA Office of Aerospace Medicine's programs in Medical Certification, Medical Education, Medical Research, Human Factors Research, and Occupational Health Services. These include a program to fulfill the aeromedical certification needs of approximately 620,000 holders of U.S. pilot certificates; a program for the selection, designation, training, and management of about 5700 aviation medical examiners; aeromedical education programs in aviation physiology, global survival, and aviation human factors for FAA flight crews and civil aviation pilots; aerospace medical publications and other materials used to disseminate medical information; a highly specialized library system in support of a broad range of aerospace medical and aerospace safety reference/research programs; an integrated program of field and laboratory performance research in organizational and human factor aspects of aerospace work environments; an applied research program to identify human tolerances, capabilities, and failure modes both in uneventful flights and during civilian in-flight incidents and accidents; an occupational medicine program to improve the safety of FAA employees; and a medical clinic that provides health services to employees and students at the FAA Mike Monroney Aeronautical Center.

Dr. Antuñano was born in Mexico City and is a graduate of the National Autonomous University of Mexico School of Medicine. He completed the Residency Program in Aerospace Medicine at Wright State University in Dayton, OH. He was then awarded a post-doctoral research fellowship by the U.S. National Research Council of the National Academy of Sciences at the USAF School of Aerospace Medicine in San Antonio, TX.

Dr. Antuñano is credited with nearly 300 presentations at national and international conferences in aerospace medicine in 23 countries and with almost 50 scientific publications covering a variety of aerospace medicine topics. He is a Fellow and Vice-President of the Aerospace Medical Association, Past President of the Space Medicine Branch, Past President of the Ibero-American Association of Aerospace Medicine, member and selector of the International Academy of Aviation and Space Medicine, and a member of the Mexican Society of Aviation Medicine. He is a faculty member at Wright State University School of Medicine, the University of Oklahoma Health Sciences Center, the Medical Sciences Division of Oak Ridge Institute for Science and Education, the University of Texas Medical Branch in Galveston, and the Santa Casa de Sao Paulo Medical School in Brazil.

Dr. Antuñano has received over 50 awards and

recognitions for his academic, administrative, and research achievements including the John A. Tamisiea Memorial Award given by AsMA for outstanding contributions to the art and science of aviation medicine in its application to the field of general aviation; the DOT Secretary's Award for Meritorious Achievement: Silver Medal granted by the Secretary of the U.S. Department of Transportation for accomplishments in promoting aviation safety in the U.S. and abroad; Outstanding Manager Award given by the FAA Office of Aerospace Medicine; the Arthur S. Flemming Award granted by the George Washington University for achievements in the promotion of aviation safety through the exercise of inspiring leadership and professionalism; and the Young Investigator Award from the Space Medicine Branch of AsMA for authorship for the most outstanding paper by a young investigator.



**SIDNEY D. LEVERETT, JR.**  
**ENVIRONMENTAL SCIENCE**  
**AWARD**

**Andrew A. Pilmanis, Ph.D.**

*In memory of Sidney D. Leverett, Jr., Ph.D., this award is presented annually to an individual who has made a significant contribution in the field of environmental medicine through a publication in Aviation, Space and Environmental Medicine, or by activities conducted in support of aerospace systems operation. Sponsored by Environmental Tectonics Corporation.*

Andrew A. Pilmanis, Ph.D., was awarded the 2003 Sidney D. Leverett, Jr. Environmental Science Award for his role as lead author of the article "Effect of Repeated Altitude Exposure on the Incidence of Decompression Sickness" (*Aviat Space Environ Med* 2002; 73:525:31). The award is given to an individual who has made a significant contribution in the field of environmental medicine through a publication in Aviation, Space, and Environmental Medicine.

Dr. Pilmanis is currently a Principal Research Physiologist at the Air Force Research Laboratory (AFRL), Brooks City-Base, TX, where he is in charge of the USAF aerospace altitude research program. He is responsible for applied research protocols dealing with the human physiological responses to reduced ambient pressure environments of military aircraft and extravehicular activity from spacecraft. He is also responsible for development of procedures and equipment as countermeasures for the physiological hazards of hypobaric environments including positive pressure breathing, full pressure suits, and preoxygenation procedures for altitude decompression sickness (DCS). He regularly provides consultations on high altitude protection issues to Air Force and other DoD Commands.

During his 14 years at AFRL, Dr. Pilmanis and his team have completed over 28 human subject research protocols, made about 100 presentations at scientific meetings, and published over 80 papers. The altitude decompression sickness database resulting from these

*See PILMANIS, p. 799.*

PILMANIS, from p. 798.

studies is the world's largest and has been the basis for the development of the predictive model for the Altitude Decompression Sickness Risk Assessment computer (ADRAC). This altitude DCS risk assessment software will allow the operational Air Force to plan safer missions and may in the future be utilized for real time estimates of risk to aircrew during flight. Dr. Pilmanis also initiated, chaired, and edited the proceedings of two 3 day international workshops. The first dealt with altitude decompression sickness while the second one documented the physiological issues associated with flight at and above 60,000 ft by the new generation of fighter aircraft.

Born in Riga, Latvia, Dr. Pilmanis received both his undergraduate (A.B. in zoology 1964) and graduate (M.S. in physiology 1967 and Ph.D. in physiology 1970) training at the University of Southern California, Los Angeles, CA. In 1970, he accepted an appointment to the faculty of the Department of Physiology at the University of Southern California School of Medicine. In addition to his teaching duties, he actively pursued his research interest in diving physiology, including projects in cardiovascular effects of microgravity, DCS and intravascular gas emboli detection in diving, thermal stress, CO<sub>2</sub> retention and underwater exercise, cardiovascular effects of diving in the California sea lion, and development of underwater physiological data acquisition systems. In addition, he was one of three participants in two 7-day air saturation dives in the NOAA sponsored Hydrolab habitat located in 50 feet of water off Grand Bahama Island. He was the principal investigator on this project to study physiological responses to saturation diving including thermal, EEG, cardiovascular, and biochemical effects.

In 1974, he was appointed Senior Research Scientist and Associate Director of the USC Catalina Marine Science Center. For 15 years he served as the Program Director for this research/clinical/teaching hyperbaric facility. In 1980, Dr. Pilmanis initiated and directed the USC/NOAA National Undersea Research Program. This program designed, engineered, and constructed the Aquarius (currently still operated by NOAA), an underwater habitat/saturation diving system operated as a national facility for marine research.

Most of his work has been applied research with direct transition to operational implementation. He participated in documenting the high career prevalence of DCS symptoms in U 2 pilots (received the Society of USAF Flight Surgeons 1997 Unger Award). This was followed by implementation of the concept of exercise enhanced preoxygenation developed by his team to reduce that high DCS risk. His USSOCOM sponsored research has defined the level of DCS risk at 35,000 ft for military air-drop missions, documented the impact of repeated high altitude exposures and post flight exercise on DCS, completed a study on the effect of various breathing gas mixtures on DCS and in flight prebreathing for the CV 22 Osprey, and determined the zero prebreathe DCS threshold at 21,000 ft. His NASA sponsored studies have defined the DCS risk with various modes of exercise at altitude, published first ever finding of decompression venous gas emboli crossing over to the arterial side in human subjects, provided data and expertise for new

NASA EVA prebreathe schedule, completed a study on microgravity and DCS, and completed a 3 year study on argon oxygen breathing mixture and staged decompression for future Mars exploration. US Navy sponsored studies have defined the DCS risk at 40,000 ft and the effect of the rate of ascent on DCS.

In 1999, Dr. Pilmanis was elected Fellow of the Aerospace Medical Association. He is on the Faculty of the USAF School of Aerospace Medicine, is a past Vice President of the Undersea and Hyperbaric Medical Society, and has served as past President of the Life Sciences and Biomedical Engineering Branch of the Aerospace Medical Association. Dr. Pilmanis has been honored repeatedly for his research including the AFRL Harry G. Armstrong Scientific Excellence Award, the Aerospace Physiologist Society Fred Hitchcock Award, the Air Force Association Texas Scientist of the Year Award, the Undersea Medical Society Craig Hoffman Memorial Award, the Research and Development Innovation Award, Life Sciences and Biomedical Engineering Branch of the Aerospace Medical Association, the NASA Group Achievement Award, National Facility Study Task Team, and five USAF Performance Awards.



**JULIAN A. WARD AWARD**

**Brian P. Hayes, M.D.**

*Established and sponsored by the Society of U.S. Air Force Flight Surgeons in memory of its first member to lose his life in an aircraft accident, and to honor all flight surgeons whose lives are lost in the pursuit of flying activities relating to the practice of aerospace medicine. The award is given annually for superior performance and/or outstanding achievement in the art and science of aerospace medicine during residency training.*

Lt. Col. Brian P. Hayes, USAF, MC, is the 2003 recipient of the Julian E. Ward Memorial Award. The award is presented annually for superior performance and/or outstanding achievement in the art and science of aerospace medicine during residency training. Lt. Col. Hayes distinguished himself through exceptional academic leadership while a resident at the USAF School of Aerospace Medicine. His background in air evacuation (AE) primed him for authoring a chapter on AE for the NATO Emergency War Surgery Book and led him to create and exportable AE course for International Health Specialists. He taught AE principles in Lima, Peru and at a Special Operations national conference. His maturity, leadership, and scholarly endeavors drove his selection as Chief Resident.

Lt. Col. Hayes was born in Colorado Springs, CO, in 1964. He received his bachelor's degree cum laude in 1986 from the University of Miami where he was the recipient of the Iron Arrow award for outstanding leadership, scholarship, and dedication to the univer

*See HAYES, P. 800.*

HAYES, from p. 799.

sity. In AFROTC, Lt. Col. Hayes was selected as the Outstanding Freshman Cadet, Outstanding Junior Cadet, Outstanding Senior Cadet of the Southeastern United States, and eventually as Outstanding AFROTC Cadet of the Year for the entire United States. He received his USAF commission in 1986.

Lt. Col. Hayes was awarded an Air Force Health Professions scholarship and entered the University of Miami School of Medicine, earning his M.D. degree in 1990. He entered active duty in June 1990 and completed a General Surgery Internship at David Grant USAF Medical Center, Travis AFB, CA. In 1991, he was assigned as a flight surgeon to the 314th Medical Group, Little Rock AFB, AR, where he served as the Officer in Charge (OIC), Flight Medicine. He then moved to the 437th Medical Group at Charleston AFB, SC, where he served as the OIC, Physical Exams and Standards. His performance earned him the award of Outstanding Company Grade Officer of the Year for 1995. The following year, he was selected as the Air Mobility Command Flight Surgeon of the Year.

In 1997, Lt. Col. Hayes had the honor of being the first flight surgeon ever selected to command the 86th Aeromedical Evacuation Training Flight, 86th Aeromedical Evacuation Squadron, Ramstein AB, Germany. While at Ramstein AB, he was part of the team providing safe evacuation of wounded sailors following the USS Cole terrorist attack. His work there resulted in USAFE nominating him for the Paul Myers Award for outstanding performance and leadership by a field grade physician. In 1999, he was selected as the USAFE Flight Surgeon of the Year.

In 2000, Lt. Col. Hayes entered the Residency in Aerospace Medicine at the United States School of Aerospace Medicine, Brooks City-Base, TX. He first earned his Master's of Public Health degree from Harvard University in 2001. He gave the first-ever AF officer brief at Harvard's "Global Chat," speaking on the USS Cole medical response. After completing a year of specialty training in Aerospace Medicine in 2002, he took and passed the aerospace board certification exam. He is currently completing a second residency training year in General Preventive Medicine. Lt. Col. Hayes was selected to command the 92nd Aeromedical Dental Squadron, Fairchild AFB, WA. He is a senior flight surgeon with over 960 hours in airlifters, tankers, fighters, and helicopters.



**RAYMOND F. LONGACRE AWARD**

**Raymond E. King, M.A., Psy.D.**

*Established to honor the memory of MAJ Raymond F. Longacre, MC, USA. It is given annually for outstanding accomplishment in the psychological and psychiatric aspects of aerospace medicine. Sponsored by Aeromedic Innovations.*

Raymond E. King, M.A., Psy.D., is the 2003 recipient of the Raymond F. Longacre Award, which is given annually for outstanding accomplishment in the psychological and psychiatric aspects of aerospace medicine. Dr. King has provided outstanding leadership in aerospace psychology for the past 16 years. While blazing a pioneering trail as an aviation psychologist, he has mentored numerous psychologists and other professionals through direct personal contact, via his book (*Aerospace Clinical Psychology*), and through more than 70 publications and presentations related to aerospace medicine.

Dr. King is currently a personnel research psychologist at the Civil Aerospace Medical Institute of the Federal Aviation Administration (FAA) in Oklahoma City, OK. He is the principal investigator of Air Traffic Selection and Training, which is a job related, computerized testing battery for the selection of air traffic control specialists. As a response to the events of September 11, 2001, he was detailed to the Federal Air Marshal Medical Office on the east coast for six months where he directed the psychological selection of Federal Air Marshals.

A native of Colonia, NJ, Dr. King received his B.A. from Rutgers College, New Brunswick, NJ (1981), his M.A. from Fairleigh Dickinson University, Madison, NJ (1983), and his doctorate from the Illinois School of Professional Psychology, Chicago, IL (1987). In addition to being an Illinois-licensed psychologist, he is a 14-year veteran of the United States Air Force (USAF), having attained the rank of Major. While stationed at Sheppard AFB, Wichita Falls, TX, he served as the flight psychologist to the Euro NATO Joint Jet Pilot Training program, a multination effort dedicated to the training of future fighter pilots. Early in his USAF career, he developed standardized protocols of the diagnosis and treatment of airsickness and other maladaptational responses to the demands of flying high-performance aircraft that served as a template for establishing similar programs throughout the world. He was subsequently assigned to the Aeromedical Consultation Service, Clinical Sciences Division of the Aerospace Medical Directorate of the Armstrong Laboratory at Brooks AFB, San Antonio, TX, and held a faculty appointment at the School of Aerospace Medicine, where he continues to teach as an invited lecturer.

Dr. King helped organize and direct the Aircraft Mishap Prevention and Investigation Course and taught mishap investigation techniques to psychologists, physiologists, flight surgeons, and other human factors consultants. He has served as a human factors consultant to numerous aircraft mishap/accident investigation boards. Dr. King also founded, and served as the first principal investigator of, the Neuropsychiatrically Enhanced Flight Screening program, an effort to improve pilot selection and medical assessment of aircrew. Since 1991, he has served as a psychiatric evaluator during astronaut selection cycles at NASA Johnson Space Center, Houston, TX.

The recipient of two competitively awarded research grants from the Defense Women's Health Initiative, Dr. King scientifically investigated the stressors, career goals, and personality/cognitive characteristics of male

KING, from p. 800.

and female aviators. He also served as the Chief of the Collaborative Systems Technology Branch of the Crew System Interface Division, Human Effectiveness Directorate, Wright Patterson AFB, Dayton, OH, during the merger of the Armstrong and Wright Laboratories into the Air Force Research Laboratory. His projects there included information warfare, collaborative functioning, and human interface with uninhabited aerial vehicles. He served as the Chief of Operational Research at the Air Force Safety Center, Kirtland AFB, Albuquerque, NM, and was the Department of Defense representative to several Joint Safety Analysis Teams, which sought to reduce the incidence of civilian aircraft accidents.

Dr. King has been decorated with an Air Force Achievement Medal, Commendation Medal, and Meritorious Service medal with three oak leaf clusters. He was named the Air Force Materiel Command Psychologist of the Year in 1994 and the Air Force Association Texas Clinician of the Year in 1995. He has given numerous scientific presentations, both in the United States and abroad, including at the Fifth Air to Air Safety Conference in Tel Aviv, Israel; the European Association of Aviation Psychology, Vienna, Austria; and at several NATO Research and Technology Organization meetings. He also served as director of Psychological and Mental Tests for Pilot Selection, a NATO short course offered in Greece, Poland, and Turkey in the spring of 2001. He has worked with the Bolivian Air Force to improve their night flying skills to enhance drug interdiction and was a consultant to the Canadian Armed Forces in their effort to understand the issues and needs of female aviators.

Dr. King is the coauthor of a psychological test entitled the Armstrong Laboratory Aviator Personality Survey (ALAPS), which is used by the U.S. Navy, USAF, FAA, and international air forces. He is the author of a book entitled Aerospace Clinical Psychology and numerous peer reviewed articles. He serves on the editorial board of the International Journal of Aviation Psychology and is a manuscript and book reviewer for Aviation, Space, and Environmental Medicine. Dr. King is an Associate Fellow of the Aerospace Medical Association and a Fellow of the Society for Personality Assessment. He serves as the membership chair for Division 21, Applied Experimental and Engineering Psychology, of the American Psychological Association.



**JOHN A. TAMISIEA AWARD**

**Victor M. Rico-Jaime, M.D., M.S.**

*This award was established and sponsored by the Civil Aviation Medical Association in memory of John A. Tamisiea, M.D. The award is given annually to an aviation medical examiner or other individual who has made an outstanding contribution to the art and science of aviation medicine in its application to the general aviation field.*

Brig. Gen. Victor M. Rico-Jaime, M.D., M.S., is the recipient of the 2003 John A. Tamisiea Award, which is presented for outstanding contributions in the application of the art and science of aerospace medicine to general and commercial aviation. For the last 22 years, Dr. Rico-Jaime has demonstrated outstanding achievements as a physician, scientist, and leader dedicated to the promotion and development of aviation medicine in Mexico. He is responsible for the establishment of the first and only Residency Program in Aerospace Medicine in Mexico (for military and civilian physicians). This accomplishment laid the legal foundation for the establishment of the Mexican Board of Aerospace Medicine. Due to these and other accomplishments, Dr. Rico-Jaime has had a significant impact on the entire civil aviation community in Mexico.

Dr. Rico-Jaime was born in Guadalajara, Jalisco, México, in 1952. Before becoming a physician, he was an infantry and paratrooper officer, graduating with a bachelor's degree in 1970 from the Heroic Military College of Mexico. He earned his M.D. in 1979 from Mexico's Military School of Medicine and in 1980 he completed the Aviation Medicine Basic Course at the National Center of Aviation Medicine of Mexico. In 1983, he obtained an M.S. with a specialty in Aerospace Medicine from Wright State University in Dayton, OH. He is board certified in Aerospace Medicine and Occupational Medicine in Mexico. Since 1981, he has been the titular professor of aerospace medicine at the Military School of Medicine. In 1999, he earned a master's degree in Military Administration for the National Security and Defense at Mexico's National Defense College.

In 1990, Dr. Rico-Jaime designed and implemented a primary course in Aviation Medicine, which has graduated more than 180 national and international students. In 1995, he founded the only Mexican Aerospace Residency Program, which is also the first in Latin America. This course is taught at the Mexican Army and Air Force University to both civilian and military physicians. During his career, he has been Chief of the Education and Research Office at the National Center of Aviation Medicine in Mexico City (1982-1987), Deputy General Flight Surgeon of the Mexican Air Force (1982-1993), and Surgeon General of the Mexican Air Force (1994-1997). Until December 2002, Dr. Rico-Jaime was the National Coordinator of the Education and Research Department of the Military Health Directorate of the Mexican National Defense Secretariat. In addition, he was the medical adviser to the Secretary of the Mexican Department of Transportation. He is currently Chief of the Aerospace Medicine Office, National Defense Secretariat's Military Health Directorate.

Dr. Rico-Jaime was the co-founder of the Mexican Association of Aviation Medicine and the Mexican Board of Aerospace Medicine. He is currently President of the Mexican Association of Aviation Medicine for the second time. He is also a Fellow of the Aerospace Medical Association and a member of the International Academy of Aviation and Space Medicine, the Ibero-American Association of Aerospace Medicine, the Aerospace Human Factors Association, and the Mexican Military College of Physicians. He has been an FAA

*See RICO-JAIME, p. 802.*

RICO-JAIME, from p. 801.

Senior AME since 1996 and a Clinical Assistant Professor at the University of Texas Medical Branch's Department of Preventive and Community Medicine since 1997.

Dr. Rico-Jaime has delivered more than 100 presentations at national and international scientific meetings written more than 20 scientific articles, published 3 aviation medicine manuals, and directed 8 aviation medicine theses. He has also received numerous awards including a Teaching Merit Medal for 20 years of teaching activities at the Military School of Medicine and the Health Military School of Postgraduate Students of the Mexican Army and Air Force University; Special Perserverance Class Medals for more than 35 years of service in the Mexican Army and Air Force; and the Mexican Honor Legion Medal.

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PRESIDENT'S PAGE, from p. 789.

then Aero Medical Association was held on October 7, 1929 in Detroit, MI. Some 60 members were present. They adopted the first constitution for the association and elected their first president, Dr. Louis H. Bauer. The officers of the Association at that time consisted of the president, 5 vice presidents, a secretary-treasurer, and 7 "elective" members. This compares with the current council comprised of the president, president-elect, 4 vice presidents, 11 at-large members, 10 representatives from the constituent organizations, representatives from the Aerospace Medicine Regent and students, along with the executive director (14 individuals in 1929 compared with 31 today).

In recognition of the 75th anniversary we are working on a special issue of the journal that will focus on our history. What are some of the critical events that influenced aerospace medicine, both with respect to the scientific accomplishments and the organizational events? A major thrust of this special issue will be on the scientific contributions provided by the various civilian and military laboratories that have been involved during the 75-year history of the Association. I have already contacted some individuals who will be preparing articles for the laboratories at CAMI, the Institute of Aviation Medicine at Farnborough, the Defence Research and Development Canada (DRDC), and Brooks AFB. If you are interested in contributing please contact me as soon as possible to coordinate the preparation of your article. The deadline for the submission of these articles is October 31.

We have little time to relax and enjoy the success of this meeting and to reflect on the scientific and other information that was shared. We need to think ahead and plan for the next meeting that will be held in Anchorage, Alaska. Having served on the AsMA executive committee for several years, I am aware of questions that have been raised concerning our decision to hold the meeting in Anchorage. However, Dr. Rayman has already been working this past year to make contacts in Alaska and plan events that will ensure that we have a successful meeting. Dr. Bob Riggs, FAA regional flight surgeon in Alaska, who will chair the Arrangements committee this next year, along with his colleagues have already initiated efforts to develop local activities in conjunction with our meeting. Certainly for those of you who have not visited Alaska previously, there are a number of tours that will be available for you to see more of the state be-

fore or following our meeting.

We are also planning to include a scientific session that reflects on the nature of aviation in Alaska. Among the many stories told by old-time Alaskan pilots (pre-GPS) is that of the "Eskimo ADF." After the bush plane was loaded with supplies for a remote village located somewhere in a vast, unmarked tundra, three or four Inuits were brought aboard, one in the right front seat, the rest on top of the supplies. After a lengthy northern flight, often over featureless, snow-covered land, the heads of the quiet passengers turned in unison and looked downward. The pilot throttled back, executed a descending turn, and after a time, noted the dim outline of the destination landing strip. How did the natives know? Centuries of living in the vast Alaskan outdoors gave them a unique sense of orientation within their home environment. This is but one of the numerous aeronautic fables that await us at our May 2004 Alaskan scientific meeting. Thanks to Dr. Mohler for sharing the above anecdote.

### COMING SOON!

#### **AVIATION, SPACE, AND ENVIRONMENTAL MEDICINE IS GOING ONLINE !!!**

Full text articles with live reference links will be offered to members and subscribers starting with the August issue!

Visit our website in July to review the details.

### Award Nominations Sought for 2004

The Awards Committee of the Aerospace Medical Association, which is responsible for selecting the annual winners of special awards, has set a December 15 deadline for receiving nominations for awards to be presented at the 2004 Annual Scientific Meeting in Anchorage, AK.

The committee chair emphasizes, however, that the names of prospective award winners should be submitted as far in advance of the deadline as possible. Lots of time is needed to review all of the names and select the winners.

Nominations can be made by any member of AsMA.

The nominations must be submitted on forms available from the AsMA Home Office, and printed in the journal.

Nomination forms should be e-mailed to: verba.moore@langley.af.mil, and jcarter@asma.org; or mailed to:

**Chair, Awards Committee  
Aerospace Medical Association  
320 South Henry Street  
Alexandria, VA 22314-3579**

#### **Policies:**

1. The nominee must be a current member of the Association, except that the Sidney D. Leverett, Jr. Environmental Science Award is open to nonmembers. Deceased members may be nominated.
2. The Chair of the Awards Committee does not vote and is not eligible for an award during his/her tenure.
3. Employees of a company sponsoring an award are eligible to receive the award.
4. Awards involving a published paper will be made only to the senior author.
5. Unsuccessful nominees for an annual award will be retained in the active file through three award cycles.

**Please take the time to nominate a worthy colleague for one of our awards. Give them the recognition they deserve!**