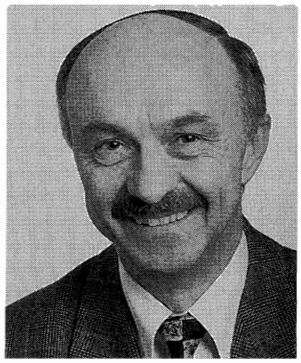
President's Page



Claude Thibeault, M.D.

Aerospace Medicine got a major boost recently. Indeed last November the International Civil Aviation Organization (ICAO) bestowed upon the International Academy of Aviation and Space Medicine (IAASM) the world's highest civil aviation distinction, The Edward Warner Prize. The prize was given in recognition of the Academy's outstanding contribution to the development of international civil aviation by its major accomplishments in aerospace medicine. Allow me to quote the ICAO president, Mr. Assad Kotaite: "Thanks to its efforts collectively and those of its members individually, the Academy has participated in the development of ICAO international standards, recommended practices and manuals in the field of aviation medicine, thus contributing to the recognition of this discipline as one of the key elements of international flight safety."

I don't know about you, but I am very impressed, and on behalf of the Aerospace Medical Association, I wish to warmly congratulate the Academy for such an honor. I am also very happy that this event will most definitely have positive fallout for all of us who practice aerospace medicine and related disciplines. As Dr. Balldin, the president of the Academy, said in his acceptance speech: "This award will be seen as a sign of the importance ICAO assigns to aviation medicine. The award will also help the operational civil aviation community and the regulatory authorities to better understand the importance of aviation medicine in increasing the safety of aircrew and passengers as well as individuals working with aviation-related occupations on the ground."

Since we are talking about ICAO, let me discuss one of their fairly recent preoccupations, and go from there to one of AsMA's accomplishments.

Until recently, ICAO was not willing to tackle any issue related to passengers that was not directly related to flight safety. For instance, there were a number of recommendations suggesting that ICAO get involved in issues such as air rage and cabin air quality; but, since the topics were not seen as directly related to flight safety, the Air Navigation Commission of ICAO did not pursue the recommendations. However, in the recent past, the wind seems to have shifted. In fact, in a speech at the ECAC/EU Dialogue with the European air transport industry on Air Passenger Rights, the Secretary General of ICAO, Mr. Costa Pereira, suggested that there may be a need for an "Air Passengers' Well-being Policy and Declaration." This is a major change of direction indicating that ICAO is now considering that several issues related to passengers' well-being may be, at least indirectly, related to flight safety and worth addressing. To this effect, a study group on unruly passengers has prepared a "Draft Model Legislation on Offences Committed on Board Civil Aircraft by Unruly or Disruptive Passengers." Furthermore, the president of the Council of ICAO put forth the suggestion that inherently human issues such as cabin air quality might be the object of formal standards. ICAO admits candidly that this implies a radical change in their approach, focussed resolutely on the passenger.

Where is AsMA's accomplishment in this? Well before ICAO accepted this recent challenge, well before the House of Lords published a report on the medical aspects of air travel, well before the US Congress requested a review of Airliner Cabin Environment and the Health of Passengers and Crew by the National Research Council and even before the manufacturers became seriously involved in passengers' comfort, AsMA had a very active committee on Passengers' Health that was producing panels, position papers and resolutions on several issues related to passengers' health. We should be very proud of this foresight and the recent events should only be one more incentive for us to continue our good work. We may not have been as vocal or as fast as we should have been, but I honestly believe this is also evolving in the right direction.

With the above in mind, we should always be reminded of our strategic position that can make or break us. Indeed, to retain our credibility and our effectiveness, we have to maintain a delicate balance between evidence-based recommendations and a practical approach. No science exists in a vacuum. Our resolutions and recommendations must take into account financial considerations, labor considerations and operational considerations without compromising science, safety and passengers and crew health. This is quite a tall order but if we do not respect this approach, our recommendations will fall on deaf ears and will be useless.

While there are purists who will advocate that our approach should only be dictated by science, my experience tells me otherwise and, after all, why should our approach be different than anywhere else in occupational or public health where the good practitioner takes all previously described elements in consideration before coming out with a reasonable, practical and sustainable recommendation? I truly believe we are now working in this fashion and that is why we are enjoying more and more credibility. Indeed, our opinion is not only being sought more and more, but is also well respected in all corners. Let's keep this up and who knows, we may also become a candidate for the Edward Warner Prize.

37th Annual Bauer Lecturer: Tom Crouch, Air and Space Museum Senior Curator

Tom D. Crouch, M.A., Ph.D., is Senior Curator of the Division of Aeronautics at the National Air and Space Museum. A Smithsonian employee since 1974, he has served both the national Air and Space Museum and the National Museum of American History in a variety of curatorial and administrative posts. Prior to coming to the Smithsonian, he was employed at the Ohio Historical Society as director of education (1969-73) and as Director, Ohio American Revolution Bicentennial Advisory Commission (1973-74).

Dr. Crouch holds a B.A. (1962) from Ohio University, an M.A. (1968) from Miami University, and a Ph.D. (1976) from the Ohio State University. All of his degrees are in history. He also holds the honorary degree of Doctor of Human Letters, conferred in June 2001 by the Wright State University.

He is the author or editor of a number of books and many articles for both popular magazines and scholarly journals. Most of his work has been on aspects of the history of flight technology. Crouch's leading books include: "The Bishop's Boys: A Life of Wilbur and Orville Wright" (New York: W. W. Norton, 1989); "Eagle Aloft: Two Centuries of the Balloon in America" (Washington, DC: The Smithsonian Institution Press, 1983); "Bleriot XI: The Story of a Classic Airplane" (Washington, DC: The Smithsonian Institution Press, 1982); "A Dream of Wings: Americans and the Airplane, 1987-1905" (New York: W. W. Norton, 1981); "The National Aeronautics and Space Administration" (New York: Chelsea House, 1987); "Apollo: Ten years Since Tranquillity Base" (Washington, DC: The Smithsonian Institution Press, 1979); " Charles Lindbergh: An American Life" (Washington, DC: The Smithsonian Institution Press, 1977); and " The Giant Leap: Ohio Aerospace Events and Personalities, 1815-1969" (Columbus, OH: The Ohio Historical Society, 1971).

Tom Crouch has won a number of major writing awards, including the history book prizes offered by the American Institute of Aeronautics and Astronautics and the Aviation/Space Writers Association. He received the 1989 Christopher Award recognizing "significant artistic achievement in support of the highest values of the human spirit," for "The Bishop's Boys: A Life of Wilbur and Orville Wright." Dr Crouch was awarded the Smithsonian Distinguished Lecturer Award in 2002.

In the fall of 2000, President Clinton appointed Dr. Crouch to the Chairmanship of the First Flight Centennial Federal Advisory Board, and organization created to advise the Centennial of Flight Commission on activities planned to commemorate the 100th anniversary of powered flight.

Throughout his career, Cr. Crouch has played a major role in planning museum exhibitions. He was involved in planning exhibitions for the Neil Armstrong Museum, Wapakoneta, OH, ; the Ohio Historical Center, Columbus, OH; as well as both the National Air and Space Museum and the National Museum of AMerican History. He takes particular pride in having served as the curator of "A More Perfect Union: Japanese Americans and the United States Constitution," which opened in October 1987 and remains on view today at the National Museum of American History.

Proposed Changes to the AsMA Bylaws

In accordance with Article XIII of the Bylaws of the Aerospace Medical Association, the following proposed changes to the Bylaws are printed herein. They will be voted upon at the next annual Business Meeting, to be held May 6, 2003, at the Gonzalez Convention Center in San Antonio, TX. Please note: The entire text of the Bylaws in available for download from the AsMA website: www.asma.org/organization.html

Change #1.

Current text:

Article IV. FELLOWSHIPS. D. Associate Fellow. (2)

Last sentence: The group shall meet annually and shall elect, during the Association's scientific meeting, its Chair-Elect and Secretary-Elect.

Proposed change:

The group shall meet annually during the Association's scientific meeting during which the election of officers will be announced.

Rationale:

The AFG has added a Treasurer-Secretary-Elect position in addition to Chair-Elect to those listed in the bylaws. They also conduct a mail ballot and no longer hold the election during the meeting. This change will allow the group to conduct elections before or during the meeting and the designated officers will be left up to the AFG and can be included as policy.

Change #2.

Current text:

Article IX. COMMITTEES. SECTION 3. Standing Committees. I. External Relations Committee : This committee shall be responsible for ensuring that the Association maintains an ongoing external relations program to further the interests of the Association and its individual members. Purposes of the external relations program shall be to increase the visibility of the Association, to allow the expertise represented by the Association to be applied in greater measure to national and international problems in aerospace medicine, to advocate aerospace issues in the public and private sectors, to maintain an effective working relationship with the aerospace industry and with allied professional organizations, and to promote outreach efforts presenting a positive image of the Aerospace Medical Association to the general public and to audiences representing likely sources of new members.

Proposed Change:

Delete entire paragraph and re-letter the remaining Standing Committees listed.

Rationale:

The external relations committee has been inactive for the past several years, and the functions have been done by other committees. This change was recommended by the Executive Committee of AsMA.

Change #3.

Current text:

Article IX. COMMITTEES. SECTION 3. Standing Committees N. Nominating Committee:

First part of the current text: Elected officers and the elective members of the Council shall be nominated by a Nominating Committee made up of the five most recent living Past Presidents of the Association and a representative selected from each Constituent Organization of the Aerospace Medical Association. The member who was President in the earliest year shall be chair of the committee. The President shall appoint another Past President to serve as chair if the Immediate Past President is unable or unwilling to discharge the associated responsibilities. A Past President who is unable or unwilling to discharge the associated responsibilities shall be replaced by another Past President who will assume seniority of the person replaced and will be appointed by the President.

Proposed change:

Second sentence (underlined)-- The Immediate Past President shall chair the committee.

Rationale:

Recommendation made by Executive Committee. There was confusion in wording between second and third sentences, and the Executive Committee felt the immediate Past President could better serve the organization as nominating chair instead of a Past President 5 years removed from the position.

Change #4.

Current text:

Article XII. FUNDING AND FINANCING. SECTION 2. Finances. B. Bond. The President, Secretary-Treasurer, and Executive Director shall furnish surety bonds in an amount determined by the Council, the cost to be paid by the Association. The Executive Director, Secretary-Treasurer, and Assistant Executive Director may sign checks.

Proposed change:

Change last sentence to read: The Executive Director, Secretary-Treasurer, and other bonded persons approved by Council may sign checks.

Rationale:

Since we currently do not have an Assistant Executive Director, and the Executive Director and Secretary-Treasurer are the same person, current practice is that the Administrative Assistant signs checks when Dr Rayman is not available. This change would be keeping with current practice and allow for changes to occur when titles change.

This Month in Aerospace Medicine History--February 2003

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

Introduction

It is no coincidence that this column was begun in the year prior to the 100th anniversary of the first sustained powered flight. The coming year will be exciting to us in our ever-increasing anticipation of the events celebrating that milestone in human history, culminating, of course, with a recreation of the Wright Brothers' historic flight at Kill Devil Hill on December 17, 1903.

It is amazing how primitive we were such a brief time ago, and yet how significant many of our discoveries and inventions were so long ago. And some issues have been around longer than you may think!

Seventy-five Years Ago

In February of 1928, Boeing Air Transport began West Coast passenger and airmail service between Oakland and Southern California (1). Boeing Air Transport was founded in 1926, and began carrying mail and passengers between Chicago and San Francisco the following year. After purchasing several other air transport companies, they became United Air Lines in 1931 (2).

Fifty Years Ago

1953 represented a significant year for Aerospace Medicine: "On February 8, 1953, the American Board of Preventive Medicine was authorized by the Council on Medical Education and Hospitals of the American Medical Association, upon the recommendation of the Advisory Board for Medical Specialties, to grant specialty certification to physicians who are properly qualified in aviation medicine. This is an epochal date in the history of the Aero Medical Association which, through the untiring efforts of its Interim Board, has sponsored the petition for formal recognition of this specialty by organized medicine."(3).

The issue of pilot aging is not new. "Dr. W. R. Stovall, President of the Association, has been empowered to appoint a Committee on Pilot Aging prior to the twenty-fourth annual meeting in Los Angeles in May... With 'pilot error' gaining common usage in the press of the country when airplane accidents are reported, the Association now is faced with a formidable task, and grave responsibility will rest on the Committee appointed by President Stovall."(4).

Lieutenant Colonel John P. Stapp, USAF (MC) was appropriately recognized. He "was named the 1952 recipient of the John Jeffries Award at the 21st annual meeting of the Institute of the Aeronautical Sciences... Riding a specially-constructed, rocket-propelled decelerator sled...he was exposed to forces as high as 45 G. The practical results of these experiments lie in improved safety harness, proper stressing of seats and gradual acceptance of the concept of having passengers facing backward."(5).

More emphasis was being given to "selective procedures of the neuropsychiatric, psychologic, and psychomotor types."(6). The USAF School of Aviation Medicine was looking at aeronautical adaptability by developing "a battery of selection tests which will predict personality adjustment to combat-flying duties. These selection tests...are designed to be administered as part of the medical examination at the time an individual applies for aircrew training... Psychiatric selection of flying personnel is *prognostic* rather than *diagnostic*. The fundamental problem is that of predicting the future adjustment to combat flying duties of an individual...prior to any experience by the individual in combat-flying situations."(7).

A new pressure suit was announced. "Doctors, engineers and technicians of the Aeromedical Laboratory [Wright Air Development Center, Dayton, OH] had to solve this problem [of ebullism] before progress could be made in developing the jet and rocket aircraft of the future required for this nation's security. It took these men six years to perfect the suit and helmet to do the job."(8). This was the advent of the T-1, High Altitude Suit, initiated in 1943 at the University of Southern California, led by Dr. J. P. Henry. The prototype had been delivered to Wright in 1946.

Some of the fears of breaking the sound barrier were discussed: "In July of 1952, the Navy's Skyrocket was reported to have flown 1,238 mph at an altitude of 79,494 feet... Apprehension as to the physical effects of passage through the sonic barrier has not been found justified. There is no distortion of vision due to a visible shock wave, and there have been no human pathological changes... At present we are trying to develop instruments which will electronically pick up physiologic responses and telemeter them to instruments on the ground."(9).

Pilot error was of growing concern, and contributed significantly to implementation of the standard "T" design of cockpit instrumentation. "Statistical analyses indicate pilot error to be the commonest cause of airplane accidents, but careful study reveals a wide variety of types of error... [M]ost involve mistakes in cockpit procedure or in the use of controls, or misinterpretation of instrument readings or warning signals... [C]areful analysis reveals that an earlier error had been made in design, making the pilot's error highly probable under some given set of conditions... [T]o maintain a sound man-machine relationship it is also necessary to analyze the qualities of the man... Within the past few months an industry group has recommended a standard instrument panel for commercial transports, and the Air Force and Navy have agreed on a common standard."(10).

Twenty-five Years Ago

The issue of pilot error, with a different solution, was revisited 25 years later in 1978. "The old concept of pilot error is now largely discredited as a meaningful and constructive description of an aircraft accident cause. It has gradually become understood that behind the so-called pilot error there was nearly always another human error a little further upstream... The most effective protection against the possibly catastrophic effects of the normal variability of human performance, and normal human limitations, is the use of the Standardized Operating Procedures and the unfailing use of the Checklist."(11).

Pilots' attitudes toward alcohol and flying were addressed by the University of Vermont. The questionnaire revealed that "[o]nly 12 pilots [of 341 returned surveys; 3.5%] reported having flown after drinking. Approximately 50% of the respondents indicated it would be safe to fly within 4 h after drinking some amount of alcoholic beverage. Based upon alcohol absorption and oxidation rates, it was estimated that 27-32% of the respondents considered flying after drinking, within a time period which would result in a 15mg% BAC or higher, to be safe behavior."(12).

The Civil Aeromedical Institute had this to say regarding student pilot anxiety: "The self-reported anxiety levels of student pilots receiving private pilot instruction entirely in an aircraft were compared to the anxiety levels of students who received a portion of their training in a ground trainer. It was found that experience in the trainer had little effect on student pilot anxiety. It was determined, however, that reported anxiety levels did vary as a function of the type of flight (solo, dual, or evaluation) undertaken."(13).

Cosmic radiation was considered by Air France: "The average amount [of cosmic radiation during 2642 Concorde flight hours] recorded was 0.99 mrems/h. A distinction must be made between the high latitudes (Washington route), on which an average dose equivalent rate of 1.49 mrems/h was recorded, and low latitudes (Rio de Janeiro and Caracas routes), on which the average dose equivalent rate was only 0.78 mrems/h. These figures...[are] very much lower than the maximum value recommended for the general public, which is 500 mrems per year."(14).

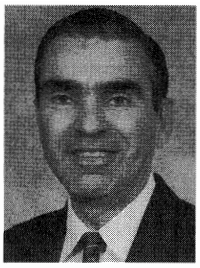
The Russians had this contribution for long-distance space travel: Two cosmonauts, "after spending 4 months in a special, hermetically-sealed apparatus called Biosatellite-3, recently stepped out of it in Siberia having covered a distance equivalent to that between Earth and Mars... The central feature of the experiment was controlled biosynthesis, an effective way of creating artificial ecological systems in, for example, a spacecraft sent out on a long journey... One of the major problems during extended flights is that of food ... The Bios-3 experiment...demonstrates vividly that a human being can spend long periods of time in a closed ecological system [as well as] man's ability to manage and run such a system."(15).

REFERENCES

1. Oakland, California Airport web site: http://www.oaklandairport.com/media_backgrounder.shtml
2. Airline Timetable Images web site: www.timetableimages.com.
3. Editorial comment: Board certification in aviation medicine. J Aviat Med 1953; 24:1-2.
4. Editorial comment: Committee on Pilot Aging. J Aviation Med 1953; 24:2-3.
5. Lieutenant Colonel Stapp given John Jeffries Award. J Aviat Med 1953; 24:28.
6. Groesbeck B. Medicine and Aviation. Medical Ann Dist Columbia 1953, 22(2):79-84.
7. Sells SB, Barry JR. A research program to develop psychiatric selection of flying personnel: 1. Theoretical approach and research design. J Aviat Med 1953; 24:29-35.
8. New high altitude suit for flying personnel. J Aviat Med 1953; 24:72, 76, 93.
9. Groesbeck B. Medicine and Aviation. Medical Ann Dist Columbia 1953, 22(2):79-84.
10. Steiglitz WI. Cockpit design and safety. Air Line Pilot 1953, 22(2):2-5, 13-15.
11. Wise words from a senior pilot. (from: Saftey [sic] in Flight Operations; Checklists and the Human Factor. Captain Frank Hawkins. Shell Aviation News, 1977; 442:20-2). Aviat Space Environ Med, 1978; 49:364.

See HISTORY, p. 194

Executive Director's Column



Rayman

Harmonization

Because of the internationalization of civil aviation, nations give allegiance not only to national regulatory authorities, but increasingly to regional regulatory authorities, such as the Joint Aviation Authorities (JAA) in Europe. And beyond that, the International Civil Aviation Organization (ICAO), although not a regulatory body, does expect its member states to adhere to its standards and recommended practices (SARPS). As might be expected, regulatory authorities have established their own policies and procedures consistent with their respective national requirements. Consequently, the rules of the game are sometimes at variance from nation-to-nation.

With the spectacular growth of aviation and its internationalization in recent decades, it has become clear that efforts have become necessary to reach some level of international standardization not only to enhance flying safety, but to facilitate international cooperation in civil aviation operations, including medical certification. As a result, national regulatory authorities throughout the world have been cooperating in an effort to standardize aviation policies and procedures. The buzzword for this process is harmonization.

To achieve harmonization, in the sense of universal agreement, those at the table would have to be willing to compromise on some of the issues. Although this is a worthy objective, is it possible in a world with far more discord than harmony? It would seem to this writer that only in a perfect world would this be achievable. Rather, these efforts are more likely to be trumped by legitimate differences of medical opinion, political realities, and economic factors. The former is particularly compelling because many aeromedical decisions are based on best medical judgment and are not data driven nor evidence based. And even in those cases where there are data and evidence, there still must be a certain willingness to take risks -- and this willingness will surely vary between regulatory agencies. For example, does everyone agree to the 1% rule? And where there is judgment, there will always be disagreement.

In aviation medicine, differences of opinion abound, particularly in the area of medical certification. For example, some believe age restrictions are necessary while others have more liberal views. Some advocate screening tests, e.g., cholesterol, be included with the periodic medical examination, while others advocate only those tests directly related to flying safety. Some regulatory authorities require a periodic chest X-ray, a baseline EEG, or pulmonary function tests, while others do not. Some disqualify aircrew with WPW syndrome, while others do not. This list of differences could go on for many pages. To expect the aviation medicine community to reach full agreement on these and many other controversial issues seems unachievable. The best we can do is reach agreement up to a point; but beyond that, we must recognize that there will be some divergence. Does this mean that harmonization is doomed to fail?

It might fail if universal agreement is an uncompromising objective. However, harmonization does not necessarily have to mean full agreement. As in music, a little discord makes the music more interesting and more challenging to the ear. I would think that a little discord in aviation medicine is tolerable and would not adversely affect flying safety, especially regarding issues with reasonable arguments to support opposing views.
I would further argue that medical regulatory authorities should respect (and recognize) the policies of other medical regulatory authorities, even if there are differences. Respect and recognition are the true hallmarks of harmonization -- and this is achievable.

The South African Society for Aerospace and Environmental Medicine Meeting

The 15th biennial South African Society for Aerospace and Environmental Medicine (SASAEM) met in the Sheraton Hotel and Towers in Pretoria, South Africa, 7 - 10 November 2002. The President of SASAEM and presiding officer was Major General (Dr.) Kenneth A. Ingham (Ret). The meeting was attended by approximately 80 SASAEM members including several from neighboring countries. The theme of the Conference was Fit to Fly.

Dr. Ingham and his staff organized an excellent scientific program in keeping with the chosen theme. Among the many papers presented were psychological wellness, hearing, HIV, and visual problems associated with high altitude flying. There were also a number of interesting clinical presentations including hyperbaric oxygen therapy, left bundle branch block, and altitude decompression illness.

The academic program also included presentations given by six students enrolled in the University of Pretoria Bachelor of Science Program in Aviation Medicine. As part of the meeting, the students underwent oral examinations and were evaluated for their presentations at the conference. Two speakers shared recognition for the best paper presented. Lt. Col. (Dr.) W. Murray, presented a paper on "Comparison of G Force Distribution; the Centrifuge vs. The Cockpit" and Ms. Karen Sharwood presented "Resting and Exercising Heart Rate Before, During, and After a 10-Day Space Flight." Ms. Sharwood is a biokineticist who was instrumental in training space tourist David Shuttleworth for his flight on the International Space Station.

One talk given by a senior airline pilot was particularly interesting. It was entitled, "Why Pilots Don't Like (hate) Doctors." It gave physicians in the audience considerable insight into the problems of the pilot/fight surgeon/AME relationship, sometimes humorously. In addition, the parents of the world's second space tourist, Mr. Mark Shuttleworth, were in attendance and gave a fascinating talk at the closing banquet describing their adventure and their son's adventure during the year of training in Russia, as well as during the flight itself.

Although not part of the meeting itself, a Road Show was organized by a special committee whereby talks were given on aviation medicine subjects at various locations in South Africa and neighboring Namibia. The major purpose for this Road Show was to garner increased interest in aerospace medicine within the medical communities of both countries. Dr. LeRoux, a graduate of the Wright State University residency program, did an outstanding job on the Road Show. He serves as Head, Aerospace Medicine, School of Medicine, University of Pretoria. Also serving on the Committee were Dr. Stoner (Capetown), Dr. Estie Maritz (Namibia), and Dr. Wannenberg (Durhan).

The SASAEM meeting was extremely well organized and held in an outstanding venue. South Africa is a beautiful country and one which is well worth the visit. The International Congress of Aviation and Space Medicine is scheduled for South Africa in 2004, although the exact location has not yet been finalized. In any event, AsMA members should make every attempt to attend this meeting. Besides the academic program that promises to be outstanding, one can also experience the special magic of Africa. (Pre- and post-conference safaris can be organized upon request.)

HISTORY, from p. 193
12. . Damkot DK, Osga GA. Survey of pilots' attitudes and opinions about drinking and flying. Aviat Space Environ Med 1978; 49:390-4.
13. Smith RC, Melton CE Jr. Effects of ground trainer use on the anxiety of students in private pilot training. Aviat Space Environ Med 1978; 49:406-8.
14. Lavernhe J, Lafontaine E, Laplane R. The Concorde and cosmic rays. Aviat Space Environ Med 1978; 49:419-21.
15. Ivanov B, Bogdanovsky G. Four months under space-simulated conditions. Aviat Space Environ Med 1978; 49:437-8.

Space Medicine Branch Youn Investigator Award

The Space Medicine Branch's Young Investigator Award is presented to a young investigator who is the primary author of an outstanding presentation in the area of Aerospace Medicine presented at the current Annual Scientific Meeting of the Aerospace Medical Association. In addition to being the primary author, the work must be original and the young investigator must be presenting at the Annual Scientific Meeting for the first time. The Award is intended to encourage young investigators new to the field of Aerospace Medicine.

The applicant must submit a draft manuscript if their presentation to the chair of the Young Investigator Award sub-Committee. To be considered for the 2003 award, manuscripts must be submitted by the end of March, 2003 to:

K. Jeffrey Myers, M.D.
Space Medicine Branch
Young Investigator Award Chair
P.O. Box 540305
Merritt Island, Florida 32954
Phone: (321) 867-2026
jeffrey.myers-1@kmail.ksc.nasa.gov

Science & Technology Watch

Keeping You Informed of the Latest Advances in Science and Technology

In this column, we typically provide you with information on new technologies to improve the ability of the aeromedical community to fulfill its role. There is a practical need for taking those technologies and providing the requirements necessary to transition them into use by the warfighters. USAF Human Systems Program Office provides this role. In this month's column, we highlight a few of their key developmental programs and provide you with points of contact to receive more information.

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Updates on Human Centered Research and Development Acquisitions

Andrew Tong, Col, USAF, MC, CFS,
Brooks City Base, San Antonio, TX

The USAF Human Systems Program Office (SPO) is an integral part of the 311th Human Systems Wing based on Brooks City Base, San Antonio, TX. The SPO is dedicated to maximizing DoD's "bang for its buck" through Human Systems applications. Using the latest technological developments in human integration, the SPO provides advanced performance, survival, and force protection capabilities to US and allied air, ground, and naval forces through development, production, and sustainment of human-centered systems. This includes life support; chemical, biological, radiological, and nuclear defense (NBC); aeromedical services; USAF uniforms; mishap analysis; and medical information systems. The SPO is comprised of civilians as well as active duty military members. SPO professionals include acquisition specialists in program management, testing, engineering, contracting, finance, and human factors experts.

The SPO currently manages over 50 programs, projects and tasks with a budget that exceeds $2 billion annually. In addition to aeromedical services acquisition and NBC protection, the SPO sustains over 12,000 fielded items such as parachutes, flotation equipment, egress systems, radios, and beacons. The SPO's Life Sciences Equipment and Materials Laboratories support the POW/MIA accountability program, aircraft mishap investigation, and life support equipment testing. The SPO's Aeromedical Device Testing Branch qualifies medical devices for safe fielding on aircraft.

The **Aircrew Laser Eye Protection** (ALEP) program is developing spectacles to protect aircrew from the harmful effects of lasers. Lasers have become commonplace in the 21st century battlespace. Increased proliferation and fielding of lasers in a multitude of military capacities had led to increasingly unacceptable threats to aircrew health and effectiveness. In 2000, the Air Force Special Operations Command identified an urgent need for laser eye protection. The SPO successfully rushed laser eye protection to AFSOC within 5 months, leveraging available organic and allied technologies. In addition to AFSOC aircrew, other AF units and units from other services were successfully protected against laser threat to aircrew health and effectiveness through this rapid fielding of the latest available laser eye protection technology. The SPO has an ongoing spiral development and acquisition program to reach beyond existing science and technologies to manufacture and deploy additional laser eye protection devices against a large spectrum of laser threats that the 21st century aircrew may encounter in the battlefield. For more information, contact Mr. Gary Trammel at gary.trammel@brooks.af.mil

The **Deployable Oxygen System** (DOS) program is a forward looking approach to improve the capabilities of the current aeromedical oxygen systems. It seeks to provide a man-portable package that generates gaseous and liquid oxygen in the field hospital environment as well as in the aeromedical evacuation arena. Conceptually simple, the DOS program pursues a classic modular acquisition strategy to address the three separate major arenas of technological challenges. The overall program utilizes: 1) Deployable Oxygen Generation System for storage in gaseous form or for delivery to patients; 2) Deployable Oxygen Liquefaction System to generate liquid oxygen for storage and for onloading to existing aircraft oxygen systems; and 3) Next Generation Portable Therapeutic Liquid Oxygen System tailored for the aeromedical evacuation mission for man portable capability. This ongoing program has successfully met several key challenges.

The **Remote Casualty Location and Assessment Device** (RCLAD) program seeks to exploit the latest advances in radar technology to allow search and rescue personnel find and assess key vital signs of victims that may be obscured from view. This one-person portable, hand held device will greatly empower rescuers and medics in the field. For more information on DOS and RCLAD, contact Colonel Daniel K. Berry at daniel.berry@brooks.af.mil

The **Chemical and Biological Aerosol Warning System** (CBAWS) is an ingenious product developed by the USAF Force Protection Battlelab (AFFPB). The AFFPB integrated a number of commercial, off the shelf technologies and products to create this light weight, highly mobile tool for the forward deployed biomedical engineers. There are several traditional, joint acquisition programs addressing the military's needs for chemical/biological (CB) advanced warning systems. However, CBAWS may be currently the only lightweight, rapidly deployable detection network that is of sufficient technical maturity for fielding. When successfully fielded, this system promises to provide warning of CB attacks in a timely fashion that would allow troops to don protective gear or seek shelter. The basic CBAWS configuration can be transported on only one-third of a standard pallet and set up by a crew of two in a minimal time span. The SPO's requirements group stepped up to the task of nurturing this laboratory invention into the mainstream acquisition process by engaging potential users and start-up funding sources. The SPO hopes to help CBAWS reach maturity by addressing crucial contractual and logistical needs. For more information, contact Lt. Samuel Duff at Samuel.duff@brooks.af.mil

Readers of this column may be interested in the SPO's laboratories and Test Branch. The SPO has two laboratories and one test branch. The Life Sciences Equipment Laboratory (LSEL) investigates aircraft mishaps and provides technical reports to the mishap board. This lab also assists investigation teams in determining the status of warfighters missing in action, providing meaningful answers and necessary closure for concerned families. The Materials Laboratory (ML) provides quality assurance testing of life support equipment and materials. This lab verifies all pre-production first articles prior to manufacturing. Other capabilities include metrology (specialized measurement), metallurgy, and nondestructive inspection. The Aeromedical Test Branch (ATB) takes a leading roll in ensuring that medical devices used for aeromedical evacuation operate safely in the harsh aircraft environment and will not interfere with the aircraft's performance and functions. For more information on LSEL and ML, contact Ms. Linda Hamilton at Linda.Hamilton@brooks.af.mil. Contact Major Paul Driessen at paul.driessen@brooks.af.mil for more information about ATB.

Colonel Albert F. Burnett leads the Human Systems Program Office. Colonel Burnett can be reached via email at albert.burnett@brooks.af.mil. The SPO's centralized telephone number is 210-536-3475.

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The AsMA Science and Technology Committee provides this Science and Technology Watch Column as a forum to introduce and discuss a variety of topics involving all aspects of civil and military aerospace medicine. The Watch can accommodate up to three columns of text, which may include a figure or picture to illustrate your concept.

Please send your submissions via e-mail to: ShenderBS@navair.navy.mil

Call for Papers NAMA Conference 2003

You are invited to submit and present paper(s) for the 7th Nordic Aerospace Medical Association (NAMA) Scientific Meeting which will be held June 14-15, 2003 in Helsinki, Finland. Olavi Hämäläinen, MD, PhD, is chairman of the conference: Olavi.Hamalainen@finnair.com.

7th NAMA conference will be held at Hotel Scandic Continental: http://www.scandic-hotels.com.

Deadline for paper title and abstract is March 30, 2003. Abstracts should be maximum of 200 words and presentation time is 25 minutes plus 5 minutes for discussion. Acceptance of abstract will be informed by e-mail May 11, 2003. The Chairman of the session is the presenter of the last paper in the session. Send abstracts to Tuomo Leino, MD, PhD: tuomo.leino@oulu.fi

Aerospace Medical Association

Corporate and Sustaining Members

The financial resources of individual members alone cannot sustain the Association's pursuit of its broad national goals and objectives. Its more than half-century history is documented by innumerable medical contributions toward flying health and safety that have become daily expectations by the world's entire flying population—commercial, military, and private aviation. However, support from private and industrial sources is essential. The following organizations, who share the Association's objectives or have benefitted from its past or current activities, have affirmed their support of the Association through Corporate Membership.

Aeromedic Innovations
Air Canada
Air Line Pilots Association
Air Methods Corporation
AirSep Corporation
American Airlines, Inc.
AMST Systemtechnik Ges m.b.H.
ASM--Austrian Society for Aerospace Medicine
AstraZeneca Pharmaceuticals LP
Autoflug Libelle GmbH
Aventis Pharmaceuticals
Aviation Medicine Center at UTMB

Baxter Healthcare Corporation
The Boeing Company

David Clark Company, Inc.

Education Enterprises, Inc.
Environmental Tectonics Corporation
Essilor of America/Varilux

Gentex Corporation
GlaxoSmithKline

International Federation of Air Line Pilots Associations

Japan Airlines

Latecoere International, Inc.
Lockheed Martin Corporation

Mayo Clinic
MedAire, Inc.
MEDJet International, Inc.
Medtronic Physio-Control
Monash University/Alfred Hospital

National Air Ambulance, Division of National Jets, Inc.
Northrop Grumman Life Support

OSU-College of Osteopathic Medicine

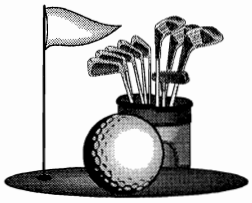
Pilot Medical Solutions, Inc.

Scandinavian Airlines System
Schering-Plough Corporation
Science Applications International Corporation (SAIC)
17 Wing Medical Clinic
Stereo Optical Company, Inc.

The First Call

United Airlines
United States Aviation Underwriters
Universities Space Research Association (USRA-DSLS)

Harvey W. Watt & Company
World Aviation Systems. Inc.
Wound Specialty Associates, P.A.
Wyle Laboratories, Inc.



Sports Activities at the 74th Annual Meeting in San Antonio

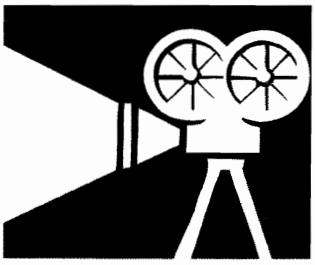
Golf Tournament--

We will be having the golf tournament Sunday morning, May 4, at Brooks Golf course. Start time will be at 9 AM. Cost will be $25 which will include green fee, cart rental, and entry, there will be an additional club rental fee which is about $5. The prizes will be awarded at the course after the tournament and all will be completed in time to get everyone back to the reception that evening. Transportation will be provided from the downtown hotels and we will also give folks a chance to stop by the Hangar 9 site if they desire. To sign up send checks made out to: Chris Kleinsmith, ASMA Golf Tourney, 434 Chimney Tops, San Antonio, TX 78258; chris.kleinsmith@brooks.af.mil

Annual 5k Fun Run--

The Fun Run will be held on Monday at 7 a.m. on the Riverwalk. (No buses!) The course will be professionally marked. The $10 fee includes a T-shirt!

Classic Aviation Films Series:



Lunch-Time Program

Monday, May 5
"The Sound Barrier" 1952. 111 min.
Starring Ralph Richardson, Ann Todd
Based on a true story line about Geoffrey de Havilland. Attempt at being the first to break the sound barrier.

Tuesday, May 6
"Reach for the Sky" 1956. 136 min.
Starring Kenneth Moore, Muriel Parlow.
Story of Douglas Bader, who lost both legs in a pre-WWII aerobatic accident, went on to be a fighter pilot and a quadruple "Ace." Spent time in Germany as prisoner of war. Led 300 aircraft in 1945 victory fly-over of London, flying a lone Spitfire.

Wednesday, May 7 (Wed.)
"The Eagle and the Hawk." 1933. 73 min.
Starring Cary Grant, Carol Lombard.
WWI air combat pilot develops depression.

Thursday, May 8
"Things to Come" 1936. 120 min.
Starring Raymond Massey, Margaretta Scott.
Prophecies by H.G. Wells: 1936-2036. Predictions of War, Space Travel.

The History and Archives Committee is sponsoring this lunchtime film program. The program is made possible by the kind offer of films for showing by Dr. Richard Jennings.

Send information for publication on this page to: **CDR Russ Lawry**
Safety Division (SDM-3), HQMC
2 Navy Annex
Washington, DC 20380-1775
lawryrs@hqmc.usmc.mil

Air Force Aerospace Physiology Program

The mission of the Aerospace Physiology Program is to design and execute proactive programs to successfully counter physiological and human performance threats, to enhance health and safety, and maximize war fighter readiness and combat effectiveness. This enhanced mission started with the reengineering of Aerospace Physiology in 1998 to be more responsive to aircrew training needs and expand human performance enhancement training to ground support personnel. Human Performance Training Teams were assigned to all Air Force operational flying wings to provide "just in time" training to aircrew and human performance training to all war fighters. These training teams compliment, not replace, more traditional Aerospace Physiology courses.

Air Force Aircrew Aerospace Physiological Training courses are carefully tailored to meet the flight safety needs of modern crews in high performance aircraft. Two significant improvements make these courses more effective. First, two traditional courses (initial and refresher) were replaced by standardized curriculum tailored to many aircrew specialties. Our numerous courses ensure pilots, high altitude parachutists, flight nurses, loadmasters, and passengers, just to name a few, get the training they need to successfully perform their flying missions. Secondly, every course is based on Air Force Safety Center mishap data identifying the threats that need to be addressed in our Aerospace Physiology courses. The lessons learned from real aircraft mishaps are our most valuable training aids. Beyond training, our direct mission support increases the effectiveness and safety of our crews in flight.

The High Altitude Reconnaissance Mission Support Program is the mission of 9th Physiological Support Squadron (9th PSPTS) at Beale AFB, CA. Over a hundred Aerospace Physiology technicians and officers provide direct support to the pilots of the U-2, high altitude reconnaissance aircraft. Flying routinely above FL700, the pilots are protected by a full pressure suit in the event of an aircraft decompression. The highly trained personnel of the 9th PSPTS inspect and maintain the full pressure suits. They train the U-2 pilots on this unique life support equipment and integrate those pilots into the full pressure prior to each high altitude mission. The national security mission of the U-2 reconnaissance aircraft requires worldwide deployments of physiological support personnel to support pressure suit operations. A second combat mission also requires the high altitude expertise of Air Force Aerospace Physiology personnel.

Dating back to the Vietnam War, Aerospace Physiology personnel are tasked with in-flight duties supporting High Altitude Airdrop Missions in cargo aircraft unpressurized above FL180. They prepare the aircrew for these hostile missions by inspecting their oxygen systems and briefing the prevention of physiological problems, including hypoxia, hyperventilation, trapped gas problems and decompression sickness. They monitor the in-flight status of high altitude parachutists and aircrew to look for physiological problems. Aerospace Physiology technicians ensure appropriate denitrogenation (prebreathing 100% oxygen) schedules are met to prevent decompression sickness. They are trained to manage emergencies and advised the aircraft commander on appropriate actions. Aerospace Physiology personnel have supported all high altitude airdrop contingencies including the recent humanitarian airdrop in Afghanistan.

With the recognition that the human system is the most critical factor in our advanced weapon systems, Aerospace Physiology personnel will remain engaged in many aspects of human performance. Optimizing human performance requires integrating human performance issues into training, research, development, weapon system interface, and operational evaluation of weapon systems, resulting in a broad spectrum challenges for the Air Force Aerospace Physiology Program.

MEETINGS CALENDAR

February 19–23, 2003, San Diego, CA. The American College of Preventive Medicine presents, Preventive Medicine 2003. Info: www.PreventiveMedicine 2003.org; or Maureen Crane (202) 466-2044, ext. 103.

March 20-22, 2003, Galveston, TX. "Pushing the Envelope V–Medicine in Extreme Environments," sponsored by University of Texas Medical Branch, Department of Preventive Medicine Residency. Infor: www.utmb.edu/pte

March 30 - April 3, 2003, Tel Aviv, Israel. Global Asthma Conference--Interasma 2003. Contact: Israel Glazer, M.D., P.O.Box 60008, Tel Aviv 61500, Israel; asthma@ kenes.com; www.kenes.com/interasma.

April 11 - 13, 2003, Telford, UK. Association of Authorised Medical Examiners Annual Scientific Meeting. International Centre, Telford, West Midlands, UK. Info: enquiries@aame.co.uk

May 4-8, 2003, San Antonio, TX. 74th AsMA Annual Scientific Meeting, Convention Center. Info:320 S. Henry St., Alexandria, VA 22314; phone: (703)739-2240; www.asma.org.

May 7-11, 2003, New York, NY. International Socciety of Travel Medicine Conference. Info: Lisa Astorga, lastorga@talley.com; web site: www.istm.org.

June 14-15, 2003, Helsinki, Finland. 7th Nordic Aerospace Medical Association (NAMA) Scientific Meeting. Contact the Chair, Olavi Hämäläinen, MD, PhD.: Olavi.Hamalainen@finnair.com.

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

October 5-9, 2003, Madrid, Spain. 51st International Congress of Aviation and Space Medicine. Organized by The Spanish Society of Aerospace Medicine under the auspices of the International Academy of Aviation and Space Medicine. Secretary of the Congress: Sandra Ruis, C/ Hermosilla no. 30, 6a Planta, 28001 Madrid, Spain; www.icasm2003.org.

AsPS WEBSITE

Visit us online at our website, www.aspsociety.org, where you can register for membership, update membership information, contact society officers and committee chairs, learn about certification in Aerospace Physiology, vote for society officers, read about society awards and more.

Aerospace Physiology Certification

The Aerospace Physiology Certification Board of the Aerospace Medical Association will administer the certification examination at the 74th Annual Scientific Meeting in San Antonio, TX on Sunday, May 4, 2003.

Individuals interested in certification should refer to the December 2002 issue (p. 1246) for more information.

Application must be made prior to March 1, 2003, to assure consideration for the 2003 examination. Applications received after that date cannot be guaranteed consideration for the 2003 exam. Any late applications not considered for 2003, will automatically be held in abeyance for consideration for the 2003 exam.

To obtain an application form and complete information about certification requirements, submit a short biography describing your relevant background in aerospace physiology, and request for information to the Chair of the Admissions Committee:

Mr. Brian D. Swan
6464 Lake Charlene Ct.
Pensacola, FL 32508
bswan@nomi.med.navy.mil

Send information for publication on this page to: **Elina Takahashi**
40 Wallford Way
Ottawa, Canada, K2E-6B6
elinatakahashi@sympatico.ca

Honorary Member

It's that time of year for submitting candidates for the Honorary Member of the Wing of the AsMA. Due to special circumstances the December 1st deadline has been extended to February 15, 2003. The guidelines for nominating candidates are as follows:

-Candidates must be submitted with accompanying biographies to the Honorary Member Committee Chair by February 15, 2003. Nominations can be mailed, faxed, or e-mailed to the addresses stated below.

-Biographies should contain information that clearly indicates the nominee is a woman who is distinguished in the field of aviation medicine, aeronautics, or related activities which could include areas of education and operation..

-Biographies should include the nominee's name, current address, professional membership organizations and affiliations, and any other information which might assist the committee in its consideration.

-Any Wing member may submit a nomination. All nominations will be considered for a period of 2 years.

Please send nominations and biographies to the Chair.

Joan Marinelli
3512 Alma Ave.
Manhattan Beach, CA 90266
FAX 310-680-8585
E-Mail lmjtm@earthlink.net

Travel Tips

The San Antonio Airport has posted these travel tips on its website. Following them will speed you on your way.

" Before you leave for the airport check with your travel agent or the airline to see of any last minute schedule changes have been made.
" Arrive at the airport two hours prior to your departure.
" Only immediate drop-off and pick-up of passengers is allowed at curbside
" Make sure you have no knives, scissors or sharp items in your luggage.
" Tag each piece of luggage inside and out. (Tags are available at airline ticket counters.)
" Have photo identification ready for security staff.

Member News

Janet Perry's daughter, Helen, gave birth to a daughter a few months ago. Ian and Janet are ecstatic to have a 7th grandchild. The Perrys attended an AOPA EXPO in Palm Springs recently and saw 700 Native Americans perform in a dance competition. "It was amazing," Janet said. "We should arrange a [Wing] meeting around a PowWow."

Judy and Mike Waring's son Matt married Carrie Close on October 25th in a small ceremony in West Chester, PA. Later the couple renewed their vows in the same church were Judy and Mike were married in 1968. "It's not many brides who get to wear their wedding dress twice," Judy said, and not "many grooms who get two chances to nervously wait at the altar for their bride." Matt and Carrie are both pilots for Continental Express flying 37-passenger and 50-passenger regional jets.

Sally Ward sold her travel agency last year. "After 15 years of ownership and a few more in the industry I could see the handwriting on the wall and that the changes in the travel industry were coming faster than I wanted to cope with." She stayed at the agency for almost a year to help out the new owner and is now "foot-lose and fancy-free." Last January Sally and Chester went on a cruise to Antarctica and have now visited all seven continents.

Lady Mary Baird's husband, John, fractured his ankle while on a bird watching trip in Madagascar. The fracture was so bad that he was unable to leave Madagascar for 10 days. Orthopedic surgeons had a difficult time reducing and plating the fracture since it was a 12-day-old injury by the time he reached the OR. "The bossy Nurse Baird is in charge," Mary wrote, "and I think his occupational therapy will take the form of copper and silver cleaning!" Mary continues to work with the Macmillan Cancer Relief and Friends of Croylands, which supports local people with long-term mental health problems.

Susi Bellenkes spent the summer renovating her father's vacation home in the Tyrolean mountains. Previously used as a summer home for 100 years, Susi is doing a total renovation and plans to open the home as a Bed and Breakfast. Meanwhile, her pet portrait business is thriving. Susi's husband Andy has accepted a position with the Office of Naval Research in Arlington, VA, so they will moving back East in June or as late as October. "We will drive the 3,500 miles with two cars and a screaming cat!" she said.

Lois Moser had shoulder surgery in June. She and Royce are looking forward to returning to San Antonio for the AsMA and Wing meetings. "It doesn't seem like it was that many years ago that I was working with Rufus Hessberg and doing arrangements for President Joan Marinelli when the meeting was held in San Antonio for the first time," she said. "That was in May 1981!"

Judy Kowalsky and her husband Nestor attended the International Congress meeting in Australia. "I still have a warm glow from that time ," she said. "I saw relatives I hadn't seen in years, and many I had never met." She continues to work as a behavioral health nurse and volunteers with bereavement groups at a hospice.

Jean and Frank Pettyjohn attended the American Heart Association cardiology meeting in Chicago and had chance to visit the Art Institute of Chicago. The highlight being the Monet exhibit. If you are in Chicago do not miss it!

Joy and John Ernsting will be in the US in May a few weeks before the ASMA meeting in San Antonio and will be staying at the Pettyjohn beach house in Sea Grove Beach, FL, for a change in weather after a winter in the UK.

Condolences

The Wing has received word from **Mariwade Douglas** saying her son Wade died suddenly on October 20, 2002. Wade had Crohn's Disease and previously undiagnosed leukemia. Mariwade said her son had been helping her jump-start her car on Oct. 15th and was hospitalized on the 17th. Many of us got to know Mariwade when she was editor of the Wing page for six years and compiled the scrapbooks. We send loving condolences to Mariwade and her family.

AsMA Future Meetings

May 4-9, 2003
Convention Center
San Antonio, TX

May 2-7, 2004
Egan Convention Center
Anchorage, AK

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

Join the Wing!

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

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

Dr. Olaf Skjenna, a Fellow of ASMA, recently taught his 101st course in Aircraft Accident Investigation at the University of Southern California. His first book, Cause Factor: Human, was used as a textbook in the faculty. He also taught for 12 years at the Royal Technical Institute in Sweden on their annual Aviation Safety and Accident Investigation courses until the cessation of the program this year. He is currently President of Sontex Health Services Ltd., an Ottawa company that delivers health and safety services to business and industry in Ontario, Canada.

Obituary Listing

We have just learned that Col. Manuel V. Olympia, Jr., MC, PA, of the Philippines passed away September 24, 2001.

New Members

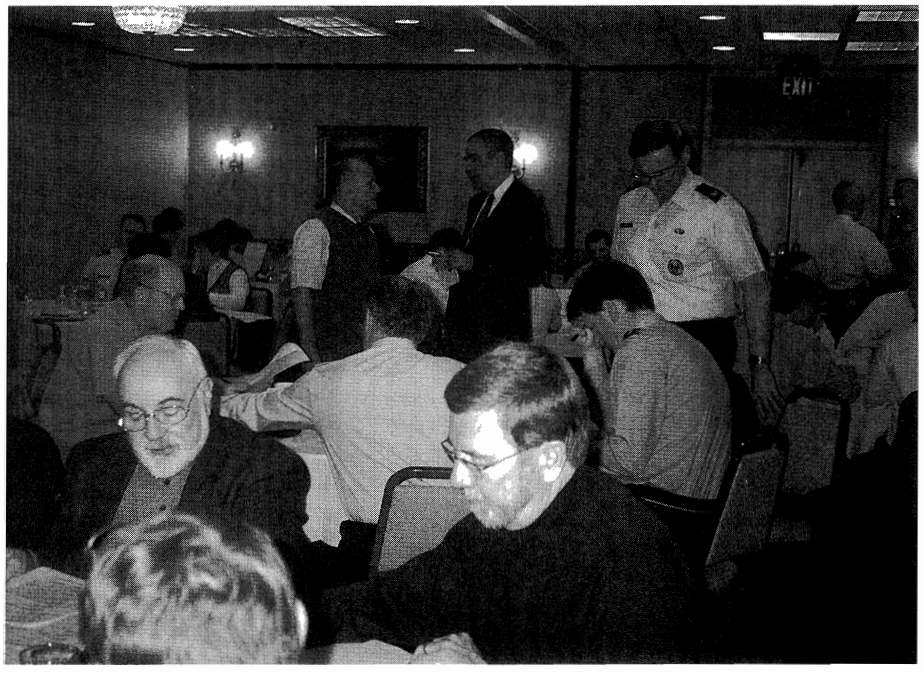
Cho, Won-Suk, M.D., Galveston, TX
Cole, James D., M.D., Sioux City, IA
Cucuzzella, Mark T., Maj., USAF, MC, Denver, CO
Gloss, David S., M.S., New Orleans, LA
Glushak, Cai, M.D., Chicago, IL 60640
Hancock, Peter A., Ph.D., Orlando, FL
Haynes, Carolyn K., M.D., Universal City, TX
Helt, Donald G., Ph.D., Staten Island, NY
Kreseen, Stephanie M., Fairfax, VA
McGuire, Michael R., M.D., Roswell, NM
Paulding, Timothy R., Maj., USAF, MC
Ryan, Michael J., TSgt., USAF, San Antonio, TX
Wolf, Michael J., M.D., Psy.D, Newport Beach, CA

International New Members
Abrahamsson, Thomas, M.D., Eskilstuna, Sweden
Barr, Yael R., Petach Tikva, Israel
Coetzee, Johann J. L., Prof., Gauteng, South Africa
Gorenewald, Andre J., M.B.,Ch.B., Umhlanga Rocks, South Africa
Hoar, Deborah H. M., M.B.,Ch.B., FRCS, Bristol, United Kingdom
Naddeo, Flavid, M.D., Salerno, Italy
Pesebre, Rolando A., Riyadh, Saudi Arabia

New Member Dues

Regular Member	$195
Student/Resident	$60
International Member w/Rapid Delivery	$220
Member & Spouse	$250
3-Year Membership	$470
Life Member	$2925
Technician	$85

For more information, contact the Membership Department at (703) 739-2240; Gloria Carter: ext. 106, gcarter@asma.org; or Sheryl Kildall: ext. 107, skildall@asma.org



SCIENTIFIC PROGRAM COMMITTEE MEETS--The Scientific Programm committee met on November 21 and 22 to peer-review the abstracts for the upcoming 74th Annual Scientific meeting. More than 80 members came from all over the world to participate in the activity.

CLASSIFIED ADS

CERTIFICATE OF KNOWLEDGE IN TRAVEL MEDICINE EXAMINATION---The International Society of Travel Medicine (ISTM) will offer a Certificate of Knowledge in Travel Medicine examination in May 2003, before the opening of the 8th ISTM Conference in New York City, May 7-11. For more information: www.istm.org.

Home Office Information

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Fax: (703)739-9652 or (703)739-9875
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Sheryl Kildall, Assist. Membership
Ext. 107; skildall@asma.org
Journal Department
Pamela Day, Managing Editor
Ext. 101; pday@asma.org
Heather Crain, Editorial Assistant
Ext. 102; hcrain@asma.org

Membership Directory is now ONLINE!!!

Go to the website at www.asma.org and click on MEMBERS ONLY!
The site is secure and requires a password. Contact Gloria Carter to receive your password or change your information in the Directory: gcarter@asma.org.

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