

President's Page

This is my penultimate President's Page, and there are many issues that I would like to share with you, including some AsMA developments, aviation and space-related news, as well as some personal experiences. I sincerely hope and wish that none of our colleagues and their families were personally impacted by the tsunami that affected many coastal areas in several countries. AsMA contributed to the relief effort by providing a monetary donation to the International Red Cross. This catastrophic event emphasized, once again, the critical role of air transportation for the effective and efficient mobilization of human resources, supplies, and equipment. It is very satisfying to know that our professional efforts and dedication in support of aviation contribute directly or indirectly in assisting people in other meaningful ways.

I am writing this page while I prepare for the next AsMA Executive Committee meeting that is scheduled for February 24, 2005. We will have a very busy agenda. We are planning to discuss the status of the AsMA Strategic/Business Plan initiatives, including our financial plan and investment strategies, the mentorship program, the redesign of our webpage, position papers and resolutions, membership growth, continuing education programs, national and international outreach activities, aerospace medicine advocacy efforts, etc. In my final President's Page, I will share the outcomes of our meeting and provide a progress report.

I recently had the pleasure of hosting Secretary Norman Mineta, U.S. Department of Transportation. Secretary Mineta came to the FAA Civil Aerospace Medical Institute (CAMI) to make a national public announcement on new measures designed to alert and better prepare pilots to handle laser exposure incidents, and to speed notification about such crimes to law enforcement investigators. This announcement was motivated by the increasing number of incidents involving commercial flights being targeted (accidentally or intentionally) by people who aim lasers at flying aircraft from the ground. Since 1990, there have been more than 400 incidents in the U.S., and FAA research has shown that laser illuminations can temporarily disorient or disable a pilot during critical stages of flight such as landing or take-off, and in some cases, may even cause permanent ocular damage. The new measures, which are outlined in FAA Advisory Circular 70-2, recommend that pilots immediately report any unauthorized laser events to FAA air traffic controllers. The FAA will then notify appropriate law enforcement and security agencies through the Domestic Events Network. These changes will provide police with more timely and detailed information to help them identify and prosecute those who are shining lasers at aircraft. Secretary Mineta's visit resulted in high public visibility for CAMI, and gave us a brief opportunity to increase media awareness about our aerospace medicine specialty. It was also an interesting, en-



Melchor J. Antuñano, M.D., M.S.

joyable, and challenging experience for me because I had never spoken in front of so many news reporters and TV cameras from the major networks and newspapers in the U.S.

In my President's Page published in the February issue of ASEM, I mentioned Steve Fossett's plans to complete a one-pilot, around-the-world nonstop flight onboard his GlobalFlyer, which was built by Burt Rutan's Scaled Composites. Mr. Fossett had originally planned to set this record at the beginning of January 2005. Unfortunately, due to unexpected delays, he is now scheduled (weather permitting) to attempt his flight in February. His tentative route would take him over Montreal, London, Paris, Rome, Cairo, Karachi, Shanghai, Tokyo, Honolulu, Los Angeles, and Chicago. I hope that by the time you receive this journal Mr. Fossett will have been successful in accomplishing this record-setting flight.

We all know that modern air navigation systems make it impossible for the flight crew of a commercial transport to get lost during flight, right? Well, not exactly! The flight crew of an Airbus 319 carrying 100 passengers was on a final approach (configured for landing) flying at 730 feet AGL and 1.3 miles from landing on a 3,300 by 75 foot runway at Vernon Regional Airport in British Columbia. The frightening part is that this runway was not much wider than the plane's main landing gear and about 300 feet shorter than the plane's minimum required stopping distance. The flight crew believed they were approaching their intended destination at Kelowna International Airport. The chain of errors leading to this incident involved unclear communications with air traffic control, erroneous information on the company-produced route manual, and crew failure to properly crosscheck a final visual approach (due to in-flight distractions). Fortunately, the captain realized the mistake just before landing and was able to fly the aircraft to the correct airport. This type of incident is not an uncommon occurrence; in fact, there have been some

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cases were flight crews actually landed at the wrong airport before they realized their mistake. The various factors that contribute to this type of incident are described in an article entitled "Geographic Disorientation: Approaching and Landing at the Wrong Airport" published in the October 1989 issue of ASEM.

The FAA held a Commercial Space Transportation Advisory Committee (COMSTAC) meeting, and I was invited to discuss the FAA Office of Aerospace Medicine's "Guidance for Medical Screening of Commercial Space Passengers: A Common Sense Approach." This guidance was well received by industry representatives in attendance. Subsequently, I was asked to speak at the 8th FAA Commercial Space Transportation Forecast Conference, where I had the opportunity to share this guidance in an open public forum. This medical guidance was one element of the FAA Office of Commercial Space Transportation's "Draft Guidance for Commercial Suborbital Reusable Launch Vehicle Operations with Space Flight Participants." This FAA medical guidance had actually been completed back in March 31, 2003, and was the culmination of a long-term team effort (everybody in the team was an AsMA member) that started in July of 1998. This medical guidance will be published as an FAA technical report in the near future. However, let us not forget other contributions by AsMA members who were involved in the development of AsMA's "Medical Guidelines for Space Passengers," which were published in the October 2001 and November 2002 issues of our ASEM journal.

Several U.S. commercial space entrepreneurs have decided to form an Industry Spaceflight Federation for the purpose of developing technical standards and processes to promote the safety and growth of the manned commercial spaceflight industry. Included are Burt Rutan of Scaled Composites, John Carmack of Armadillo Aerospace, Elon Musk of Space X, Jeff Greason of XCOR Aerospace, Peter Diamandis of the X PRIZE Foundation, and Stuart Witt, Mojave Airport Manager. This group intends to initially focus on standards and procedures related to vehicle safety, medical requirements, and training for space passengers and crew.

Did you know there is a new contender in the race towards the establishment of a viable manned commercial space transportation industry? Seattle-based "Blue Origin" is a suborbital space venture established by Jeff Bezos, the 41-year-old billionaire who is the founder, president, CEO, and chairman of Amazon.com. Bezos announced his plans to build an aerospace testing and operations center on a portion of his 165,000-acre Corn Ranch located north of Van Horn, Texas. Blue Origin is

currently involved in the FAA pre-application process for a launch site license. I had the opportunity to meet with Mr. Bezos and his engineering team at Blue Origin's headquarters in Seattle, WA, to discuss the physiological and medical aspects of suborbital flights.

The Futron Corporation released their 79-page report entitled "Space Tourism Market Study" that was based on a poll of affluent Americans. Some of the main findings of this study include: 1) The overall space tourism market (suborbital & orbital) could generate revenues surpassing \$1 billion dollars per year by 2021; 2) suborbital space tourism has the potential of generating 15,000 passengers and \$700 million per year; and 3) orbital space tourism will grow at a slower pace but could still generate about 60 passengers and \$300 million per year. If you are interested in reading the full report it is available at www.futron.com/spacetourism.

Did you know that a helium-filled research balloon launched by NASA at the National Science Foundation's McMurdo Station in Antarctica set a flight duration and distance record? This balloon covered a distance of 660 kilometers (410 miles) in 41 days and 22 hours and reached an altitude of 38,100 meters (125,000 feet). The flight demonstrated the capabilities of the NASA Ultra-Long Duration Balloon support system that has the potential of extending flights up to 100 days. This system has very important implications for high-altitude atmospheric and astronomical research.

NASA selected 32 consortia in the National Space Grant College and Fellowship Program to receive \$3 million in awards (ranging from \$20,000 to \$100,000) to support the development of a work force to sustain NASA's Vision for Space Exploration. These awards will provide hands-on interdisciplinary opportunities in scientific, engineering, and technical disciplines for talented individuals who could make significant contributions in support of NASA's vision. The winners were selected based on a competitive evaluation of their plans to enhance the resource pool of higher education graduates and faculty involved with NASA as employees, contractors, or principal investigators.

The NASA Summer High School Apprenticeship Program celebrated its 25th Anniversary. The goal of this program is to attract high-achieving students to serve as apprentices in a variety of NASA professions, and motivate them to pursue careers in science, technology, engineering, and mathematics, which are essential in supporting the future of NASA's Vision for Space Exploration. For more information about this program, go to the web site at www.nasasharp.com.

I look forward to having a great meeting in Kansas City, and I hope to see you there!

Medical News

Executive Director's Column



Rayman

You Are Invited

Every year at the Annual Scientific Meeting, a Business Meeting/Luncheon is scheduled for Tuesday, noon to 2:00 p.m. This meeting/luncheon is open to everyone and we would encourage as many members as possible to attend. Although lunch is available at the usual price of \$25.00, there are many seats available in the room for those who do not want lunch, in which case there is no charge.

Admittedly, attending a business meeting may not sound very appealing to some members and there may be the mistaken assumption that the Business Meeting is only for officers and committee chairs. In reality, the meeting is open to everyone and I would very much encourage you to attend for several reasons.

First, by simply sitting through the meeting you will have a general idea of the current activities of the Association. Secondly, and perhaps more importantly, the Business Meeting is the venue in our democratic process where our officers are elected and our resolutions are discussed and put to the vote. Any member in attendance can speak for or against the resolution at hand by merely raising his or her hand and being given the floor by the President. You are then free to speak your piece. Once discussion is exhausted, a vote is taken. I would think that all members would be interested in discussing and voting on such issues as pilot age limitations, cabin air quality, research in space, and many more. Thirdly, and finally, this is an opportunity to sit and break bread with the officers and committee chairs and discuss any matters of aerospace medicine interest.

The Business Meeting is a great opportunity and you're invited. This year it will be held on Tuesday, May 10, in the Chateau Room of the Hyatt Hotel. Be there.

AsMA JOURNAL IS ONLINE!

You must register via www.ingentaconnect.com, AND pay AsMA an additional \$20 fee.

AMA House of Delegates Meeting Minutes

The interim meeting of the American Medical Association (AMA) House of Delegates was held December 4-7, 2004, in Atlanta, GA. In attendance representing AsMA were Drs. Daniel B. Lestage, Michael A. Berry, Daniel A. Shoor, and Russell B. Rayman. John Nelson, M.D., President of the AMA, gave an outstanding address to the entire House summarizing the major issues facing health care in America.

At this time there are approximately 45 million Americans who are uninsured, which is shameful given the wealth of our country. The AMA approach to solving this problem is by tax credits and health savings accounts which the AMA officers will advocate among the members of Congress as well as with the President.

Another major area of concern is the disparities in health care for minorities. The AMA is working with the National Medical Association and 35 state and specialty medical societies in seeking solutions, among them efforts to increase professional awareness and to provide greater diversity among medical students as well as in the physician work force.

Although medical liability continues to be a festering problem in the nation with a number of states in crisis, the AMA is winning this battle at the state level. Many states have either passed laws or are considering laws to place a cap of \$250,000 to \$350,000 on non-economic damages. The AMA will vigorously pursue grassroots efforts and will fight in Washington, DC, as well, to obtain reasonable premium rates for physicians.

The current Medicare payment system is in trouble in that many physicians can no longer afford practice or must cut back in their respective practices because the costs of medical care exceed the Medicare payment schedule. Although the AMA was successful in stopping a 5.4% decrease in Medicare payments last year, there is a looming danger in the coming years of payments decreasing by as much as 17%. If this trend continues, the crisis will deepen and even larger numbers of physicians could leave the profession and/or cease accepting and treating Medicare beneficiaries.

There was considerable debate regarding the importation of medications from other countries. These cheaper medications are in great demand by patients and as a cost-saving measure, the AMA does support the importation of medications from overseas, providing the medication is proven safe. One way of doing this is by electronic tracking, which the AMA endorses.

There has been a great flu vaccine shortage in this country, causing considerable dismay among patients. The AMA supports government involvement to ensure a safe supply including quality control and distribution.

Many other areas were discussed, including tobacco use and cessation and reducing alcohol intake, particularly by youths. Obesity is another key issue, with the AMA advocating

better weight control as well as educational sessions for physicians. Most of the officers of the AMA are practicing physicians with very few in administrative or academic positions. Consequently, they feel the pain of our health care crisis and enthusiastically fight the battles from the trenches. There is a genuine interest in patient welfare, including access and quality care. Your AMA dues play a significant role in supporting AMA lobbying efforts in the nation's capital as well as at state and local levels.

The remaining resolutions and reports covered a wide range of issues in our health care system. If you have questions about any issue, feel free to contact your representative as indicated in the first paragraph. I would also add that AMA Board of Trustee member Dr. Herman Abromowitz, along with Dr. Dan Lestage, will be holding another panel in Kansas City entitled "Health Care in America." I'd strongly encourage you to attend the session if you would like to keep current on topics/health care issues. AsMA must stand shoulder to shoulder with the other medical specialties in the House of Medicine. Consequently, I urge U.S. physicians to join the AMA now!

AsMA offers a new member service: Automatic debit for payment of dues

Instructions for "Yearly Bank Debit" by Check

1. To establish an automatic debit, Member must contact the AsMA Home Office at 703-739-2240 Ext. 106 or Ext. 107, to obtain our Bank information (Bank name, Account number, Routing number.)
2. Member must initiate the automatic debit of their annual membership with their own Bank and must inform their Bank of the exact payment amount. The debit should occur prior to the membership expiration date.
3. The Association's Bank will issue a credit memo when payment is submitted.
4. As dues increase, it will be the member's responsibility to contact their own Bank to include the increase in the annual membership fee.

Instructions for "Yearly Credit Card Payment"

Member must contact the Home Office by email, fax, or mail with their credit card number and expiration date, and amount to charge, signature and authorization to make the yearly charge.

As the annual dues increase, the member will need to send authorization to charge the new dues rate to their card.

NOTE: It will be totally up to each member to initiate the above procedures by contacting the Home Office.

Call for Papers:

SAFE 43rd Annual Symposium
October 24-26, 2005

Grand America Hotel, Salt Lake City, UT
541-895-3012; safe@peak.org;
www.safeassociation.com

The primary objective of the SAFE Association is the preservation of human life and to stimulate research and development in the fields of safety, survival, and life support through communication between professionals in industry, government, and education related to these fields.

Tentative areas of discovery include: Commercial and Military Crash Safety; NBC Protection; Acceleration; Altitude; Ejection; Human Factors; NTSB & FAA Accident Investigation; Hearing Protection; Simulation; and Testing Methods.

All abstracts must be submitted electronically to the SAFE office at safe@peak.org. Abstracts should be 200 words. A brief biography of the primary author/presenter is required. For full Call for Papers, contact the SAFE Office: P.O. Box 130, Creswell, OR 97426; 541-895-3012.

Deadline July 29; Powerpoint presentations due Sept. 30th e-mailed to safe2005@athenagtx.com.

ISTM Offers Certificate of Knowledge in Travel Medicine

The International Society of Travel Medicine (ISTM) will offer its Certificate of Knowledge in Travel Medicine Examination on May 1, 2005, in Lisbon, Portugal, prior to the opening of the 9th Conference of the International Society of Travel Medicine. Those passing the exam will receive a Certificate in Travel Health[®], or CTH[®]. The exam is open to all travel medicine practitioners, including physicians, nurses, pharmacists, and others. The same exam will be given to all practitioners and will be administered in English. To obtain more information about the exam, please access the ISTM website at www.istm.org.

AsMA Future Meetings

May 8-12, 2005
Kansas City, MO
Hyatt Regency Crown Center

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

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

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

May 3-7, 2009
Westin Bonaventure Hotel
Los Angeles, CA

MEETINGS CALENDAR 2005

May 1, 2005, Lisbon, Portugal. 9th Conference of the International Society of Travel Medicine. Lisbon Conference Center. Info: www.istm.org.

May 21-28, 2005, Dominica. The 30th Annual Dive Medicine Conference will be held by the International Society of Aquatic Medicine (ISAM). For more information, contact ISAM, 6240 Turtle Hall Dr., Wilmington, NC 28409; (910) 452-1452; FAX (910) 799-5209; or visit www.diving-docs.org.

May 22-26, 2005, Graz, Austria. 15th IAA Humans in Space Symposium. For more information, visit <http://www.uni-graz.at/space2005>.

May 19-22, 2005, Washington, DC. National Space Society's 2005 Annual International Space Development Conference (ISDC). NSS-ISDC 2005, 1620 I Street NW, #615, Washington, DC 20006 (202) 429-1600; FAX: (202) 463-8497; E-mail: nsshq@nss.org; www.nss.org

June 5-11, 2005, St. Petersburg, Russia. 36th World Congress on Military Medicine. Sponsor: Russian Ministry of Defence. Info: Ivan Kholikov, tel. (095) 696-1940; mobile 8-926-202-7606; <http://www.congress-ph.ru/eng>

June 13-July 26, 2005, Moscow, Russia. Fifth International Space Medicine Summer School, a joint project of the Lomonosov Moscow State University, the Institute for Biomedical Problems, and Contemporary Educational Programmes. A 2-week program for those in biomedicine, natural sciences, engineering, and related fields. For more information, go to www.cep.ru.

June 19, 2005, Las Vegas, NV. Diabetes and Diving--1-day CME Workshop co-sponsored by UHMS and DAN. To register: www.uhms.org

July 22-27, 2005, Las Vegas, NV. 11th International Conference on Human-Computer Interaction. Further info: HCI International 2005, School of Industrial Engineering, Purdue University, Grissom Hall, 315 N. Grant St., West Lafayette, IN 47907; hcii2005.engr.wisc.edu; www.hci-international.org

July 25-28, 2005, Boulder, CO. Cryogenic Engineering Training Short Course. www.cryoco.com.

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

October 19-22, 2005, Playa del Carmen, Q.R., Mexico. XXII International Meeting of Aerospace Medicine. Sponsor: Mexican Association of Aviation Medicine, A.C. General Theme: Advances in Clinical Aerospace Medicine. Info: Luis A. Amezcua G., M.D., Tel./Fax: (52-55) 55-15-68-84; lamezcua@att.net.mx

October 24-26, 2005, Salt Lake City, UT. SAFE Association 43rd Annual Symposium. Info: Jeani Benton 541-895-3012; safe@peak.org; www.safeassociation.com.

Tropical Medicine Supplement Available Online for Free

The March Supplement to *Aviation, Space, and Environmental Medicine*, "Tropical Medicine and Travel Medicine," sponsored by the German Academy of Aviation and Travel Medicine, Frankfurt, Germany, is now available for free on the Ingenta journal website: www.ingentaselect.com.

As the world continues to provide disaster relief to the victims of the tsunami in Southern Asia, this volume will be an indispensable tool for all concerned with flight operations in tropical areas.

March issue is Meeting Program

This year, your March issue of *Aviation, Space, and Environmental Medicine* is the Meeting Program. It contains the abstracts accepted for presentation at the meeting, plus the schedule and much more! If you make notes in it, you might want to bring it along with you to the meeting. Additional copies will be available in Kansas City.

Navy Maps Malarial Parasite DNA

A team of scientists at the Naval Medical Research Center (NMRC), in collaboration with The Institute for Genomic Research (TIGR), have determined the entire genetic sequence of *Plasmodium falciparum*, the parasite that causes malaria in humans. The NMRC/TIGR team was the first to sequence an entire malaria parasite chromosome back in 1998 and completed the sequencing in 2002. This accomplishment will allow faster research and development of antimalarial drugs and new targets for vaccines, as well as making it possible for researchers to discover the potential mechanisms of drug-resistant strains.

During the effort, the Navy scientists provided expert guidance, technology, critical protocols, reagents, and highly purified chromosomal DNA for the sequencing. When they completed sequencing of four of the parasite's chromosomes, it was named as one of the top five scientific accomplishments for 1998 by the National Institutes for Allergy and Infectious Diseases. When the entire DNA sequencing was complete, Science hailed it as the third most important scientific breakthrough in 2002. (Taken from *Federal Technology Transfer 2004* (p. 12) and from <http://www.afrl.af.mil/successstories/1999/emerg-tech/et6.pdf>.)

This Month in Aerospace Medicine History-- March 2005

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

Seventy-Five Years Ago

In March of 1930 the world was introduced to the first issue of the *Journal of Aviation Medicine*, the official publication of the society.

The importance of physical health in flying (Assistant Medical Director, Aeronautics Branch, Department of Commerce): "Physical departures from the normal correlate well with decreased performance. The examiner should never feel so sorry for an applicant that he may overlook the possible aeronautical significance of a defect. An applicant who does not meet our standards is better off out of aeronautics. It is an injustice [sic] to encourage him to go into a field of endeavor for which he is unfitted and in which he will be unable to compete successfully" (1).

The status of Aviation Medicine in Europe (from a Navy Commander physician): "The rapid strides in aviation development throughout the world have opened a new field of medical research and today aviation medicine has taken its place among the more important specialties.

"Medical personnel attached to European aviation activities are not required to fly and the degree of their 'flying line' activities is largely dependent upon their own initiative. Flight surgeons in the United States services are constantly in touch with pilots, both on and off duty, watching for the first signs of insidious deterioration that affect air performances.

"Selection is highly important but maintenance of the flying personnel is the greater field. The physical standards, both at home and abroad, are not fanciful but founded upon the factors possessed by successful war time pilots" (2).

Psychology and aeronautical adaptability (from a Navy Lieutenant Flight Surgeon): "In spite of strict adherence to a high physical standard, a large percentage of our army and navy applicants for heavier-than-air craft training fail to qualify under instruction. This percentage is probably still higher in civilian schools.

"The writer is of the opinion that a large number of these failures can be attributed to the inability of the flight surgeon and medical examiner properly to determine the psychological equipment for flying of the applicants brought before him for examination. This is due to the pioneering stage of his specialty. He is further hampered by insufficient training, both in the science of psychology and in the art of flying. However, he must strike out into the uncharted sea of psychological possibilities concerned in aviation, and try to standardize the determination of the student's ability to acquire the technique of this newly developed art.

"The writer is working on a series at the present time tabulated by means of an aeronautical adaptability index, in which various characteristics are given numerical values, which balance in such a manner as to establish a score for each examinee.

"The time should eventually arrive when the flight surgeon can state with courage of his well-founded convictions, that certain individuals will or will not be able to qualify as pilots of airplanes. Further he should by close association with pilots recognize a deviation from an individual's established norm in its incipency and avoid many crashes not due to materiel failure" (8).

Fifty Years Ago

Man's adaptation to space travel: "Space flight is already with us. Space travel (not to be confused with interplanetary travel) will come before long; but the needs and reactions of man in space must be determined before the aeronautical engineer can begin his drawings...

"In space man and materials would have mass but no weight, owing to the absence of gravity forces. The resulting loss of elastic deformations would probably not impair most physiological functions. The main difficulty would be the altered stimuli from the vestibular and anti-gravity systems. Normally there is a baseline of stress from which we judge position at rest and in movement; and without this baseline an entirely new co-ordination would have to be learnt unless the cabin were supplied with a rotational device to stimulate gravity. Further, where there is no gravity there is no convection; so a highly efficient air-stirring system must be provided, to prevent the crew suffocating in its own expired air. At present rocket craft move in space in a bizarre and far from smooth manner that would cause prostrating motion sickness; this is a problem for the engineers. Visual adaptation will be necessary. In gasless space there is no light scatter; light is brilliant, shadow totally dark, and the visibility range almost limitless. So much for space itself, but it has to be reached and left. This means that the crew must undergo enormous acceleration and deceleration. During the development of high speed aircraft much has been learned of how to lessen the harmful effects of such changes, but more needs to be known.

"If man with the help of machines can adapt himself to space it will be as great a step as from water to dry land. We may surely imagine that the step will be taken. After all, did any silurian [sic] Jules Verne dream that even his remotest cousin would one day breathe air? Yet that is what we do." (9)

The first qualifying examination in Aviation Medicine: "The first examinations to qualify eligible physicians for certification in aviation medicine by the American Board of Preventive Medicine will be held in Washington, D. C., March 17, 18, and 19, 1955, according to Dr. Ernest L. Stebbins, secretary of the Board. These dates immediately precede the 26th annual meeting of the Aero Medical Association at the Statler Hotel in Washington on March 21-23, 1955" (3). "More than 100 physicians are expected to take the...examinations..." (4).

Twenty-five Years Ago

The physiology of motion sickness (Naval Aerospace Medical Research Laboratory, Naval Air Station Pensacola, Florida): "This study investigated the relationship between the development of symptoms of motion sickness and changes in blood pressure, heart rate, and body temperature. Twelve subjects were each

evaluated four times using the vestibular-visual interaction test (6). The results were analyzed both within and across individual subjects. Neither a systematic group nor consistent individual relationship was found between the physiological parameters and the appearance of symptoms of motion sickness. These findings suggest that biofeedback control of the physiological variables studied is not likely to prevent the expression of motion sickness symptomatology" (7).

Staying healthy during international travel (Bacterial Diseases Division and Foreign Quarantine Program, Center for Disease Control, Atlanta, Georgia): "International travel is becoming increasingly popular. We want to strongly recommend international travel; we think it can be one of the most exhilarating experiences of a lifetime. In addition to satisfying personal and business needs, international travel serves to unite the peoples of the world and to improve the quality of life of people in developing areas who are increasingly dependent on tourism. This paper focuses on some of the potential health risks associated with international travel, but we want to emphasize that a few common-sense precautions and use of the usual tourist accommodations can make travel abroad quite safe - certainly safe from the more serious illnesses that can occur. We wish to stress the unique dangers of vehicle travel, the need for malaria prophylaxis in some countries of Asia, Africa, the Middle East, and Latin America, the risk to health posed by water and ice, raw shellfish consumption, salads, undercooked meats and fish, and uncarbonated bottled beverages. We wish to stress the importance of our own natural defense mechanisms in protecting against enteric pathogens and that diarrhea, in particular, is nature's way of coping that should not be compromised by drugs. Simple diarrhea, like the common cold, is self-limited - the complications can be avoided by use of oral fluids containing sugar and salts in the proportions that the World Health Organization (WHO) has recommended" (5).

REFERENCES

1. Cooper HJ. The relation between physical deficiencies and decreased performance. *J Aviat Med*, 1930; 1(1):4-24.
2. Davis RG. European aviation medicine. *J Aviat Med*, 1930; 1(1):25-8.
3. Editorial comment: Examinations for certification in aviation medicine to be given. *J Aviat Med*, 1954; 25(6):565-6.
4. Examinations for certification in Aviation Medicine. *J Aviat Med*, 1955; 26(1):84.
5. Gangarosa EJ, Kendrick MA, Loewenstein MS, Merson MH, Mosley JW. Global travel and travelers' health. *Aviat Space Environ Med*, 1980; 51(3) 265-70.
6. Graybiel A, Lackner JR. A sudden-stop vestibulo-visual test for rapid assessment of motion sickness manifestations. *Aviat Space Environ Med*, 1980; 51(1):21-3.
7. Graybiel A, Lackner JR. Evaluation of the relationship between motion sickness symptomatology and blood pressure, heart rate, and body temperature. *Aviat Space Environ Med*, 1980; 51(3):211-4.
8. Haselton FR. Psychological considerations in judging aeronautical adaptability. *J Aviat Med*, 1930; 1(1):29-32.
9. Man in space. *Lancet*, 1955 (Mar 19); 268:601.

This Month in Aerospace Medicine History-- April 2005

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

Seventy-Five Years Ago

The specialty of aviation medicine (read by Dr. Louis H. Bauer, Medical Director of Aeronautics, Department of Commerce before the Medical Society of the District of Columbia, April 30, 1930): "I think it will be agreed that the pilot, who is subject to terrific speeds, high altitudes, intense cold, violent winds, marked glare, continuous disturbances of his equilibrium, and conditions which are markedly fatiguing from physical, mental and nervous standpoints, requires a careful physical examination and close medical supervision. I think it will also be agreed that the flight surgeon should have special training and that aviation medicine is really a distinct specialty.

"In conclusion, perhaps the most important thoughts I can leave with you, are that the physical examination for flying must not be considered a routine matter. Lives may depend on it, and it must be conducted with extreme care and thoroughness. The personality study may have to be approached from a different angle in many cases and it cannot be hurried if the examiner is to obtain results. The mere asking of routine questions and the performance of a few neurological tests are of little value. The applicant must be studied in a detailed manner. As Longacre has so aptly put it, this part of the examination begins when the candidate first appears and ends only when he has passed from sight and hearing.

"Safety in flying, from the physical standpoint is our goal. To attain it we must select only the physically fit and keep them fit. We must be relentless in keeping the physically unfit out of the air, remembering our duty to other flyers, aviation as a whole and the general public, even though, at times, it may seem hard on the individual.

"The part medicine plays in flying is constantly becoming greater, and I am glad to say, increasingly recognized. It behooves us, as physicians, to keep up with the progress of this new science of aeronautics and lend all the forces and facilities of our profession to its further advancement" (1).

The progress of instrument flying: "On April 4th, 1930, Captain W. C. Ocker, using the ordinary instrument equipment of an Army Douglas O2-K airplane, flew for a distance of 105 miles solely by instruments....

"The path of the airplane was snake-like with a position of the airplane first east of the course a few miles and then west a few miles. Then the flight by instruments was discontinued the airplane was about five miles west of the course and in the vicinity of Kingsville, TX.

"This flight of Captain Ocker and Lieutenant [Carl J.] Crane [safety pilot] demonstrated an important phase of blind flying training; practice under a cockpit hood with standard flight instruments that were not specially adjusted for sensitivity before the flight.

"The preparation of this airplane for the practice flight involved no change to the airplane and a cost of only one dollar and twenty cents (\$1.20) to prepare a suitable cockpit cover made of canvas" (2).

Fifty Years Ago

First Helicopter Ambulance Services: "Kenmore Mercy Hospital in Kenmore, New

York, a suburb of Buffalo, is one of the two hospitals in the United States that now has helicopter emergency ambulance service. A temporary heliport, a 20-foot square wooden platform, has been constructed a few feet from the emergency entrance to the hospital and a helicopter is on call any time of the day or night...

"Helicopter ambulance service was first established in the United States at a hospital in Santa Monica, Calif. Here a rooftop platform serves as a landing area, and helicopters are made available by rotorcraft firms in the Los Angeles area. Arrangements are now being made for the construction of a heliport in the Dallas-Fort Worth area" (5).

Serving patients in austere Australian environments: "The Australian Flying Doctor Service took many years of idealistic planning before it became an accomplished fact. It demanded close cooperation and the exploration of entirely new ideas by physicians, radio and aeronautical experts, and other men of vision prepared to face danger without reward to help the pioneers of their country's outback areas, to whom doctors sometimes had to struggle for many days through deadly country only to arrive too late to be of help....

"One of the reasons the Flying Doctor Service has received the whole-hearted support of every Australian is its complete lack of discrimination. Whatever a man's creed, wherever he lives, and if he is rich or poor, black or white, can or cannot pay, he is treated without favors. Even the wounded in tribal disputes are treated like all other men, and they are entirely without means to pay for the service they receive" (7).

Proposal for an Institute of Civil Aviation Medicine: "One important result of research in aviation medicine is the discovery that the human body can endure a great deal more physical and mental stress than was once thought possible. The answers to the problems of flight in tomorrow's jets and rocket aircraft may be found in the human research now being done in the field of aviation medicine rather than in loading the planes with heavy and expensive equipment. And so I conclude as I began by re-emphasizing the need of research in the field of civil-aviation medicine.

"After I have had an opportunity to give some additional study to the form of the legislation, it is my intention to introduce a bill calling for the establishment of an Institute of Civil Aviation Medicine" (6).

Human factors associated with in-flight refueling: "Operationally, the first problem [of in-flight refueling] is to rendezvous with the tanker. This is a problem of navigation and vision because once the fighter pilot gets in the area of the tanker, he must be able to find him. Once the rendezvous is made, the next problem is one of speed differentials and rate of closure. The fighter must approach the drogue very slowly....

"In making contact, depth perception is important to the pilot. With good depth perception, it is simple. Certain visual defects however, would make this a difficult process. Once contact is made, the problem then becomes a problem of formation flying. The fighter must maintain the same approximate relative position with the tanker during the fuel transfer... Refueling can be done at night almost as easily as during the day. At night the rate of closure is more difficult to judge, hence the receiving aircraft proceeds to make contact with the drogue more slowly than during day operations....

"Does inflight refueling impose any additional human factors problems upon regular tactical flight? There is one possible addition. On long overwater flights with tanker rendezvous over water, when the receiver aircraft must have a successful refueling to be able to reach land, the pilot may develop an anxiety reaction. This is partially compensated for because inflight refueling helps to ease the high fuel consumption problem in jets. Other than this anxiety problem, which occurs in only some refuelings, there are no added problems. Because of the increased range and endurance, however, the present existing problems are magnified" (4).

Twenty-five Years Ago

Drinking and flying (Civil Aeromedical Institute, Oklahoma City): "Eight private pilots, four men and four women, were trained to perform on a two-dimensional tracking task (joystick control of a localizer/glideslope instrument) and to respond as quickly as possible to the onset of a red pinlight, appended to the tracking instrument, by depressing a button on the joystick. Tracking and reaction time scores were obtained under both static (stationary) and dynamic conditions (during angular acceleration), at ground level and at simulated altitude of 3658 m (12,000 ft). Subjects were tested in pairs one night per week for three consecutive weeks (alcohol, placebo, and sleep control sessions). Sessions began at about 1700 hours and continuing through midnight to about 1100 hours the next day. Subjects performed in the evening after a monitored dinner, drank prepared beverages from 2100 to midnight, and were tested again. Subjects slept 4-5 h, were awakened around 0645, were fed, and performed the tasks again, beginning about 0730. Ground-level test sessions always preceded ascent in the altitude chamber and sessions included completion of several questionnaires and rating forms by the subjects. AT midnight following alcohol ingestions (3.25 ml of 100-proof alcohol/kg body weight), peak breath alcohol levels averaged 91mg%. Impairment in tracking performance and in visual reaction time occurred during midnight sessions following alcohol ingestion. While ratings of hangover and other questionnaire data indicate awareness of hangover symptoms, no hangover-related performance impairment was recorded during morning sessions. In addition, no significant altitude/alcohol interactions on performance were obtained during either acute intoxication or hangover periods. These results thus offer no evidence contrary to the '8-hour rule'" (3).

REFERENCES

1. Bauer LH. Aeronautics and the practice of medicine. *J Aviat Med*, 1930; 1(2):81-95.
2. Bauer LH. Symposium on blind flying: Introduction. *J Aviat Med*, 1930; 1(3):127-32.
3. Collins HW Jr. Performance effects of alcohol intoxication and hangover at ground level and at simulated altitude. *Aviat Space Environ Med*, 1980; 51(4):327-35.
4. Dorris HW Jr. Human factors aspects of in-flight refueling. *J Aviat Med*, 1955; 26(2):117-20.
5. Helicopter ambulance service. *Public Health Reports*, 1955 (Apr); 7:432.
6. Priest Hon. JP. *Congressional Record*, 1955 (Apr 19); 101:A2594.
7. Prince JH. The flying doctors of Australia. *New Eng J Med*, 1955 (Apr 28); 252:706.

Send information for publication on this page to: **Smith L. Johnston, III, M.D.**
1402 Redway Lane
Houston, TX, 77062-5411
(281)483-0453
smith.l.johnston1@jsc.nasa.gov

SPACE MEDICINE BRANCH REPORT

A Message from the SMB President

Dear friends and colleagues,

It never ceases to amaze me how time continues to fly by at an ever increasing rate. Those of us at NASA, and I'm sure all members of SMB, have been eagerly anticipating the return to flight of our grounded shuttle fleet by this early summer. I hope 2005 has been good to all of you and I'm looking forward to seeing everyone in Kansas City. It's a great city and should be an outstanding Convention. I know that Dr. Rayman and his excellent staff at the AsMA Home Office have been working very hard on the 76th Annual Scientific Meeting.

The Executive Committee members of SMB have also been working hard to sustain our organization and support our parent organization. I would like to thank those members who have volunteered their time and represented us well during the AsMA Council Meeting and Scientific Program Committee Planning Session in Alexandria, VA, last November. I am happy to report that there are over 2 days of space-related sessions scheduled for the AsMA meeting. The SMB is endorsing five panels, three slide sessions, one poster session, and will be co-sponsoring two Bellagio Panel Sessions. These sessions are scheduled as follows:

Monday, May 9

10:30 a.m. - 12:00 noon Operational Space Medicine (Slide)

2:00 p.m. - 3:30 p.m. Challenges in Space Medicine Technology (Slide)

2:30 p.m. - 5:30 p.m. Space Medicine I & II (Poster)

Tuesday, May 10

4:00 p.m. - 5:30 p.m. Bioastronautics & Space Medicine Research (Panel)

Wednesday, May 11

8:30 a.m. - 10:00 a.m. Lessons Learned From Space Shuttle Columbia Accident Investigation - Part I (Panel)

10:30 a.m. - 12:00 p.m. Lessons Learned From Space Shuttle Columbia Accident Investigation - Part II (Panel)

2:00 p.m. - 3:30 p.m. Spaceflight Issues in the 21st Century: The Bellagio Report - Part I (Panel)

4:00 - 5:30 p.m. Spaceflight Issues in the 21st Century: The Bellagio Report - Part II

Thursday, May 12

3:30 p.m. - 5:00 p.m. Space Medicine Physiology (Slide)

Please don't forget the Society of NASA Flight Surgeon luncheon on Wednesday and the SMB Meeting and Luncheon on Thursday.

The SMB is very excited to announce that **James D. Wetherbee**, (Captain, USN Ret.) will be the featured speaker at SMB luncheon. Capt. Wetherbee was selected by NASA in May 1984 and became an astronaut in June 1985. A veteran of six spaceflights, Wetherbee logged over 1,592 hours in space, and is the

first American to command five space missions. He will be speaking on the future of manned spaceflight. This will encompass the return to flight of the STS, the ISS, and the NASA's new Crew Exploration Vehicle (CEV). As you can see, this should be a great meeting for Space Medicine.

Many of you may not be aware that the SMB amended the Constitution and By-Laws to separate the responsibilities of the secretary/treasurer position. Creating in effect two officer positions, secretary and treasurer, has served our day-to-day operations nicely by streamlining each officer's workload. We will hear from our Treasurer, Genie Bopp, and our Secretary, Alan Moore, as they report at our luncheon in Kansas City. Thanks to the efforts of Genie and Alan, and many others, our constituent organization is on sound financial and organizational footing. We have much work ahead of us: to involve more international partners, to develop a web-based membership database, and to coordinate our activities and plans for the future with other like-minded Space Exploration organizations.

I would like to take this time to support the efforts of Dr. Andrew Bellenkes and Dr. Warren Silberman and the AsMA Membership Committee's new membership drive by challenging every SMB member to recruit at least one new member to AsMA for the coming year. Look for the membership form in the upcoming President's newsletter and spread the word to others about our stellar organization. Our Secretary and Treasurer's reports, as well as the members-at-large and officer's ballots will also be included in the next issue. President-elect, Dwight Holland, is on board with our membership plans and I'm sure looking forward to his term in 2005 and 2006. So go get a colleague and sign him or her up to join AsMA and SMB.

There are tremendous opportunities that lay ahead of our organization. Currently, we are developing, jointly with the Society of NASA Flight Surgeons, a position paper on the future of human space exploration to Moon and Mars. Dr. Joe Kerwin has been leading the way on this endeavor and I look forward to discussions about this project in Kansas City. SMB members will be receiving a Draft of the outline for this position paper in our newsletter in the coming months. I look forward to working with the teams on this project.

In closing, I would again like to thank all those members who have supported the SMB over the last year and a special thanks to our corporate sponsors at Wyle Laboratories and Kelsey-Seybold Clinic for their continued and generous support. I am sure I can speak for all of us in thanking, most importantly, our servicemen and women in uniform. Our very best to all of you, and our prayers for a safe return home.

Hope to see you in Kansas City, and Toto too.

Smith Johnston
SMB President 2004-05

NASA Probe to Improve Women's Health Care

BioLuminate, Inc., a Dublin, CA-based company, in collaboration with the Lawrence Livermore National Laboratory in Livermore, CA, has been licensed by NASA to develop and market the "Smart Surgical Probe," a device that will potentially end the thousands of unnecessary surgical breast biopsies that take place in the United States every week. The probe, which was originally developed by Dr. Robert Mah of NASA's Ames Research center, gathers information as soon as it is inserted into tissue. Its measurements are compared with a set of known parameters by computer software to determine the presence or absence of cancer. For the first time, doctors will be able to generate quantitative information on six known cancer indicators after a suspicious region of the breast has been identified through mammography and/or physical examination. The measurements will enable doctors to better determine how to proceed with care of their patients as well as potentially reduce annual health care costs.

(Taken from *Federal Technology Transfer* 2004 (p. 6); www.bioluminate.com.press_rel1.html.)

AFRL's Vein Viewer to Save Time and Lives

Scientists from the Air Force Research Laboratory's (AFRL) Materials and Manufacturing Directorate (ML) have developed a breakthrough device that allows doctors to see vasculature beneath the skin and through body sections. This will allow faster administration of intravenous fluids through reliable and accurate viewing of a patient's veins even in conditions where lighting is less than optimal. It can save countless lives on the battlefield, in hospitals, at accident scenes, and at the scenes of major catastrophes. It can also be used to alleviate the suffering of the elderly, infants, and patients who must undergo medical procedures, such as chemotherapy or dialysis, requiring repeated access to veins.

The Vein Viewer uses night-vision goggles equipped with special filters developed by the Air Force. These goggles allow the user to see infrared light that passes through the patient's body, but is partially blocked by blood veins. Studies showed this ability is due to the absorption of infrared light by deoxygenated hemoglobin traveling in veins. Bone, muscle, and other tissue are not viewed since they transmit or scatter the infrared light instead of absorbing it. Researchers also verified that skin color does not affect the ability to view veins. Experiments verified that a needle inserted beneath the skin is clearly visible because metal block infrared light. This means that any foreign object under the skin, such as a bullet or shrapnel, can also be detected.

(Taken from *Federal Technology Transfer* 2004 (p. 12); and from www.afrl.af.mil/successstories/1999/emerg-tech/et6.pdf.)

Send information for publication on this page to: LCDR Joe Essex, MSC, USN
BLDG 2272 Suite 345
47123 Buse Rd
Patuxent River, MD 20670
joseph.essex@navy.mil

AEROSPACE PHYSIOLOGY REPORT

Big Plans for Kansas City

As we move closer to our annual meeting, members of the Physiology Society are hard at work making final preparations for three great events: our Education and Training Day, our Smith W. Ames Lecture, and of course, our social.

Education and Training Day

The team, headed up by MAJ Woodrow and LT Bransdorfer, have put together a great panel discussion on human performance, ergogenic aides, and implications for the warfighter. The strategies for enhancing human performance are inextricably locked to the basic building blocks of nutrition for endurance and fitness. Although the modern warfighter is equipped with technologies previously unavailable, mounting evidence indicates that in extreme environments, including extended-duration missions, there is still the challenge of providing appropriate nutrition and supplementation. Previous studies of nutritional supplements have provided a way forward to enhancing performance under specific mission demands, but have left air, sea, and land commanders with unclear guidance on the most effective nutritional strategies. The Aerospace Physiology Society is sponsoring a panel at the 76th Annual Scientific Meeting of the Aerospace Medical Society that will draw together experts in a scoping discussion of current strategies and future research proposals in the area of providing the most portable and effective forms of performance enhancing foods and supplements in environments across the spectrum of the battlefield. Speakers are scheduled from the Canadian forces, National Institute of Health, TNO (The Netherlands), and the U.S. Air Force. Please join us for an informative dialogue on nutrition and performance.

Society Luncheon

Thanks to the hard work of Joe Zellers, the speaker for this year's Smith W. Ames Memorial Lecture, to be held in conjunction with our annual luncheon on Wednesday, May 11th, will be Major Kathryn G. Hughes, USAF. The title of Maj. Hughes' presentation is "The A-10 in OIF: Close Air Support at its Best."

Major Hughes graduated from the USAF Academy in 1988. She went to Laughlin AFB for pilot training and remained as a T-38 Instructor Pilot until 1992. During this time she served as a scheduler, evaluation pilot, and wing stan/eval pilot. She moved to Offutt AFB as a T-38 Accelerated Copilot Enrichment Instructor, but eventually transitioned to the RC-135 as a pilot and flew that aircraft for 2 years. During this time, she became a squadron stan/eval pilot.

In 1995 Major Hughes started medical school at the University of Nebraska Medical Center in Omaha. After graduation she was

assigned to Wright-Patterson for a surgery internship. In 2000, she was assigned as a Flight Surgeon at Mountain Home AFB and joined the Air Warfare Battlelab at Mountain Home as the Medical Officer Liaison. The A-10 became her latest aircraft to be qualified in and her current assignment is with the 190 Fighter Squadron, Idaho Air National Guard in Boise, ID. In this job she is the A-10 Pilot/Physician.

Major Hughes has served on two Safety Investigation Boards. Additionally, she has won many awards including the ACC Flight Surgeon of the Year in 2001. Major Hughes is a member of many professional associations including the Aerospace Medical Association, Dedaelians Fraternity of Military Pilots, and 99's: International Organization of Women Pilots. The opportunity to listen to Major Hughes at the AsPS Luncheon will be a true treat. She can relate her flying experiences and her medical training in a way that brings the listener as close as it gets to the world of close air support flying as well as the human performance issues of that community.

Evening Social

The Physiology Society will hold an evening social on Wednesday, 11 May, at 18:00 at the Kansas City Masterpiece BBQ Restaurant and Grill. The restaurant is located in the fashionable Country Club Plaza entertainment district of Kansas City. Dinner features a buffet menu including spare ribs, beef brisket, chicken, sides/salads, and fixings. There will be a cash bar available. Space is limited and tickets will be on sale at the Society information table. Cost is \$20 per person. Thanks to Commander Tom Wheaton for arranging this event.

Aerospace Physiology Society Election Information

Election of officers for the Society will be conducted exclusively online this year. Bio's of the candidates and instructions for voting can be found at the AsPS website. Please logon for additional details. Bios will be published by 15 March, and voting will commence 4 April. As a reminder, you must be a member in good standing of both AsMA and AsPS for your vote to be registered/counted. For additional information, please contact CAPT Gail Hathaway, Society President: hathaway@nepmu6.med.navy.mil; or CAPT Donna Murdoch, Past President: co@namrl.navy.mil.

AsPS Member Benefits

The outstanding network potential and the chance to gain knowledge from the field's top minds.

The opportunity to take part in forums for the integration and utilization of experts in many diverse professional fields. Our members have shared their expertise in multinational and multi-service working groups for altitude effects, acceleration, spatial disorientation, passenger and patient transport, and human factors.

The opportunity to recognize scientific achievement in the field of aerospace physiology. There are three Society awards presented each year.

The chance to contribute to the success and quality of the annual AsMA conference. The Society's Education and Training Day has been one of the most widely attended sessions during the annual conference. Membership is only \$10. For more information, please contact Joe Essex at joseph.essex@navy.mil, or write to:

LCDR Joe Essex, MSC, USN
BLDG 2272 Suite 345
47123 Buse Rd
Patuxent River, MD 20670

30th Annual Dive Medicine Conference

The International Society of Aquatic Medicine (ISAM) will hold its 30th Annual Conference May 21-28, 2005, at the Fort Young Hotel in Dominica. The conference is a 30-hour Category 1 CME program that offers lectures on diving medicine, forensic science, physiology, hyperbarics, and exploration research. The afternoons are spent in the field conducting underwater exploration.

For further information, contact ISAM, 6240 Turtle Hall Drive, Wilmington, NC 28409; (910) 452-1452; FAX (910) 799-5209; or visit www.divingdocs.org.

Business Meeting Open to ALL Members

The next AsMA Annual Business Meeting will be held Tuesday, May 10, 2005. You do not have to buy lunch to attend the meeting. Your attendance and participation are encouraged. We need your support to vote on current issues and elect our officers. Please join us!

Send information for publication on this page to: **Eileen Hadbavny**
1266 Merton Rd,
Charleston SC, 29407-3317
e-mail: hadbavny@usit.net
www.aerospacenursingsociety.org

AEROSPACE NURSING SOCIETY NEWS

A Message from the ANS President

Greetings from the Aerospace Nursing Society President. My term will end this May when I hand over the gavel to Capt. Dan Roper.

This year has been a busy one with most of my time spent on securing continuing education and contact hours for nurses attending the AsMA 76th Annual Scientific Meeting as well as all future meetings. In addition, we are continuing to expand our membership by increasing our visibility with our website and biannual newsletter.



It is my pleasure to announce that Maj. Gen. Bruce Green, Commander 59th

Medical Wing, Wilford Hall Medical Center, will be our Keynote Speaker at the ANS luncheon on Wednesday, May 11th.

Scientific Program Highlights this year include a panel presentation chaired by Col. Virginia Schneider on Patient Transport-In-flight Medical Emergencies on Tuesday, May 10th, 10:30-12:00.

The ANS is a diverse and outstanding group of dedicated Nurses and Allied Health Professionals. I thank you all for your support this year and I look forward to seeing you in Kansas City. I would like to extend a heartfelt thank you to all military medical personal who give the best medical care in the world to our airman, marines, sailors, and soldiers deployed around the globe.

Colleen Morissette
President-ANS, 2004-05

Continuing Education Credit

Colleen Morissette, ANS President

Continuing education in nursing is defined as programs beyond basic nursing preparation which enrich, improve, and enhance the skills of professional nurses. The goal of continuing education is to promote excellence in nursing, thus improving health care to our patients, families, and communities.

In the past, CEU has been the word used to describe continuing education for nurses; the term "contact hour" is a more generic term and, as you can see by the table below, includes CEU's, CME's, and Academic Semesters.

Continuing Education and Contact Hour Equivalencies:

- 1 CEU = 10 Contact Hours
- 1 Contact hour = 0.1 CEU
- 1 Contact Hour = 50 min
- 1 Academic Semester Hour = 15 Contact Hours
- 1 Academic Quarter Hour = 12.5 Contact Hours
- 1 CME = 60 minutes or 1.2 Contact Hours

- 1 AMA Credit = 60 minutes or 1.2 Contact Hours
(Source- American Nurses Credentialing Center ANCC)

Nurses must meet state license, employer, and advanced credentialing requirements for continuing education. Each organization has a different number of contact hours and type of hours required. For example, the American Nurses Credentialing Center continuing education certification renewal states: "As of 2003, a) at least 51% of the total continuing education credits must be in your certification specialty and b) at least 50% of the total continuing education credits must be from any of the following: ANCC Accredited Provider, AAFP, AAPA, ACNM, AphA, APNA, ENA and Etc. In addition to continuing education provided by the organizations listed, Continuing Education (CE) will also be accepted as part of the 50% requirement if it is provided by organizations accredited by the Accreditation Council on Continuing Medical Education (ACCME)."

The Aerospace Medical Association is accredited by the ACCME and offers approximately 24 Cat 1 CMEs at each Annual Scientific Meeting.

In addition, USAF Nurses may obtain Category C nursing continuing education contact hours through the Air Force Nurse Corps Continuing Education and Recognition Program (CEARP). To obtain credit, submit a copy of the course completion certificate and supporting documentation such as a program schedule along with completed Air Form 2664 to Lt. Col. Sandra Bruce, Chief of Air Force Nursing Education: Sandra.Bruce@randolph.af.mil. This credit can be used towards fulfilling the AF requirement for contact hours.

ANS Luncheon Keynote Speaker: Maj. Gen. Charles Bruce Green, USAF, MC

It is our honor and pleasure to announce that Maj. Gen. Charles Bruce Green, USAF, MC will be our keynote speaker this year at the Annual ANS luncheon on Wednesday, May 11th, 2005, starting at 12:00 p.m. The ANS annual business meeting will follow the luncheon.



Maj. Gen. Green is the Commander, 59th Medical Wing, Wilford Hall Medical Center, Lackland Air Force Base, TX. He leads the Air Force's largest medical facility with a staff of 5,400 military, civilian, contract employees, residents, and students. As the Department of Defense Multi-Service Market Manager for San Antonio TRICARE, he oversees four medical treatment facilities in the San Antonio metropolitan area and directs a \$1.2 billion dollar budget providing health care for more than 204,000 beneficiaries.

General Green was commissioned through the Health Professions Scholarship Program and entered active duty in 1978 after completing his M.D. degree at the Medical College of Wisconsin in Milwaukee. He completed residency training in family practice at Eglin Regional Hospital, Eglin AFB, FL, in 1981, and in aerospace medicine at Brooks AFB, TX, in 1989. He is board certified by the American Board of Family Practice and the American Board of Preventive Medicine. An expert in disaster relief operations, he planned and led humanitarian relief efforts in the Philippines after the Baguio earthquake in 1990, and in support of Operation Fiery Virgil following the 1991 eruption of Mount Pinatubo.

General Green has commanded three previous hospitals. He served as the Command Surgeon for U.S. Central Command, planning all joint medical responses for operations Desert Thunder and Desert Fox. He also served as the Command Surgeon for U.S. Space Command and U.S. Transportation Command. The General oversaw aeromedical evacuation for operations Enduring Freedom and Iraqi Freedom prior to assuming his current position.

In Memoriam Barbara A. Werth

It is with great sadness that we mark the passing of Barbara A. Werth in November 2004 at the age of 54. She was the 1998-99 president of the ANS. During her nursing career she had worked as director of nurses for Georgia Correctional HealthCare, and was also chief, standardization/evaluation USAF Reserves, Charleston, SC.

Barbara received both her associates degree and bachelor of science in nursing from Armstrong State College, Savannah, GA. She went on to earn a master of science in nursing from the Medical College of Georgia, Augusta. She was a board certified occupational health nurse specialist and attended various training courses including the Flight Nurse Course at USAFSAM, and the USHHS Military Medicine



Education Institute for trauma and advanced burn life support courses.

During her military career Werth was deployed as part of Operation Just Cause, Operation Desert Shield/Desert Storm, and Operation Uphold Democracy. Her military decorations include the Air Force Meritorious Service Medal, Commendation Medal, Outstanding Unit Award with Valor with 5 devices, Combat Readiness Medal, National Defense Service Medal, Humanitarian Service Medal, and Southeast Asia Service Medal.

An active AsMA and ANS member for many years, Barbara participated on committees and presented at several scientific meetings. She will be missed.

Send information for publication on this page to: **Dale Orford**
15516 E Acacia Way,
Fountain Hills, AZ 85268
480-837-7919; dorford@cox.net

WING NEWS & NOTES

Thank You for a Special Year

By Harriet Hodgson

Saying goodbye involves lots of emotions. Some goodbyes, such as leaving for a long-planned trip, are filled with expectation and hope. Other goodbyes, such as bidding good riddance to a bad cold, are different and you're eager to feel like yourself again. But saying farewell is a different process. My term as Wing president is almost over and it's time to step aside. This isn't a sad time for me because I know my goodbye isn't final. I'll see many of you again at AsMA and Wing meetings. Therefore, my goodbye is really "so long," a term that implies future contacts.

Before I say so long, I need to thank all of you for the support you have given me. Your "atta girl" comments have not only kept me going, they've energized me. It's been an honor to represent you and I've done it proudly. I also thank AsMA for its support, especially the Executive Director, Dr. Russell Rayman.

In the December 2004 issue of *Aviation, Space, and Environmental Medicine*, Dr. Rayman wrote about membership. He said AsMA membership was "backsliding," down by 88 members, and asked existing members to seek new members aggressively. The same is true of the Wing. When AsMA members retire from their various positions, some stop coming to meetings. We miss them, their spouses, and their friendship.

New members are the lifeblood of every organization. Dr. Rayman concluded his article by asking every AsMA member to get one new member. I ask you to do the same. At the Anchorage meeting I learned (to my dismay) that some AsMA members have never heard of the Wing. The solution? Talk to AsMA members and their spouses about our organization and invite spouses to join. Tell the spouses about Wing tours, the Annual Meeting and Luncheon, and offer to accompany them to these events.

Ideas are also the lifeblood of every organization and if you have additional membership recruitment ideas please email them to me at harriethodgson@charter.net. Now it's time to say "So long" and thank you for this special year. You have given my heart wings and memories to cherish for a lifetime. I know you'll do the same for the next Wing president, Trish Trifilo. Congratulations Trish!

Beer, Blues & BBQ.... Kansas City Strip, and All That Jazz!

Move over Carolinas! Step aside, Texas! Kansas City claims the title of "BBQ Capital of the World." It's not just a food group here; it's Kansas City's identity!

KC Barbecue "has been perfected through a slow cooking method - sometimes up to eight hours - and constant monitoring of the fire so it does not vary more than 12 degrees." This is serious stuff! But, before you order, learn the lingo... Burnt ends are not restaurant rejects, but a delicacy! These are cut from the ends of a brisket and served with sauce or as a

sandwich, and supersized with "unpeeled fries hot from the lard bath." Yum! This is NOT low-carb! Top it off with an ice cold beer and a little Jazz, and you have a perfect evening.

Kansas City was the heart of the music scene in the 20's and 30's. In those days, KC was a railroad hub, so many jazz greats would stop there on their way to the big cities, and many were happy to make the heartland their home. Today, rhythm and blues and jazz can still be heard at night spots, restaurants, and courtyards every night of the week, all over town! Check out the *Kansas City Star's* Friday preview for a listing of headliners, or call the **24-hour Kansas City Jazz Ambassadors' Hotline at (816) 753-5277.**

Kansas City is also known for its award-winning steak--the Kansas City Strip! The top Steakhouses select only corn-fed, USDA - graded prime beef. For you carnivores, check out some of the following listings for the best of the best of this beautifully marbled, boneless cut loaded with flavor... but don't ask for New York Strip... they don't like that! And don't forget to make a reservation! You be the judge. Here are some of the famous places to try out:

Oklahoma Joe's BBQ
47th & Mission, KC, KS (913)722-3366

Arthur Bryant's Barbeque (East Side)...a KC landmark since 1930.
1727 Brooklyn (817) 231-1123

The Majestic Steakhouse (Downtown)
931 Broadway (816) 471-8484

Plaza III, the Steakhouse (Country Club Plaza)
4749 Pennsylvania (816) 753-0000

Grand Emporium - voted "Best Blues Club in America"
3832 Main (816) 531-1504

Blaney's
415 Westport Road (816) 561-3747

Information gathered from *Insiders' Guide Kansas City.*

In Memoriam: Jean Pettyjohn

We are very saddened to note the passing of long-time Wing member, Jean Pettyjohn of Gulf Breeze, FL, who passed away suddenly on January 2nd, 2005.



Born in Montreal, Canada, Jean grew up in Evanston, IL, before moving on to New Jersey. She attended the University of Delaware and graduated with a degree in Elementary Education. In 1962, Jean became an American citizen. Her teaching career rapidly transformed into a career of volunteerism, as husband Frank's military career found them moving from coast to coast for

over 26 years. They settled in Gulf Breeze in 1980. The Wing extends our sincerest condolences to Jean's husband, Dr. Frank S. Pettyjohn and to her two daughters and two grandsons.

Jean is remembered by Wing Members:

Lady Mary Baird, "As I think of Jean, I see a most gracious, gentle lady who was always available to support the Wing. We will miss her quiet demeanor at our events. She was a friend, a wife and mother who will be sorely missed by all who have had the privilege of knowing her."

Elina Takahashi, "I got to know Jean very well first while in Singapore. We were sitting in Raffles (the four of us) having a Singapore Sling, when Jean noticed the size of Georges' feet compared to Franks!! She burst out laughing and we decided that there was a 7 size difference. We bonded well and I enjoyed her company at all of our meetings. At that same conference, I strongly encouraged her to go into the Iguana pen with me. I love reptiles and wanted to share this with Jean. She looked at me as if I was crazy but humored me, reluctantly, and joined me. These creatures were beautiful and Jean even petted one of them. She was a wonderful person, and this world is not going to be the same without her."

Reminder from our Favors' Chair

Our Kansas City meeting is rapidly approaching and we are all looking forward to meeting and greeting old friends and new. It has been a Wing tradition for many years to distribute small favors at our Welcoming Reception, and we offer the following suggestions on what to bring. Gifts should reflect the home region of the donor, and need not be expensive - in the 10-15 dollar range would be appropriate. You may also wish to include a small note with your name so that the recipient may thank you.

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: judywaring@com-cast.net

Abdollah Behzadi, M.D., M.B.A., of Ontario, Canada, originally a Fellow at the Mayo Clinic in Rochester, MN, is now a Consulting Surgeon at the Scarborough Hospital in Scarborough, Ontario, Canada.

Dr. Charles A. Berry has been awarded the Audie and Bernice Davis Award from the Civil Aviation Medical Association for his exceptional service in contributing to aviation safety through the promotion of the health and longevity of the pilots in his care. Dr. Berry has served as a flight surgeon in the U.S. Air Force, as Medical Director of the NASA Manned Spacecraft Center in Houston, TX, and as Director of Life Sciences for all of NASA. During the Cold War, he represented the United States in the mutual exchange of spaceflight data with the Soviet Union. He is currently an FAA Senior Aviation Medical Examiner and an Aviation Medical Examiner for Canada. He is a Past President of the Aerospace Medical Association, a Past President of the International Academy of Aviation and Space Medicine, and is on the Board of Trustees of the Civil Aviation Medical Association.

Dr. Ian Reid Entwistle M.B., Ch.B., of Wirral, UK, has been honored with the award of a Fellowship from the Royal Aeronautical Society for his work in the fields of space, aviation, and particularly deep vein thrombosis in air travelers.

Wg.Cdr. Gregory V. Hampson, RAAF, MC, of North Adelaide, Australia, has been posted as the Commanding Officer at the Institute of Aviation Medicine in Edinburgh, Australia.

Thomas H. Marshburn, M.D., of Pearland, TX, initially a flight surgeon at NASA Johnson Space Center (JSC) in Houston, TX, has transferred to the position of astronaut candidate at NASA JSC.

Maj. Walter M. Matthews, USAF, MC, FS, formerly the Chief of Aeromedical Services 39 ABW at Incirlik AB, Turkey, is now the Chief of Aeromedical Services at Cannon AFB, NM. He recently received a Meritorious Service medal.

Geff McCarthy, who was the Director, Medicine and Surgery, VA Upstate NY Healthcare Network, has moved to Portland, OR, to be Chief Medical Officer, VA Northwest Network. He is responsible for quality of care for 200,000 veterans who are cared for by a system of 8 hospitals and 20 clinics. He was also recently appointed as U.S. Delegate to the Medico-Physiologic Committee of the Federation Aeronautique Internationale, the air sports governing body.

CPT Kathryn R. O'Donnell, MC, USA, of Leavenworth, KS, was promoted to Major in 2002.

Focus on Members

CAPT Michael R. Valdez, MC, USN (Ret.), of Corrales, NM, formerly the Director Aerospace Medicine Residency in Pensacola, FL, has retired from the U.S. Navy. He is now a Field Representative for the Accreditation Council for Graduate Medical Education in Chicago, IL. He was awarded the Legion of Merit and the U.S. Army Commendation Medals upon retirement.

CAPT Valdez was born and raised in New Mexico. He served in the U.S. Air Force from 1968-1972, after which he attended New Mexico State University, earning a B.S. in Biology in 1975. He received his M.D. from the University of New Mexico School of Medicine in 1979 and completed a surgery internship at the Naval Regional Medical Center, Portsmouth, VA, in 1980. During that same year, he participated in flight surgeon training at the Naval Aerospace Medical Institute, Pensacola, FL. In 1981, he attended Undersea Medical Officer training at the Naval Undersea Medical Institute in Groton, CT. He earned an M.P.H. and Tropical Medicine degree from Tulane University School of Public Health and Tropical Medicine in 1988.

During his military career, CAPT Valdez has served in a variety of positions, including FS/UMO, Senior Medical Officer, and Wing Surgeon. From 1995-1998, he served as Director, Special Programs at the Naval Aerospace and Operational Medical Institute. He became Director, Residency in Aerospace Medicine, and served in this position until 2004.

CAPT Valdez has been awarded the Meritorious Service Medal twice, the Air Medal, the National Defense Ribbon three times, the Vietnam Service Medal, the Vietnam Campaign Medal, the Navy Achievement Medal, the Southwest Asia Service Ribbon, the Air Force Good Conduct Medal, the Air Force Longevity Ribbon, the Fleet Marine Forces Ribbon, the Overseas Service Ribbon with silver star, and marksmanship ribbons.

In Memoriam

Robert Graeme Cameron

Robert Graeme Cameron, M.D., of Switzerland, died in January 2005. Born in 1925 in Australia, he enlisted in the RAAF after high school. He attended navigation school and earned his wings in 1944. He was posted to No. 22 Squadron at Noemfoor Island off Dutch New Guinea later that year. When the armistice was signed, he volunteered for the No. 93 Squadron; during this time, he visited the ruins of Hiroshima.

Dr. Cameron started at the University of Melbourne in 1947, graduating in 1955 with an M.B.B.S. After graduation, he re-enlisted with the RAAF as a medical officer. After training at the RAAF Hospital at Laverton, he was posted as a Senior Medical Officer to the Basic Flying Training School at Urenquity with an acting rank of Squadron Leader. Shortly after this, he became a flight surgeon for the Swiss Air Force Institute and

moved to Switzerland. While he was working there, he did basic research on color vision defective pilot candidates which he later developed into a thesis for his M.D. degree, which was awarded to him by the University of Zurich in 1968. He was also appointed an AME.

In 1960, Dr. Cameron transferred to the Medical Department of Swissair, where he conducted routine medical examinations of flying personnel and lectured on various topics such as aviation physiology, tropical hygiene, and first aid to both cockpit and cabin crews. He was later appointed an AME by the FAA. In 1968, he left Swissair and joined the medical department of Ciba-Geigy, a pharmaceutical company, where he was responsible for setting up, and later running, a worldwide computer system for the evaluation of clinical trials. During this time, he was appointed an AME by Britain, Canada, Australia, and New Zealand.

He retired from Ciba-Geigy in 1985, devoting himself full time to the practice of aviation medicine. In that same year, he was elected a member of the International Academy of Aviation and Space Medicine, which he held until 1992. In 1988, after 20 years on the committee of the Swiss Association of Tropical Medicine and Parasitology, he was elected their first Honorary Member. In 1991, he was elected a Fellow of the Aerospace Medical Association, having been a member since 1955. In his early sixties, he obtained a private pilot license and actively flew Piper Archer II aircraft until into his seventies. He retired from being an AME in 1995 due to the "age 70 rule" in Switzerland.

Hamilton B. Webb, M.D.

Hamilton B. Webb, M.D., died in January 2005. Born in 1914 in New York, he graduated from Yale University with a B.S. in 1935. He earned his M.D. at Columbia University in 1939 and interned at Bellevue Hospital in 1939 and Lenox Hill Hospital in 1940. He spent a year of residency, also at Lenox Hill Hospital, in 1941. He joined the military in 1942 and did his post-doctoral work from 1942-1955 at the New York University School of Medicine, the U.S. Air Force School of Aviation Medicine, and the U.S. Navy School of Preventive Medicine.

During his military years, Dr. Webb served in a variety of positions including flight surgeon, Hospital Commander, Chief of Aviation Medicine and Director of Medical Operations, and Wing Surgeon. He was awarded the Bronze Star, the Joint Services Commendation Medal, and the Air Force Commendation Medal. He retired from the Air Force in 1973 with the rank of Brigadier General and took a position as Medical Officer of the Library of Congress.

Dr. Webb was a member of the Association of Military Surgeons, the American Medical Association, and the

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American Association for the Advancement of Science. He was also an Emeritus Member and Fellow of the Aerospace Medical Association.

Obituary Listing

We have recently learned that **Lt.Gen. Tragool Thavaravej, RTAF, MC**, of Thailand, has died. Born in 1914, he received his M.B. in 1937 from the Medical School in Bangkok. He received a Diploma in Graduate Surgery in 1949 from New York University Bellevue Medical Center, and an FICS from the International College of Surgeons in Chicago in the same year. He was also a Visiting Fellow in Orthopedic Surgery at Barnes Hospital in St. Louis, MO. He served as Surgeon General of the Royal Thai Air Force and was a Past President of the Aviation Medical Association of Thailand. He was also a member of Military Surgeons of the U.S., of the Siamese Medical Association, and was made a Fellow of the Aerospace Medical Association in 1969.

New Members

- Aull, Cody B., ENS, MC, USNR, Kirksville, MO
- Bowden, Bruce A., M.D., Bellingham, WA
- Brisson, Michael P., Daytona Beach, FL
- Dekleva, Kenneth B., M.D., Dulles, VA
- Doerr, Harold K., M.D., Houston, TX

- Gilley, Emily A., ENS, MC, USNR, Chicago, IL
- Gomenyuk, Sergey, Washington, DC
- Lakin, James D., LCDR, MC, USNR, Burnsville, MN
- Longstaff, James E., CAPT, MC, USN, San Antonio, TX
- Mequio, Michael J., 2Lt., USAF, Portage, MI
- Miller, Michael B., D.O., Atlanta, GA
- Nicholson, Wayne T., M.D., Pharm.D., Rochester, MN
- Rimmer, John J., Brick, NJ
- Rudsenke, Clayton W., Atlanta, GA
- Troitino, Anthony, M.D., Clifton Park, NY
- Zhou, Lan, Ph.D., Monterey Park, CA

International New Members

- Campbell, William A., M.B., Ch.B., Edinburgh, UK
- Harding, Noel, Flt.Lt., RAAF, MBBS, Queensland, Australia
- Haseldine, Dominic C., Sqn.Ldr., RAF, M.B., Ch.B., Wiltshire, UK
- Jackson, Claire E., MAJ, RAA, M.B., Ch.B., Wiltshire, UK
- Johnson, Alana L., Flt. Lt., RAAF, MBBS, Larrakey N.T., Australia
- McCready, Claire, MRCGP, Lincolnshire, UK
- Qabaka, Bonakele, B.Sc., Mandela Metro, Rep. of South Africa
- Soderberg, Richard, M.D., Stockholm, Sweden
- Twerdahl, Jr., Eric H., ENS, MC, USN, Oxfordshire, UK

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POSITION AVAILABLE

AMSUS Seeks Executive Director

The Association of Military Surgeons of the United States (AMSUS) is seeking an executive director with proven leadership skills. AMSUS is the Society of the Federal Health Agencies whose nearly 10,000 members include health professionals in the Army, Navy, Air Force, U.S. Public Health Service, including National Guard and Reserve, and the Department of Veteran Affairs (<http://www.amsus.org>). Applicant should have substantial experience in federal medicine at the senior management level and possess demonstrated executive leadership skills. Applicants should submit cover letter and resume including references to AMSUS, 9320 Old Georgetown Road, Bethesda, MD 20814, Attn: Executive Director.

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Aerospace Medicine Student and Resident Organization News

Salutations from AMSRO's President

Welcome to a new year and to AMSRO - the Aerospace Medicine Student and Resident Organization. AMSRO is an organization that supports both students and residents interested in aerospace medicine and research. Since its inception more than 12 years ago, AMSRO has provided young scientists, medical students, and residents in aerospace medicine (RAMs) access to every facet of the aerospace industry. This includes educational programs, research opportunities, aerospace medicine, space clerkships, and many other academic and social activities. AMSRO provides its members the opportunity to learn, study, organize, lead, teach, and generally participate in every aspect of aerospace medicine by means of its direct association and sustained support from the Aerospace Medical Association.

AMSRO is a lead-in organization to AsMA, and is supported by every member of the AsMA leadership. The AMSRO president has access to the AsMA leadership and has always had an informal seat at the Council table during the mid-year and May conference business and organizational meetings. It is at these meetings that the collective voice of AMSRO's membership is best heard and solicited by members of the various constituent bodies. What does AMSRO provide? This can be summed up in three words: career development, advocacy, and outreach.

Career Development: This is the most obvious aspect of what AMSRO provides to its

members. AMSRO exists largely to support and promote the careers of its members in the field of aerospace medicine or related fields. We can facilitate this by goal by establishing a membership network for the dissemination of information and exchange of ideas worldwide. The establishment of a system of e-mail list serves, a newsletter, and a website are all integral aspects of AMSRO's communication infrastructure.

Advocacy: As the only national and international organization representing students and residents in aerospace medicine, AMSRO is dedicated to looking out for the interests of future practitioners and leaders in aerospace medicine. Our seat on the AsMA Council and our delegates to both the medical Student Section and Resident Physician Section of the American Medical Association allow us to accomplish this task.

Outreach: In addition to meeting the needs of our members, AMSRO has always been dedicated to reaching out to the next generation. The Professional Outreach Program is a way for AMSRO members to identify and educate those students and young professionals who have or may have an interest in aerospace medicine. Additionally, the popular Educational Outreach program has annually gone out to entertain, educate, and motivate elementary school students. This is just one way in which AMSRO members can give back and invest in our aerospace future.

Conference Call: At our last AsMA conference call in Anchorage, AK, we missed many of our members, and just as importantly, elected the bare minimum in leadership as required by our Constitution. Our membership

has slipped to an all time low and our website is in need of a competent web master and sustainable funds. It is with this state of affairs that I call for help from past and present AMSRO members in revitalizing this organization. As president, I am currently reinitiating our website and will have it available to our members by means of the AsMA website. I am also requiring modest membership dues of \$5 so as to sustain the website indefinitely.

While in Kansas City for the upcoming AsMA conference this May, I hope to have past, present, and future AMSRO members and supporters drop by our table to chat and join in our continued mission of Aerospace Career Development, Advocacy, and Outreach.

Join the Aerospace Student and Resident Organization (AMSRO)

AMSRO's vision is to be "the international advocate for aviation, space, and environmental medicine among students and residents" and the mission to "advance the science and art of aerospace and diving medicine among undergraduate, graduate, medical, allied medical, and nursing students, as well as among medical residents, throughout the world."

Dues are just \$5 dollars and membership is open to all students and residents in aerospace medicine and allied health professionals. For further information, contact:

Johann S. Westphall, AMSRO President
4625 Pebble Run
Schertz, TX 78154
johann.westphall@brooks.af.mil