

President's Page

Happy New Year!

As we move from the old year to the new it is a good opportunity to pause for thought and reflection in our personal lives, professional activities, and our involvement with AsMA.

It is easy to look at the half-empty bottle and worry about the falling membership and its implications. But as the year 2006 stretches before us, I prefer to look at the half full bottle and grasp the opportunities we have to make AsMA a vibrant and vital organisation, membership of which is considered essential by anybody practising any profession associated with aerospace medicine and its related disciplines.

More than 70 members of the Scientific Program Committee, under the leadership of Dr. Jeff Myers, met in November to review over 600 abstracts submitted for the Orlando meeting, the second highest number of submitted abstracts in the history of the Association. The mood of the committee was vibrant and upbeat and the Orlando meeting promises to deliver a memorable scientific congress. This is really encouraging for the future of our Association, but, as I have said many times, there is much work to do.

We have in place a fine Strategic Plan to take AsMA forward. However, our survival as an organisation depends upon having sufficient members to provide the infrastructure and financial stability to continue the annual scientific congress and the monthly journal. If you have read my previous President Pages, you will doubtless be a little tired of the same old message. Well the good news is that we are doing something active about it on your behalf.

A 'Tiger Team' has been established to examine all aspects of what our organisation is and what it offers the membership, including branding, service provision, and membership benefits. We benefited from the drive and enthusiasm of CDR Andy Bellenkes in formulating this team and its aims, and he has now handed over the



Michael Bagshaw, M.B., B.Ch.

chair to Dr. Russell Rayman. Other members of the team include Mesdames Gloria Carter, Pam Day, and Sheryl Kildall from the Home Office, and Drs. Jim Webb, Kris Belland, Jack Hastings, Yvette DeBois, Warren Silberman, Charles Fisher, Bob Weien, and Marian Sides from the membership.

This team will present to Council recommendations to implement ideas to reverse the falling membership trend and improve the product we offer, and I hope to tell you about these when we meet in Orlando in May.

We have already implemented a random survey of a proportion of members, and I am grateful to those of you who have taken the time to respond. If you were not selected by the randomisation process, we still welcome any comments you may have about your Association. Your opinions really do count and make a difference.

The motto of the Royal Air Force is 'Per ardua, ad astra.' I am taking the liberty of borrowing this for AsMA as we enter the new year. Let us work together and reach for the stars!

More next month.

Medical News

AVIATION, SPACE, AND ENVIRONMENTAL MEDICINE

Executive Director's Column



Rayman

Evenings with Wilma

The Mexican Aerospace Medical Association had planned its 22nd Annual Meeting for October 19-22, 2005, at a hotel in the Yucatan about 30 miles south of Cancun. A very interesting scientific program had been organized under the able hand of the President, Dr. Octavio Amezcua. Opening Ceremonies commenced on the first evening with a military Color Guard followed by remarks by various dignitaries. Unfortunately, the meeting went no further as it was announced that hurricane Wilma was approaching the area and that a direct hit was expected the following morning with category 5 winds and heavy rains, making Wilma one of the largest and most dangerous hurricanes ever recorded.

As it was, the weatherman was very accurate in his prognostications as the storm did hit the Yucatan Coast as predicted. Unfortunately, given the size of the storm and its very slow progress (3 to 6 kph), it was obvious that we were in for a long siege. As it turned out, the devastating storm hovered in the Cancun area for appropriately 72 hours.

Immediately after Opening Ceremonies it was announced that everybody was to report at 11:00 a.m. the next morning with blankets and pillows to the large salon in the hotel. Approximately 450 hotel guests, including the 50 attendees of our meeting, duly reported, with everyone staking a claim on the hard floor of the salon. Although the room was crowded, there was space for everyone. Small lunch bags were distributed containing fruits, pastries, and sandwiches that we were told must last until the next day, necessitating a little bit of food rationing. Not long after 11:00 a.m. we could hear very strong winds building up as well as heavy rains falling on the roof. The day was spent lying on the floor and chatting with neighbors. There were concerns for a number of elderly individuals, undoubtedly some with illness, as well as a large number of children. Nevertheless, the evening went relatively well with most getting at least some sleep, although there was a palpable feeling of anxiety.

The next morning the winds were extremely loud. Suddenly there was the sound of a large crash over our heads. Looking up, about half of the roof had been blown away. Several minutes of panic ensued as the hotel staff immediately evacuated the children, fol-

lowed by the adults several minutes later. We were told later that the entire roof had collapsed about 10 minutes after evacuation from the salon.

The salon was connected to the hotel kitchen, which was very large because it serviced all of the hotel restaurants. We were told to expect to be in the general kitchen area for at least 24 hours (it turned out to be actually 48 hours). The kitchen seemed to be a very strong structure, making it unlikely it would sustain damage from the high winds. Nevertheless, the thought of the building collapsing was certainly on everyone's mind. Again, everyone staked out a claim in the kitchen with some sleeping on the cutting boards, some on hard floors, and some even on pastry trolleys. There was also a small restaurant attached to the kitchen in which some were able to sleep on the limited floor space.

The hotel staff did an excellent job keeping everyone informed of the status of the storm. Somehow they were able to provide several simple but hot meals as well as a large supply of drinks and coffee. Also the hotel staff did an outstanding job keeping the limited bathroom facilities adjacent to the kitchen clean and in good order. Of course, there were no showers and no way to change clothes, so everyone spent approximately 72 hours in the same set of clothing.

After 24 hours in the salon and 48 hours in the hotel kitchen, the winds had died down to a safe level, so everyone was permitted to return to their hotel rooms. Some were badly damaged, some were flooded, and some were in reasonably good condition. But at least everyone now could go to their rooms and enjoy some privacy as well as taking a cold shower. The problem was then evacuation. We were told that there were approximately 75,000 tourists in the Yucatan and that flights were drastically reduced because of considerable damage to Cancun Airport. At this point the group was challenged by boredom and the uncertainty of evacuation. Walking, talking, reading, and drinking coffee became the routine. Nevertheless, most of our group reached home approximately 8-9 days after arrival via humanitarian flights—everyone with a story to tell.

All of us have seen natural disasters on television, but to really appreciate what one goes through, one simply has to be there. During our stay in the salon and kitchen, we had ample time to talk to our colleagues, friends, and many strangers as well. It was very satisfying to have the opportunity to sit down (on the floor, of course) with fellow AsMA members and get to know one another better. I sensed that the group bonded somewhat and will always have a special relationship because of this experience. I also could not help but notice some of the personality changes in the group due to these trying circumstances. Some became withdrawn, some depressed, and certainly there was increasing irritability. Yet in some cases there was no obvious change in personality or demeanor. I believe this probably would not be true if we

had stayed there much longer as we were stressed very much by boredom as well as the uncertainty of evacuation.

There is a lot more to this story, but I think I will end at this point. I'm sure you will hear many personal anecdotes from fellow AsMA members who were in attendance. With the risk of forgetting somebody, the following AsMA members shared this harrowing experience: Luis Amezcua, Octavio Amezcua, Michael Bagshaw, Ted Brooks, David Claypool, Jay Danforth, Gene Davis, Ramon Dominguez, Leon Dykster, Silvio Finkelstein, Star Forrester, Angelo Liberatore, and Michael Muhm.

Proposed By-Laws Change

In accordance with Article XIII of the Bylaws of the Aerospace Medical Association, the following amendment is hereby published in anticipation of its consideration at the Annual Business Meeting to be held Tuesday, May 16, 2006, in Orlando, FL. The meeting is open to all members of the AsMA. The current Bylaws are available on the AsMA website at www.asma.org.

1. Article X, Section 4. Rules. "Robert's Rules of Order, revised, shall cover the procedure at all meetings unless otherwise provided by these Bylaws. All elections and all questions shall be decided by a majority of votes cast." Replace the last sentence with: "Unless provided otherwise by Robert's Rules or by these Bylaws, all elections and questions shall be decided by a majority of votes cast."

This will eliminate the discrepancy in the Bylaws, between Article IX, Section 3. Standing Committees, E. Bylaws, and the above

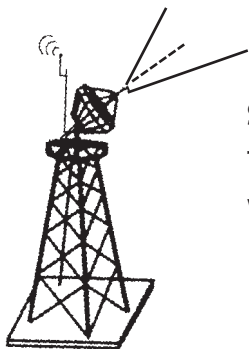
AMA House of Delegates Meeting

At the November 2005 meeting of the AMA House of Delegates, your Delegates supported the following resolutions (both were approved):

1. RESOLVED, that our American Medical Association formally submit comments encouraging the Department of Transportation's Proposed Rule that will require airlines to permit portable oxygen concentrators that have met all applicable safety and security testing onboard airplanes for use by patients.

2. RESOLVED, that our AMA seek appropriate legislative or regulatory authority for the U.S. Department of Transportation to include water system sanitation and sanitation testing as part of routine commercial passenger aircraft maintenance.

Starting this month, the online version of *Aviation, Space, and Environmental Medicine* is now available to Members for FREE. Simply go to www.asma.org, log into the Member Home page, and follow the link to the online journal through Ingenta.



Science & Technology Watch

Keeping You Informed Of The Latest Advances In Science And Technology

In the continuing efforts to improve operational effectiveness, the use of the head as a platform for displays presents a wide variety of technical challenges and opportunities. Too often the technologies required for these devices are developed without an appreciation for the human factors and aeromedical issues involved when actually flying with these devices. The operational benefits are clear and it is the job of our community to ensure that all aspects are considered to design systems that provide these aids without increasing injury risks. Dr. Newman outlines the benefits and pertinent aeromedical issues for us in this month's Watch.

Multi-Sensor Integration Systems For The Tactical Combat Pilot

Dr David G. Newman, MB, BS, DAvMed, PhD, MRaES, FAICD, AFAIM
Aviation Medicine Unit, Department of Epidemiology and Preventive Medicine, Monash University, Melbourne, Australia

During flight, the tactical combat pilot receives a significant amount of critical mission information relating to aircraft systems, the current tactical situation, the outside world view, aircraft attitude, flight performance, and navigation. All of this diverse yet crucial information comes from multiple sensors, all of which tend to have different capabilities.

Multi-sensor integration, or "sensor fusion" as it is also known, is a term which means that all available sensor information is integrated or "fused" into a single display. This technology combines tactical information with flight performance data and mission information to give the pilot an integrated single-display sense of what is happening in and around the aircraft.

Multi-sensor integration technology can include just about any sensor-derived information available: enhanced night vision technology [incorporating night vision goggle (NVG) and/or forward-looking infrared imagery (FLIR) overlays], head-up display (HUD) symbology, aircraft systems information, weapon aiming cues and sighting systems, threat detection systems (including three-dimensional localized auditory stimuli), ground collision avoidance and situational displays. These systems can also incorporate information data-linked from other remote sources, such as airborne early warning aircraft or even ground-based stations.

Such a system is designed to increase both the situational awareness and the tactical

performance of a pilot and to maximize the combat effectiveness of the aircraft as a weapons system. For example, by providing some flight reference symbology during performance of off-boresight visual tasks (such as weapon aiming or target acquisition), the pilot is able to remain spatially oriented and aware of what the aircraft is doing. During all phases of the mission the pilot is thus able to operate "head-out/head-up" with a greater level of safety.

To achieve this, the multi-sensor integration system makes use of the pilot's helmet as a mounting platform for the integrated visual display. This display may take the form of a small monocular screen presented to one eye, or a more comprehensive display projected onto the visor of the helmet. While helmet-mounted systems have been around for several years, and are in regular service with combat pilots world-wide, the true helmet-mounted multi-sensor integration system as described above is still an emerging technology. There are several research and development teams around the world working on such systems, which clearly offer the tactical combat pilot some distinct operational advantages.

However, it must be said that such technological systems present almost as many challenges as advantages. These challenges include cognitive, psychological, biodynamic, and aeromedical issues. Many of these remain to be fully resolved, and represent ongoing issues to be addressed by the research and development teams.

The biodynamic issues inherent in a helmet-mounted system incorporating multi-sensor integration are potentially significant. The system involves an overall increase in head-borne helmet weight, with a possible shift in the center of gravity of the head-helmet complex. There is considerable potential for acute and/or chronic neck injury in pilots using these systems. This is even more likely if the tactical environment involves significant head movements, or unfavorable head positions during aircraft maneuvering, especially under high +Gz loads. It is unknown what the potential consequences of long term use of these systems are.

What about the dynamic aspects of head movements? If sensory systems include weapon sighting and cueing systems, head tracker technology must have minimal latency periods, in order to maximize accuracy and limit the potential for disorientation. What about ejection, impact dynamics and crashworthiness? Could such a helmet-mounted system increase the injury potential in an otherwise survivable aircraft accident? What about emergency ground egress? All of these issues need to be addressed before the system can be accepted into full operational service.

The human factors issues involved with multi-sensor integration technology are also significant. In overall terms, the technology must be enabling, not disabling from a cognitive workload point of view. The system should enhance the aircrew's ability to complete the mission, without greatly increasing their workload. If workload increases, the potential for errors also increases.

Humans have limited information processing capability, so it is important to avoid sensory overload of the pilot. What information is needed and how should it be presented? How much information is necessary

for different phases of the mission? Too much information can lead to visual saturation. There is no limit to what could be displayed. Visual representations of navigation aids and beacons, flight path vectors, traffic collision and avoidance (TCAS) advisories, and even air-to-air radar data are possible. This could reduce the risk of mid-air collisions and improve aircrew situational awareness. Should information about chemical, biological and nuclear defense capabilities be integrated, along with visual warnings of possible or likely contamination or exposure?

An autonomous decision-making algorithm could set priorities for the information load coming from the various sensors depending on flight phase and mission requirements. In addition, pilots may have the ability to select various declutter levels for the information displays, so that they see only what they need at the time.

Clarity and luminance of the visual display are important, especially during changing ambient lighting conditions. An adequate field of view is also important. Stabilization of the projected imagery during movement of the head or aircraft is also vital. An unstable image will lead to increased difficulties and greater pilot workload, with greater potential for error. HUD symbology should be sufficient to enable accurate flight without degrading the quality of any synthetic image that may also be provided from other sensors such as NVG and FLIR.

How should the outside world be presented? Day-time visuals? A synthetic night image, based on a computer-processed composite of NVG and FLIR data? A grid-based terrain view, or a computer-generated, enhanced outside visual world as used in typical high-fidelity flight simulators? There are advantages and disadvantages with all of these options.

There are also many operational issues to consider, such as ease of maintainability and availability of technical support, as well as the overall integrity of system operation in the austere tactical environment. In addition, what about potential adverse interaction with other items of personal protective equipment? What about in-flight failure? The consequences of this in the low-level, high-speed, high-threat environment could be catastrophic. There should be an adequate back-up system for such an emergency and the option to revert to non-sensor fusion flight displays.

A multi-disciplinary team approach, involving biodynamicists, human factors specialists, engineers, aerospace medical experts, and pilots is the most appropriate way to develop this technology. An experienced test pilot in the team is crucial for evaluating the overall use and operation of the system and discovering any latent problems in the technology prior to its in-service deployment.

Training is a critical component in successfully introducing such technology into operational service. A structured training program, with clear objectives, designed to familiarize users with all aspects of the system is essential. Such training minimizes the potential for spatial disorientation, ensures appropriate interpretation of displayed information, and increases overall mission effectiveness and flight safety.

Multi-sensor integration offers considerable tactical advantages, but there are many

See SCI-TECH, p. 88

This Month in Aerospace Medicine History-- January 2006

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

Seventy-five Years Ago

Physical examination of the industrial worker.
"One of the marked characteristics of this industrial age of ours is the enormous amount of investigation that has been given to the welfare of workers. Industrial medicine and all that it implies is an index, more or less complete, of the variations which have influenced the human side of industrial relations. No one will deny that, considered from the standpoint of public health, the status and the physical efficiency of labor, to say nothing of the exigencies of modern machinery and the new processes, with their innumerable regulations devised in the interest of safety, medicine has not advantageously effected and earned a high place in the industrial scale..."

"The basis of all physical examination must necessarily be fact, the substantial reality of the human body as a whole. When medicine comes to deal with industry we find that the fundamental problem which underlies the development of a system of measurement is that, theoretically, the physical examination should be based on functional valuation. The physician in addition to recording the clear cut cases of physical disturbances due to occupation, has always this vital element to reckon with. The doctor in industry must forecast. The future must not be left to take care of itself. He must set himself with grim, persistent determination, to the task of testing each human being in his organization for his or her functional capacity. Such is one of the sober truths with which medicine has to negotiate in forecasting the future of industry; the other is the constancy of human nature. The same conclusion is not less certain, although it may be less obvious in other walks of life. But in industry the resources of the individual are drawn upon to the fullest extent to keep his efficiency at the highest pitch. The consequence is that improper placement is an indication that the worker is unable to rise above the physiologic difficulties of the job. This much every physician knows instinctively, but it was not until after the compensable theory had been put into force that industry grasped its economic significance. In the United States industry involves nearly all classes. The springs of action lie very deep, therefore improper placement is still a point of view which, in many other matters as well as the economic, belongs to the future, when we shall have more comprehensive and accurate information as to just how much our new industrialism is going to cost biologically..."

"Perhaps nothing shows the exigency of standards in industrial medicine more than the present confusion resulting from the large vocabulary used by physicians in describing different preclinical conditions. Different physicians may have in mind the same physical condition and yet may mean a different thing to each of several different physicians. For this reason, data, to be comparable, must be defined by a common nomenclature.

"At the present time there is no criterion of nomenclature for industrial physical examinations. Therefore, in attempting to write down the different features of human activities in industry – those considered evidence of either health or disease, it is necessary to establish

precise methods of labelling [sic]. This necessitates two things, (1) a standard of nomenclature and (2) a standard of classifications for using this nomenclature. Such labels, or nomenclature, should as far as possible, be descriptive and descriptive only of the conditions which they indicate. The classification should be precise definitions of the preclinical states named in the nomenclature. To achieve its purpose physicians examining in different localities or in different industries must have the same idea as to what a label indicates. This is all the more important to industry if statistical studies are to be made..."

"1. *Defect.* This is a condition in which the examiner considers a deviation from the normal has taken place providing there is no evidence of functional disturbance. Physiologically, a defect should have no economic bearing on the worker's occupational fitness.

"2. *Impairment.* Impairment on the other hand, has a distant economic significance in that it defines a physiologic change in something that is chargeable – functional capacity. Therefore, impairment is a deviation from the normal to such an extent that the examiner can positively record a disturbance in organic function.

"3. *Disability.* Disability is a state in which there is positive evidence of disabled function. A condition that requires more than a thirty day lay-off for recuperation and may or may not improve to allow limited or usual work" (2).

Fifty Years Ago

The hazards of sickle cell anemia and flight.
"Since the description in 1950 of the first case of sudden splenic enlargement in a patient with sickle cell trait undergoing airplane flight, there has been amassed a great amount of evidence that persons with sickle cell anemia, when exposed to decreased oxygen tension during airplane flight, may develop infarction of the spleen. This is a report of the authors' observations of splenic infarction precipitated by airplane flight in five Negroes and one Puerto Rican soldier with sickle cell anemia. Hemoglobin analysis revealed three of the patients had sickle cell trait, two had sickle cell-hemoglobin C disease, and one with sickle cell-thalassemia disease (microcytosis). Sick cell trait individuals may be expected to develop infarction of the spleen only when flying at 10,000 to 15,000 feet in unpressurized planes. However, patients with sickle cell-hemoglobin C disease or sickle cell-thalassemia disease, and patients in the splenomegalic phase of sickle cell anemia should not fly at all unless ground level pressure can be maintained. Even mild hypoxia, such as encountered in pressurized planes, 4,000-6,000 foot equivalents, might precipitate splenic infarction in these individuals. Splenectomy is the best treatment, although many cases of infarction may be successfully treated symptomatically. Screening tests are recommended for the detection of sickle cell anemia among Negro and Puerto Rican military personnel who may be required to fly" (5).

Suitability of patients for transport by air.
"After eliminating from consideration patients who are not acceptable as passengers on any type of public conveyance or who are too ill to be moved over long distances by any means, it is apparent that there are relatively few ambulatory patients who will be adversely affected by air travel. Identification of those who should not fly is relatively simple if airline flight procedures are understood. In questionable cases, the medical director of the airline

concerned is qualified to provide expert opinion and guidance" (1).

Twenty-five Years Ago

Effect of aviation on lung volume and disease
(Naval Aerospace Medical Research Laboratory, Naval Air Station Pensacola, FL). "Lung volume measurements on a large number of initially healthy young military aviators (the U.S. Navy's '1000 Aviator' cohort) were recorded periodically in follow-up from 1940-1969. Vital capacities were measured spirometrically and total lung capacities were measured planimetrically from chest roentgenograms. Residual volumes were calculated by subtracting the vital capacity from the total lung capacity in each subject. Additional variables available for analysis were cigarette smoking histories, family histories, aviation career patterns, pulmonary symptoms, cardiac disease diagnoses, and anthropometric measurements. Multiple linear regression techniques were used on these variables to construct prediction equations for each lung volume in 1969. From these longitudinal analyses, cigarette smoking and pulmonary symptoms were found to be associated with an 'obstructive' lung volume pattern in 1969, while coronary artery disease and weight gain were found to be associated with a 'restrictive' lung volume pattern in 1969. A career in military aviation had no significant association with lung volumes" (4).

Randomized trial of motion sickness medication
(Naval Headquarters, Helsinki; Research Laboratories of Medica, Helsinki; University of Tampere, Tampere; Finland). "In seasickness, the central cholinergic-noradrenergic balance is disturbed. Capsules of identical appearance – containing scopolamine hydrobromide 0.3 mg, scopolamine hydrobromide 0.3 mg + ephedrine hydrochloride 25 mg, or placebo – were given prophylactically three times daily to 30 naval cadets during a crossing. In this randomized, double-blind trial the superiority of scopolamine and scopolamine + ephedrine over placebo was confirmed. Ephedrine did not clearly increase the effectiveness of scopolamine. One subject in the scopolamine group and one in the placebo group interrupted the treatment. The symptoms of seasickness as well as the number of side-effects of the drugs decreased on the third day of the study. Scopolamine alone or in combination with ephedrine proved useful in the prevention of seasickness in young healthy male volunteers" (3).

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Surviving Wilma (quite an ordeal)

By Silvio Finkelstein

A personal, real life short story equating the strength of nature forces, human coexistence and behavior and emergency preparedness.

Background Information

Aviation Medicine in Playa del Carmen, Quintana Roo, México

Because of the very successful Congress held in 2003 by the Mexican Association of Aviation Medicine, it was decided to return there for this year's event. As indicated in the relevant report of the previous meeting "A five star, all inclusive hotel was the headquarters where the sessions took place and where delegates and accompanying persons were able to enjoy not only the socio cultural benefits of the meeting but also the excellent Mexican food served. The local organizing committee took advantage of the magnificent scenery which was breathtaking and the congenial human atmosphere always present in México." With such an enchanted environment to host another successful Congress, the organizers decided to return to Playa del Carmen (the pearl of the Riviera Maya)!

Hurricane Wilma

In the opinion of hurricane experts, Wilma was one of the more perplexing storms they have dealt with. It was predicted that the storm could result in many deaths (fortunately hurricane-related human casualties were minimal but substantial property damage ensued) and a tremendous storm surge where it eventually would make landfall. The storm, packing winds up to 150 mph, was expected to make an agonizingly slow journey to the tip of Mexico's Yucatan Peninsula and sideswipe Cuba — 130 miles east of Cancun — then swing east toward hurricane-weary Florida. In Cancun, high winds bent and uprooted palm trees and waves gobbled the city's white-sand beaches. Forecasters said the storm — with sustained winds of 155 mph (250 kph) — early Wednesday (19 October) registered the lowest-recorded barometric pressure of any Atlantic basin hurricane in history — an indication of its intensity. As such, Wilma became the most intense and slowest moving hurricane recorded in the Atlantic. The storm's 882 millibars of pressure broke the record low of 888 set by Hurricane Gilbert in 1988. Lower pressure brings faster winds.

The aviation-minded doctors and their accompanying families soon became very familiar with new terminology: eye of the hurricane, rate of displacement, gust winds, etc. What affected us significantly was the combination of all the physical factors plus the fact that it stalled over us for a very long period. By comparison, Gilbert lasted 12 hours, Mitch only 8 hours, but Wilma was persistent and seems to have enjoyed its imposition on Playa del Carmen for almost three full days.

Chronology of Events

Wednesday 19- Despite the ominous meteorological forecast, the Annual meeting had the Opening Ceremony late afternoon with the military band and the Mexican Flag flown. But, alas!, a few minutes after the ceremony, the General Manager of the Hotel told us that our meeting would have to be cancelled, or postponed on account of the need to utilize the meeting rooms as shelters!! This was announced publicly from the podium to the audience. Detailed information would be forthcoming.

Thursday 20 – The hotel management placed a multilingual note in every room during the early hours. The English version of the note reads as follows:

Dear Guest:

We inform you that in the next 24 hours there is a possibility that hurricane Wilma passes through the Riviera Maya. The hotel has taken the necessary measures to provide you with a safe shelter.

Tomorrow at 10:00 AM we will proceed with the evacuation to the conven-

tion centre in the hotel. Please pack your belongings to be put inside the bathroom on top of your sink in your bathroom.

Have one small suitcase ready with necessities for 24 hours as you are not allowed to bring big suitcases into the shelter. In addition, please take with you important documents like passport, flight tickets, cash, credit cards and medicines.

Also take with you the pillows and blankets from your room to the convention centre.

ALL THESE MEASURES ARE FOR YOUR OWN SAFETY.

Therefore the convention center was converted into a community bedroom. We were asked to take our portable belongings to the room in the morning and return at around 9:00 p.m. to be sheltered and sealed to protect us from the gusting winds. There were 375 of us accommodated on the floor, all with our pillows and blankets. The service areas to the meeting rooms were used as well; some doctors slept in makeshift berths such as kitchen counters, rows of chairs, and tables. Limited access to bathroom facilities were provided by protected corridors. We were given care packages with food and water supplies.

Friday, 21 Oct – THE UNFORGETTABLE DAY!!! Despite the noise (albeit attenuated by the structure) produced by the very heavy rain and gusty winds outside, we slept quite well notwithstanding the physical discomfort. We were treated to fresh fruits and coffee early in the morning. An announcement was made that there were many doctors available in addition to the hotel doctor on duty. Hopefully this message helped to alleviate some fears.

Close to noon, a major sonic boom was heard and one-third of the convention center room became brightly lighted! The exterior shell of the roof was blown away and light came through the openings of the ventilation/air conditioning system. AT THAT POINT, THE ORDER FOR EVACUATION WAS GIVEN!! Our ears popped as a result of the significant barotrauma originated.

The hotel personnel were guiding us, 10 at a time, women and children first, through internal service corridors to a safer, more protected room (the dining area for hotel staff and surrounding internal passages). And, as luck would have taken pity on us, shortly after we all left the room, the roof collapsed and debris came down covering and burying our belongings underneath the rubble. We were glad not to be in those clothes when the roof collapsed!! After a few hours standing and sitting (on the floor and on anything else found), we were redirected (women, children and grandparents) to the food storage area (despensa), a structure very well protected where we slept for the following two nights.

Saturday, 22 Oct – Our community bedroom became an intense children activity center. Foreign children, unaware of language difficulties were really entertained graciously by Mexican children. Fathers were allowed to join the bedroom since many children complained that they could not sleep without their fathers. The food storage area became a social community center where families exchanged stories. At regular intervals, the hotel staff would call to provide us with hot meals. It should be emphasized that the hotel staff under the general direction of high level management did a Herculean job performing well above and beyond the call of duty. Some of them had suffered losses in their private homes in the nearby city but they were ready to look after our needs.

Sunday, 23 Oct – All rooms were inspected by hotel staff and guests were invited to inspect their rooms. Many rooms suffered damage that made them unsuitable and therefore necessitated a change of room allocations. It was great to be able to take a shower, even though no hot water was available. Since winds and rain had diminished considerably, guests were permitted to inspect the surrounding grounds and many children (and adults as well) started to enjoy what was left of the beaches.

See WILMA, p. 88.



SURVIVORS--Drs. Finkelstein, Rayman, Bagshaw, and Amezcua manage to smile during the ordeal.



REFUGEES--Hotel guests camp out on the convention center floor, before the roof collapsed!



STORM DAMAGE--A drug store was heavily damaged during Wilma's stay in Playa del Carmen.

From SCI-TECH, p. 85

unresolved issues. Ideally, the tactical, operational and flight safety advantages of such technology will far outweigh any biodynamic, cognitive and pilot health disadvantages the system may create. It is the task of the aerospace medicine, human factors, and engineering communities to work together so as to provide this enabling technology at the lowest possible human cost.

The AsMA Science and Technology Committee provide 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 and comments via e-mail to: barry.shender@navy.mil

March issue will again be the Meeting issue

This year's March issue of *Aviation, Space, and Environmental Medicine* will again be the Meeting issue. It will contain the abstracts accepted for presentation at the meeting, plus the schedule and much more!

MEETINGS CALENDAR 2006

February 13-17, 2006, Galveston, TX.
Pushing the Envelope VII/Army Operational Aeromedical Problems Course. Sponsored by UTMB and the U.S. Army Medical Command. Info: www.trueresearch.org/mice

September 10-14, 2006, Bangalore, India. 54th International Congress of Aviation and Space Medicine. This meeting is being hosted by the Indian Society of Aerospace Medicine. A preliminary registration form may be found at <http://www.isam-india.org/conference44/newreg.php>.

AsMA Future Meetings

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

AsMA MENTORSHIP PROGRAM

AsMA recently established a new Mentorship Program for our younger members. We encourage you to go to our website (www.asma.org) and click on "Members Login." Once at the Member Home page, click on Mentorship Program. You can sign up as a Mentor or Mentee, or view Participating Mentors--those who have already volunteered to serve.

Please take advantage of the great new feature!

Where's the Proof?

Evidence Based Medical Certification: an International Challenge

CAMA Sunday, Orlando Florida, with AsMA

Sunday May 14, 2006: 8:00AM-Noon

Speakers: ICAO, JAA, UK, Transport Canada, FAA, New Zealand

Don't miss it!

WILMA, from p. 87.

Post-Hurricane Situation

Monday, 24 Oct - The level of fear for physical damage to us or to our belongings decreased significantly but the concern for our mental status increased exponentially. In my opinion, this was due to a multiplicity of factors:

The impossibility of communications with the outside world produced a generalized and contagious obsession for news and anxiety situations. This was due to the fact that rumors emerged indicating that the outside world was notified that no survivors were found by the rescue brigades in Playa del Carmen. Thanks to the help of hotel personnel and volunteer guests, whenever a line was available, e-mails were dispatched to relatives of guests. Cell phones were unusable due to the absence or weakness of the signals.

Since the airport (located one hour away from us) was closed and roads were seriously damaged, there was no possibility of exiting the area soon. We became worried about food, water and medical supplies. To complicate matters, without reaching the level of panic attacks, tempers flared significantly on account of many minor things.

Tuesday, 25 Oct - The group, under the general leadership of Captain (and M.D.) Octavio Amezcua, was given periodic briefings assessing the general situation and the options potentially available to leave the area. Consideration was given to the possibility of reaching (by land, despite the poor road conditions) Merida, or Chetumal, or even Mexico City. It should be noted that an ambulance, as a rescue vehicle sent from Mexico City, took approximately 36 hours to reach us.

One of the doctors left that morning and his description of his departure is as follows:

After striking out from the hotel at noon on Tuesday in the Taxi- we determined that the road to Merida via Cancun was probably not passable, and the refugees desperate. So we took the jungle road through Tulum. That road was flooded in places, and in poor condition. By the time I got to Merida, the airport had turned into a refugee camp. No hotels available.

Tempers were really flaring when a group of tourists was informed that an aircraft from their country of origin would come to their rescue. Other foreign nationals were outraged that a similar rescue operation was not available to them, feeling neglected and abandoned by their governments.

Mexicana started relief, humanitarian (vuelos de rescate) flights bringing supplies to the area and taking back stranded passengers. Four flights were op-

erated that day under daylight conditions (VFR) since navigational aids were substantially damaged.

Meetings were held with the General Director of the Hotel who informed us that water was in very short supply necessitating its rationing, but there was still plenty of food and we were treated to royal feasts.

Wednesday, 26 Oct - 22 members of our group were able to catch one of the 7 relief flights operated on Wednesday. Since checking in at the airport was impossible due to the collapsed informatics systems, Mexicana mounted an operation whereby passengers would go the downtown office in Cancun (which sustained major damages as well), to be provided with boarding passes and minivans would transport them to the terminal. The entrance road to the airport was blocked by the police and only persons with boarding passes were allowed to go through. Many tourists were camping close to the airport and a huge crowd was camping at the entrance of the downtown office in order to be eligible to get the boarding tickets. Our group received preferential treatment on account of Captain Amezcua's intervention.

Another meeting with the Hotel General Director indicated the need to really leave the premises since the Hotel would have to be closed in two days time on account of the many hardships it sustained!

Thursday, 27 Oct - After we had the certainty that all foreign nationals had left safely, the 14 remaining members of our group left for Cancun in a minivan (the road had been totally cleaned by then--only debris from telephone and electricity lines and fallen tree branches were dispersed on the sides). Many traffic lights were still not operational but the police helped in directing traffic. We were able to obtain boarding passes for one of the morning relief flights which took us to Mexico City. My wife and I rested one night at the Camino Real Airport Hotel and the following morning we boarded the flight back to Montreal.

Conclusion

Nature forces are strong; human endurance is very strong. A real emergency brings about the best and the worst of human nature. Let us learn from this survival episode, respect the environment and enjoy coexistence!!!

This harrowing experience brought the excellence and kindness of the Mexican population who showed a tremendous respect for the foreign tourists and outdid themselves to provide for basic needs and to make our stay as pleasant as possible. Knowing that the tourist industry is a major source of income for this area, it should motivate us to continue visiting beautiful Mexico!

SPACE MEDICINE BRANCH REPORT

Send information for publication on this page to: **Dwight A. Holland, Ph.D.**
DwightHoll@aol.com

Space Medicine Branch Website

Two years ago, the Space Medicine Branch website was lost after a crash in the server system. We have now developed a new website with greatly expanded features. To access the website, go to www.asma.org, then Related Organizations/View Constituent Organizations/Space Medicine Branch/URL citation/Continue to site. To enter the Member's Area requires a user name and password which will be in the Space Medicine Branch newsletter in February (or simply contact me at mcamp@1starnet.com).

The Public Area has information on membership, contact info, and links to related organizations. Notice the different space medicine quotes on the banner and right sidebar of each page from previous Space Medicine Branch members and other space exploration experts. If you would like to add a historical quote, please contact me and I will try to include it.

The Member's Area has the Membership Directory, Committee lists, President's annual letter, Photos (downloadable) from the last meeting, and Archives sections. If you have any photos (from the last or previous meetings) or archives, please send them to me so that we can include them. This website can only function off the content contribution by the members and we desperately are begging for your help.

Finally, you need to know about a very unique concept called the Space Medicine Bulletin Board (accessed in the Educational Section of the Member's Area). This area is made up of contributions from individual Space Medicine Branch members and consists of documents, Powerpoint presentations, videos, and photos related to space medicine from each individual member's vast amount of personal electronic information. It is loosely organized under each contributing member's name and whatever organizational structure they have provided. The Space Medicine Branch is not responsible for the accuracy of

the material and does not try to sanction or censor the content! We would like for the size of this section to continue to rapidly grow and reach several 100 gigabytes. I would like to plead with the Space Medicine Branch members to support the organization by each sending me as many discs as possible of space medicine information from your personal files.

We would like to start a category in the Educational section entitled Lessons Learned, which will be a summary of current space medicine information that has immediate applicability to long duration space flight. Again contributions to this project are encouraged and these items will be peer reviewed before placement on the website.

This website is a dynamic entity and I am constantly looking for new ideas, content and corrections. It has tremendous potential but in the end will only be as strong or as weak as we make it. Please take time to look over the website and please contribute to expand our content.

AEROSPACE PHYSIOLOGY REPORT

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 Operational Excellence, Training, Research and Leadership Award Nominations

The Aerospace Physiology Society presents three major achievement awards to recognize individuals who perform extraordinary work within the Aerospace Physiology Community. Awards will be presented at the Aerospace Medicine Association's 77th Annual Scientific Meeting, held in Orlando, Florida, 14-18 May 2005. Society Awards will be presented at the annual luncheon, Wednesday, 17 May 2006.

The AsPS presents **three** awards. These awards are presented for outstanding achievement in all areas of aerospace physiology: operational support, training, research, and leadership. The descriptions of each award are:

The **Paul Bert Award**, recognizes outstanding research contributions in aerospace physiology. This award was established in 1969, and was originally given for achievement in operational physiology. It is named in honor of the famous French physiologist, Paul Bert, the "Father of Pressure Physiology."

Nominees will be considered for research covering the previous 5-year period. Limit the nomination to 2 or 3 major research contributions. The Awards committee considers unrecognized nominations from the 3 past years, though it is strongly recommended that those nominations be updated annually in writing. Research areas may range from basic science to research in highly applied areas of aerospace physiology. The Society currently sponsors the Paul Bert Award. The 2005 winner was **Edward Eveland, Ph.D.**

The **Fred A. Hitchcock Award** recognizes career contributions of senior aerospace physiologists for excellence in either operational aerospace physiology or aerospace physiology

research. The award was established in 1972, and is named in honor of Fred A. Hitchcock Ph.D., co-translator of Paul Bert's classic work, "Barometric Pressure". International ATMO of San Antonio, TX, sponsors the Fred A. Hitchcock Award with an honorarium, a plaque, and an edition of Paul Bert's classic work, "Barometric Pressure." The Awards committee considers unrecognized nominations from the 3 past years, though it is strongly recommended that nominations be updated annually in writing. The 2005 winner was **Col. Susan Richardson, USA (Ret), CA&P.**

The **Wiley Post Award** recognizes outstanding contributions in direct operational physiology and aeromedical training and education. In 1972, the Wiley Post Award replaced the Paul Bert Award for Operational Physiology. It is named in honor of the aviation pioneer Wiley Post. The Wiley Post Award is presented for exceptional service and achievement in operational physiology, including education and physiological support of Department of Defense, FAA, NASA, or civilian aircrew. The Gentex Corp. of Carbondale, PA, sponsors the Wiley Post Award with an honorarium and a plaque. Nominees will be considered for the previous 12-month body of work in operational physiology. Unrecognized nominations from past years will not be considered. The 2005 winner was **LT Ron Schoonover, MSC, USN.**

AWARD SUBMISSION CRITERIA

DEADLINE: 07 April 2006

The standard Aerospace Medical Association Awards form shall be the format.

The nomination should include:

- 1) A citation of 80 words or less;
- 2) A bulleted list of significant accomplishments of 300 words or less;
- 3) A one page professional biography of the nominee; and
- 4) A portrait photograph of the nominee.

Standard award forms may be downloaded from the AsMA website, or contact the Awards Chair by email. Digital e-mail submission of the award package is preferred. MS-Word for documents and GIF or JPEG files for graphics are the preferred file formats. Hard copy nominations will be accepted by mail. Awards not submitted on the AsMA form will not be accepted. Nominations should specify the time interval over which the nominee's contributions were made.

Society and Association members are strongly encouraged to nominate and recognize outstanding contributions by professionals within the aviation scientific community. Nominations may be submitted by anyone, regardless of AsMA or AsPS membership. Chain of command endorsements are not required for military nominations, but may be considered by the committee.

Award nominations are due no later than 07 April 2006. Late nominations will not be considered or carried over to the next year. Send nominations to the Award Chairman:

Commander, NAVAIRSYSCOM (PMA-202)
Attn: (CDR Wheaton, AsPS Awards)
47123 Buse Road
Bldg. 2272, Suite 347
Patuxent River, MD 20670-1906
Phone: (301)342-8445
Email: thomas.wheaton@navy.mil

Beyond the Theme Parks

Come explore the beautiful Orlando area and discover its many attractions beyond the Theme Parks. The Wing is offering two tours for its members and their guests. The all-day Tuesday tour will take us to the enchanting Winter Park – Florida's premier urban village. This suave, sophisticated and cultured area, with its quaint brick streets, European-like town center, luscious gardens, unique boutiques and cafes, has much to explore. Included in the tour will be a one-hour boat tour along the canals between the city's sparkling lakes overlooking the area's most prestigious homes. This relaxing, narrated ride will take us past Rollins College, The Kraft Azalea Gardens, Isle of Sicily, and enchant us with views of the area's tropical birds, plants, and flowers. After the boat tour, we will stroll down Park Avenue to the Charles Hosmer Morse Museum of American Art. This museum houses the most comprehensive collection of Louis Comfort Tiffany's works found anywhere, as well as major collections of American art pottery and late 19th and 20th century American paintings, graphics, and decorative arts. Following our tour of the museum, we will have ample time to stroll down lovely Park Avenue where we will be free to have lunch on our own in any one of the large selection of restaurants from barbecue to vegetarian. The cost of lunch is not included in this tour.

Our second tour will take us on an "Airboat Adventure at the Old Florida Fish Camp," where we will experience the world in a whole new light. This educational excursion will take us into the seldom visited heart of natural Florida where we will see protected wetland hammocks, walk through ancient flatwoods, and travel by airboat into sections of fresh water marshes and upriver into the bald cypress swamp – home of the Florida alligator, American bald eagle and a myriad of wildlife. Certified eco-guides, biologists, and botanists will guide us to assure that we come away with a new and profound understanding of Florida's vastly different land and plant communities, and of the importance of their inter-relationship and preservation. We will see up close a marvelous assortment of birds, reptiles and plants – some endangered, some threatened, and a few native species found in this area, affectionately called, "The Central Florida Everglades." Our tour will include a 30-45 minute walk into the heart of this pristine

wilderness before we transfer to the 100-year-old outpost, turn-of-the-century fish camp. This is an easy and danger-free adventure, and the natural beauty of Florida will make this a memorable outing. Lunch is on your own and the cost is not included in this tour.

Spaces for these tours fill up quickly and we encourage you to send in your registrations forms as soon as possible to avoid disappointment. Registrations forms for all Wing activities as well as for the general AsMA meeting can be found at the beginning of this issue of the Journal.

The Wing's Honorary Member 2005 Marie-Paule Charetteur, M.D.

Fascinated by the life sciences, Dr. Charetteur readily admits that neither medicine nor aviation medicine were on her agenda when she left Brittany to study in Paris. Her interest in medicine developed after teaching medical students biology for 2 years. She chose to specialize in ophthalmology and practiced pediatric ophthalmology. As security, she specialized in occupational medicine. Aviation medicine came by chance when she took a temporary job in the medical department of the private French airline, UTA, and the rest is history!



She became so enthusiastic that she then specialized in aviation medicine and has never looked back. She became UTA's Medical Director in 1984. When UTA and Air France merged in 1991, she quickly stepped in as Chief Medical Officer of Passenger Services, then Chief Medical Officer of Air France Orly's Medical Department. In 1997, Air Inter merged with Air France, and Dr. Charetteur was deeply involved with the organization of Orly's new medical department. In 1998 she was appointed Air France Medical Director and Advisor. Despite this challenging role, ophthalmology kept calling to her as she devoted time practicing what she calls, "recreation time with children."

She is currently semi-retired and savoring the arts, mainly classical music, painting, and literature. She enjoys spending more time with family and friends and traveling.

The Wing is pleased to honor Marie-Paule Charetteur, M.D., for her numerous contributions to aerospace medicine.

Meet Doris Linnenbach

I was born in the beautiful City of San Francisco shortly before the beginning of World War II. After the war ended my parents, who had both been born in Germany and came to America as youngsters, became involved in the Relief effort to help the starving citizens in all of Europe. Our entire family was involved and from this experience of

helping others, I think my lifelong interest in civic and charity work began.

After attending the University of California in Berkeley I began a teaching career that lasted 35 years. My first assignment was in the disadvantaged area of Hunters Point. It was this experience that taught me that poverty was very much a part of our own



country, as well as places abroad. My teaching career took many avenues, such as becoming a Resource Teacher, teaching English as a Second Language, and becoming a Reading Specialist. Although I am now retired, I often look back

upon the happy years I spent in the classroom with children. I think it helps to keep you young at heart!

In 1966 I married Wolfgang D. Linnenbach. Wolfgang arrived in the United States in 1952. He had flown in the German Luftwaffe as a young man and then attended the University of Heidelberg Medical School. His interest in flying was the impetus for his becoming a Federal Aviation Medical Examiner. Wolfgang, aside from having his own medical practice, also is an Associate Clinical Professor of Medicine at the University of California Medical School, and worked as a company doctor for Lufthansa German Airlines, World AirWays, Pan American, and United Air Lines.

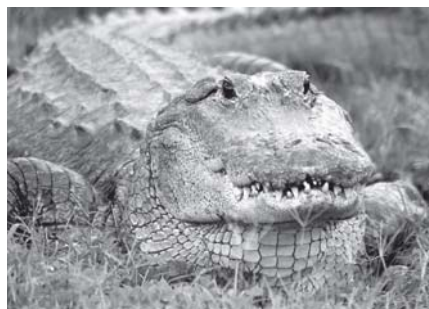
We have two children. Christine is a lawyer in Sacramento, CA, and our son, Carlton, is in the investment banking business in San Francisco. We are fortunate to have them both nearby. Time makes us realize the importance of family ties.

Today I spend my time working for charities and civic organizations. Currently, I am working on reconstructing the history of the German Ladies Benevolent Society, which has aided women and children for over 135 years. Our actual records were lost in the fire following the Great Earthquake of 1906, so we must reconstruct history through newspaper articles and various resources. I am also very active in my neighbor organization on Twin Peaks in San Francisco. Currently, I am organizing the 50th A. Lincoln High School Reunion of the Class of '56. I am busier now than I was when I was working!

Because I was working as a teacher, I was unable to come in the past to the meetings with my husband. Now I am looking forward to attending all the meetings with him. I truly enjoyed myself in Kansas City thanks to the gracious hospitality of Harriet, our past President. I look forward to seeing everyone in Orlando in May of 2006.

Join the Wing!

Dues are \$20 per year. For further information, contact: Judy Waring, 4127 Kenyon St., Seattle, WA 98136; (206) 933-0884; e-mail: judywarig@comcast.net



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

Dennis E. Deakins, M.D., of Grove, OK, who was serving as a Flight Surgeon at the Naval Aviation Schools Command at NAS Pensacola, FL, recently retired from the Navy. He is now the Medical Officer for the Federal Aviation Administration's Civil Aeromedical Institute in Oklahoma City, OK. He has received the Legion of Merit.

Ian R. Entwistle, M.B., Ch.B., who is a long-standing Associate Fellow of AsMA, was recently honored by the Royal Aeronautical Society with a Fellowship.

Capt. Dan R. Roper, USAF, NC, of Snowflake, AZ, originally the flight commander, Readiness/Education & Training, 49th Medical Group at Holloman AFB, NM, has retired from the Air Force after 22 years of service and is now the Director of Roper Healthcare Consultation, LLC. He is the current President of the Aerospace Nursing Society.

William J. Tarver, M.D., M.P.H., of Seguin, TX, formerly the President of South Texas Occupational Medicine and Prevention Clinic in Seguin, TX, is now serving at the Deputy Chief of the Flight Medicine Clinic at the NASA's Johnson Space Center in Houston, TX.

New Members

Adler, Michael P., LTC, USAFR, MC,
 Portland, OR
 Avery, Eleanor E., M.D., San Antonio, TX
 Bicaldo, Domingo P., M.D., McGuire AFB, NJ
 Branley, Howard, M.B.Ch.B., M.Sc.,
 MRCP(UK), London, UK
 Dagostino, Dominic, Ph.D., Dayton, OH
 Felix, Robert J., M.D., Dover, DE
 Fortuna, Sarah P., M.D., Ocean Springs, MD

**Want to see Your News
 Printed Here?**

Send us an e-mail!
pday@asma.org or
rtrigg@asma.org

We would like to know about awards, promotions, retirements, changes in duty station, or any other milestone events. Let us know!

We are going to begin publishing an online newsletter with up-to-date news of members and association news--check out the Members Only section of website.

Gammill, Amy E., M.D., Fairfield, CA
 Gibson III, George R., D.O., MPH, Tularosa, NM
 Gustafson, Karrn E., D.O., Mountain Home, ID
 Hardy, Michael K., M.D., M.P.H., Salt Lake City, UT
 Hughes, Thomas G., Maj., USAF, BSC, Albuquerque, NM
 Jones, Jerrilyn D., M.D., Roxbury, MA
 Kreitman, Oliver, Oxford, UK
 Laird, Phillip, B.Sc., M.Sc., Ph.D., Calgary, Canada
 Lamond, Anna C., Liverpool, Merseyside, UK
 Lanier, Teresa M., M.D., Ph.D., Gilbert, AZ
 Lewis, Richard J., D.O., Manassquan, NJ
 Matlock, Kelly, B.S., M.D., Temple, TX
 Miller, John T., M.D., St. George, UT
 Monahan, Patrick B., M.D., Washington, DC
 Ribnik, Harlan R., M.S., M.D., Cheyenne, WY
 Rickett, Devin A., M.D., San Antonio, TX
 Seiwert, Vincent R., M.D., Hillsboro, GA
 Stokes, Suzy, London, UK
 Strauss, William S., M.D., Salem, OR
 Taylor, John T., CDR, MC, USN, Pensacola, FL
 Torres, Fernando G., M.D., Kingwood, TX
 Trudgill, Michael J., M.B., B.Ch., Bedfordshire, UK
 VanRensburg, Nicola J., M.B., Ch.B., Worcestershire, UK
 Wolver, Susan, M.D., Midlothian, VA
 Woodford, Bruce A., D.O., Warrensburg, MO
 Zhang, Jian, M.D., San Antonio, TX

News of Corporate Members

SAIC to Provide IT Support to Defense Logistics Agency

Science Applications International Corporation (SAIC) recently announced a task order award to support the Defense Logistics Agency's (DLA) activities inside the Hart-Dole-Inouye Federal Center in Battle Creek, MI. Awarded by the GSA Federal Systems Integration and Management Center (FED-SIM) under GSA's Millennia contract vehicle, SAIC will provide first and second level helpdesk support known as "Tier 1 and Tier 2" services, as well as mid-tier (HP Unix type devices), asset management, telecommunications, and support for local area network operations and limited information assurance in support of the Defense Reutilization and Marketing Service (DRMS) and Defense Logistics Information Service (DLIS) personnel. The task-order award has a base year value of \$7,655,870 with an additional option

year valued at \$7,388,809 for a potential total of \$15,044,679.

About SAIC

SAIC is an engineering and scientific company that solves complex technical problems in national security, homeland security, energy, the environment, space, telecommunications, health care, and logistics.

Baxter Awards Grants to Improve Access to Healthcare

The Baxter International Foundation, the philanthropic arm of Baxter International Inc. recently announced grants to 24 organizations in 9 countries totaling nearly \$1.3 million to support initiatives that improve global access to quality and cost-effective healthcare. Of the 24 grants, 17 focus on improving access to healthcare for homeless and uninsured/underinsured individuals and families in disadvantaged and underserved communities throughout the world where Baxter employees live and work. These second and third quarter grants are in addition to the foundation's \$1 million donation in the third quarter to relief efforts for victims of Hurricane Katrina.

Through one of these grants, the foundation partnered with Tri-City Health Center (TCHC) in Alameda County, CA, to support the creation of a new childhood tooth decay prevention and treatment outreach program. The Baxter International Foundation also partnered with Camden Eye Center (CEC) to support Project H.O.P.E. (Homeless Outreach Program Enrichment). CEC was founded in 1961 to provide high quality comprehensive eye and vision care to low and moderate income and uninsured residents of Camden city and county, as well as the surrounding southern New Jersey area. Outside the United States, the foundation has partnered with Fundacion Hogar Manos Abiertas (Open Hands Home Foundation), an organization founded more than 14 years ago to care for abandoned children and adults with severe disabilities and/or terminal illnesses.

About Baxter

Baxter International Inc., through its subsidiaries, assists healthcare professionals and their patients with the treatment of complex medical conditions, including cancer, hemophilia, immune disorders, kidney disease and trauma. The company applies its expertise in medical devices, pharmaceuticals and biotechnology to make a meaningful difference in patients' lives.

News of Members is also online!

Go to <http://www.asma.org>, click on the link for the Journal, then on the link for AsMA News. Announcements are also posted on the Members Only page. Visit the website & see for yourself!

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Corporate and Sustaining Members of the Aerospace Medical Association



The financial resources of individual members alone cannot sustain the Association's pursuit of its broad national goals and objectives. Its 75-year 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
Aircraft Owners and Pilots Association
Air Line Pilots Association
AirSep Corporation
American Airlines, Inc.
Autoflug Libelle GmbH
Aviation Medicine Center at UTMB
Baxter Healthcare Corporation
Carleton Life Support Systems Inc.
David Clark Company, Inc.
Education Enterprises, Inc.
Environmental Tectonics Corporation
Essilor of America/Varilux
Gentex Corporation
International Federation of Air Line
Pilots Associations

Japan Airlines
Korean Air Force Safety Center (AFSC)
Lockheed Martin Corporation
Martin-Baker Aircraft Company Ltd.
Mayo Clinic College of Medicine
MedAire, Inc.
Monash University / Alfred Hospital
Pilot Medical Solutions
SAIC
Sanofi-Aventis Pharmaceuticals
Stereo Optical Company, Inc.
United Airlines
United States Aviation Underwriters
Universities Space Research
Association (USRA-DSLS)
Harvey W. Watt & Company
Wyle Laboratories, Inc.