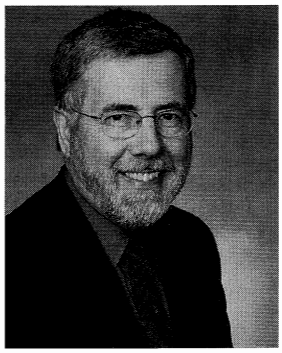
President's Page



David J. Schroeder, Ph.D.

How often have you walked by the International Congress of Aviation and Space Medicine (ICASM) table at the AsMA annual scientific meeting and thought to yourself, "I would sure like to go there." Well, like most of you, I have thought about going, but due to other pressing activities, did not find the opportunity to participate. This year, the 51st ICASM meeting was held in Madrid, Spain. Not only is Madrid a beautiful city, but the conference was also interesting, providing a nice blend of science and operational aerospace medicine. Unlike many meetings in the U.S., the ICASM is truly an international meeting with representatives from 56 countries. Personally, I was privileged to participate in the meeting and provide a talk on stress and well-being in air traffic controllers. Likewise, Drs. Rayman and Bellenkes also participated in the meeting and were actively involved in recruiting attendees to join AsMA. This effort led to several new international members for our association. The scientific sessions were similar to those typically found at our annual scientific meeting, with a focus on human factors, space medicine, aeromedical aspects of modern kerato-refractive surgery, color vision requirements for pilots, aviation psychiatry, travel medicine, and aircrew health, to mention a few. The sessions reinforce the view that the prominent issues and concerns in aviation medicine and medical certification, as well as the human factors research priorities, cut across international boundaries. We need to continue to strive to improve the sharing of our knowledge across international boundaries through improved collaboration and consistency in the application of our regulations.

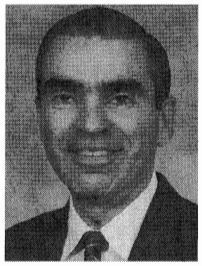
You will be proud to know that AsMA was well represented, with Dr. Claude Thibeault serving simultaneous as our past president and the past president of ICASM. Dr. Ulf Balldin, also a long-time AsMA member served the final year of his term as the ICASM president. A number of other AsMA members are on the executive committee and made presentations during the meeting. I had a good time at the meeting and enjoyed exploring MADRID in my free time. My wife and I did find it difficult adjusting to the Spanish custom of eating our evening meal around 9 or 10 o'clock.

Following the meeting, I was a member of the group that toured the IBERIA maintenance facilities. This visit provided a good understanding of the occupational health and human factors issues arising from employees working at a major aircraft maintenance facility. From the occupational health side, there are a number of issues involving exposure to toxic materials and noise, ergonomic issues associated with working on the aircraft and in the workshops, and shiftwork and fatigue. The importance of human factors was also evident in the human-machine or human-computer interactions, the detection of small cracks in aircraft surfaces through the use of various non-destructive testing techniques, and communications within and between work teams. This is another arena where we could benefit internationally from improved communications within the scientific and medical communities.

While this column will appear after the November meeting of council and the scientific program committee, we are actively involved in making preparations for the meeting in Alaska. Dr. Riggs has contacted all of the physicians in Alaska and alerted them to our upcoming meeting. Early indications suggest that a number of them are interested in attending and participating in our meeting. We have received a number of abstracts for the meeting, and as usual, the majority of the submissions will come within the next few days prior to the October deadline. The Scientific Program Committee, under the guidance of Drs. Carol Manning, chair, and Scott Shappell, deputy chair, will meet following the council meeting to review the abstracts and prepare the scientific program for our meeting in Anchorage. Typically, some 70+ members of the association who have volunteered their time to provide support for the review of the abstracts and preparation of the scientific sessions during the 2-day meeting in November.

Finally, in recognition of our 75th anniversary meeting, I would like to put together a group of pictures that represent some of the highlights of our association from the first meeting in October of 1929 to the present. If you have photographs from some of the early meetings you can either send them to me (I will scan them and create a digital image) or you can scan them and send them to me via e-mail (djschro@att.net). I will return the photographs once I have scanned them. Please provide a brief description of when the photograph was taken and the individuals in the photograph.

Executive Director's Column



Rayman

Policy Formulation

This past July a Working Group was formed by Dr. Arnauld Nicogossian under the auspices of George Mason University, School of Public Policy. Members of the Working Group included senior executives from industry, universities, government agencies and your Aerospace Medical Association. The intent of this Working Group was to review select examples of the existing medical and health policy formulation processes and practices for various extreme environments and to recommend a general process of policy formulation. In order to accomplish this objective, selected attendees were asked to explain how their respective organizations formulated policy. This information was to be collated and analyzed with a final report prepared utilizing the best processes gleaned from the various presenters. (At the time of this writing, follow-up meetings of the Working Group have not yet convened but will be scheduled in coming months.)

In order to comply with the objectives of the Working Group, the Aerospace Medical Association presented its policy formulation procedures from the perspective of a non-governmental not-for-profit organization. Included in the presentation was a description of our instruments as well as their respective strengths and weaknesses. The intent of this and a future column is to describe AsMA public policy formulation and to discuss our effectiveness.

As an aside, AsMA over the past decade has been very active in formulating and publishing policies or position statements on many issues of central interest to the aerospace medicine community. As a result, our voice has been clearly heard in the U.S. and abroad. For all of us, our cause could be broadly described as flying safety and crew health in the aviation and space environments and passenger health and safety. Practically everything that we do would fall in these categories. Consequently, our constituents are civil aircrew, military aircrew, space crew, ground support personnel, and passengers.

In general, AsMA has never lobbied—if you accept the definition of lobbying as influencing legislators in favor of a special interest. We have never really represented a special interest group, nor have we ever approached a governmental agency advocating spending for any special interest group. We have the luxury of being an organization that supports the public welfare, for which reason this Association must continue to assert itself publicly whenever a relevant issue is brought forward. Rather, we advocate for our constituents, utilizing educational techniques, not for our own profit, but for the public welfare.

With that as general background, in the next issue this column will describe methodology employed by AsMA to formulate public policy and discuss how effective we have been.

I take this opportunity to wish everyone a Happy Holiday Season and a healthy, happy 2004.

Resolutions Policy Process

In accordance with AsMA Bylaws, all resolutions brought forward must be presented to the membership at the Annual Business Meeting held on Tuesday during the Annual Scientific Meeting with business conducted under Robert's Rules of Order. In order to ensure that the process is understood, the following information is provided to you by your Executive Committee. All resolutions usually consist of several "Whereas" clauses (As noted in Robert's Rules, a resolution may not require "Whereas" statements) followed by the resolution, "Therefore be it Resolved". Although in most cases there is only one "Therefore be it Resolved", it is possible that there could be two or more. The purpose of the "Whereas" portion is to demonstrate the logic employed by the author in reaching the resolution itself. Since the "Whereas" portion is not put to a vote nor part of the resolution, nor published, it is out of order to comment on it at the Business Meeting. Rather, all discussion must focus on the "Therefore be it Resolved" portion(s), i.e., the resolution itself. When discussion of the resolution is exhausted, a vote will be taken with the majority ruling. If the resolution passes, it will become AsMA policy and the Executive Director will forward only the resolution, the "Therefore be it Resolved" part, to interested organizations and agencies worldwide.

This Month in Aerospace Medicine History--November 2003

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

Introduction

I never did like deadlines, but they are unfortunately a necessity to keep the world running smoothly. And it is amazing how several simple things usually taken for granted can get one so quickly and effectively past one's deadline.

First, my computer screen went out. I could not even see my files, so I could not access my research for my November article. Ever heard of backing up files before your screen goes out? So I sent off the computer with the promise it would be back within 72 hours, in plenty of time for the deadline.

But then there was Hurricane Isabel. Not only did we lose power for 2 weeks and internet access for 3, but my computer was not returned until nearly a month later. I took technology, the weather and the mail system for granted. Does this ever happen in aviation?

With my apologies to those who faithfully read this column, here is November's history, humbly submitted one month past deadline.

Fifty Years Ago

Even in 1953 the effects of alcohol on flying were already recognized: "Most pilots do not realize how long it takes the body to rid itself of alcohol. A man of average size eliminates alcohol at the rate of about 1/3 ounce an hour. This is accomplished by oxidation of about 90 per cent of the alcohol, with less than 5 per cent being eliminated unchanged by the kidneys, lungs and skin… [Elimination] is not influenced by exercise or other factors felt by some to lessen intoxication. For example, it takes twelve hours for the alcohol from six highballs or five 12-ounce bottles of beer to disappear… The presence of even minute amounts of alcohol in the system of a pilot may affect his judgment and reflexes enough to make a considerable difference in his ability and reactions. The pilot himself cannot tell when small amounts of alcohol are present. In fact, if he is slightly hypoxic as a result of alcohol he may feel in excellent condition" (1).

A brief history of early ejection seats was presented: "It is perhaps not generally known that the first experiments with 'explosive' seats were made in Sweden by the S.A.A.B. Company as long ago as 1942. Swedish experiments to find a consistently safe method for aircrew to abandon aircraft at any speed or attitude began as early as 1939… The first successful dummy ejection was made using the S.A.A.B. Model 1 ejection seat on January 8, 1942. The first live ejection with the Model 1 seat was also its first use in an emergency, when the pilot of a J-21A saved his life with it on July 29, 1946, after colliding with another fighter. Since then, thirty-one Swedish aircrew members have made successful emergency ejections with S.A.A.B. Model 1 and Model 2 seats, more than half of which were from piston engined planes. In the spring of 1948, a successful inverted ejection was made from the twinboom J-21R jet fighter… While the S.A.A.B. is light, it lacks many safety devices on the lightweight Martin-Baker automatic seat, which is still some seventeen pounds lighter. The most notable omission is the lack of any stabilizing factor, such as the linen drogue on the Martin-Baker seats" (3).

Twenty-five Years Ago

Fatigue, stress and the body's response were studied at the U. S. Army Research Institute of Environmental Medicine in Natick, MA: "Two groups of highly-trained and motivated military personnel were deprived of

See NOVEMBER HISTORY, p. 1313.

NOVEMBER HISTORY, from p. 1312.
sleep while sustaining performance of their assigned military tasks in a laboratory simulation; one team (I) was sleep deprived for 48 h while the second team (II) was deprived of sleep for two consecutive 39-h periods separated by a 33-h rest interval…. During sleep deprivation, each team performed its functions as an artillery fire direction center (FDC) in response to a sustained simulated combat scenario. Results suggested that anticipation and perception of the experimental situation affected the common urinary indices of stress…. We conclude from these studies that, under these conditions, generally similar effects are noted for sympathicoadrenomedullary and adrenocortical activity. Further, the responses are affected by situational uncertainty as well as apparent cumulative fatigue" (4).

The Institute of Aviation Medicine in Linköping, Sweden, studied decompression sickness and the relationship of diving and flying: "Intracardial gas bubbles, detected with Doppler ultrasound, and symptoms of decompression sickness were registered at 9,000 m simulated altitude within 12, 18, and 24 h of exposures to 15 or 39 m simulated water depth allowing no stage decompression. With a time interval of 12 h between diving and flying, the earliest intracardial bubbles were found in some subjects already during the first minutes at altitude, and the earliest symptoms of decompression sickness some minutes afterwards. With an 18-h interval, the earliest bubbles and symptoms as well as their average time onsets appeared somewhat later. With a 24-h interval, the earliest bubbles and symptoms were detected slightly later, i.e. after 17 min and 23 min, respectively. Thus, a safe time interval between no-stage decompression dives and flying at 9,000 m cabin altitude for a maximum of 15 min appears to be 24 h. For prolonged such flights [sic], a longer time interval seems to be necessary" (2).

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This Month in Aerospace Medicine History--December 2003

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

Introduction

What an exciting month this is for us in aviation medicine! The entire year has been leading up to this month, with many events scheduled nationwide, not the least of which is a planned recreation flight with an authentic reproduction Wright flyer.

Up until December 17, 1903, there was no need for a specialty in aviation medicine. Certainly balloonists held altitude records, and there were specific needs in terms of environmental protection from cold injury and hypoxia. But balloon flight was primarily for scientific research or record altitude attainment. Between balloonists and mountaineers, physicians knowledgeable in altitude medicine were utilized, but they were few and far between.

So once man took to the air in the increasingly efficient and effective new flying machines, the specialty of aviation medicine was born.

One Hundred Years Ago

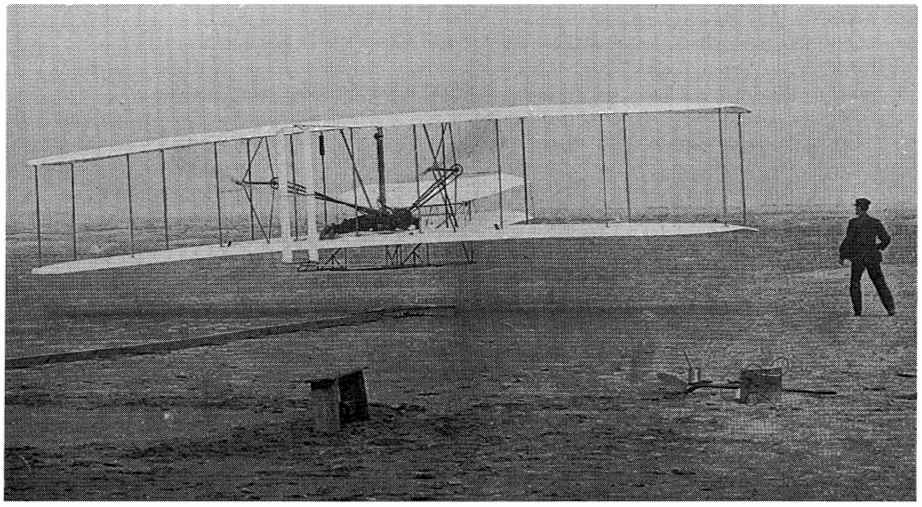
By now it is undoubtedly common knowledge among readers that the generally accepted first sustained, manned powered flight was accomplished December 17,1903 by the Wright Brothers on the sand dunes of Kill Devil Hill near Kitty Hawk, NC. The first flight that day, with Orville at the controls of a glider powered by a 12-horsepower engine, lasted 12 seconds for a distance of 120 feet. By the end of the day, Wilbur had piloted the machine a distance of 852 feet in 59 seconds. The Age of Flight was born (5).

Fifty Years Ago

The 50th anniversary of flight was celebrated in 1953: "Kill Devil Hill echoed and resounded with spoken tribute to these famous pioneers [the Wright Brothers] during the four-day gathering of early birdmen from all parts of the world in observance of man's conquest of the air. The celebration, representative of the last four days that led up to the first flight, was elaborately planned and memorably executed." The article went on to discuss the implications for medicine, and some of the early aviation medicine publications: "The giant strides made by aviation in the past half century have been aided immeasurably by nearly all of the physical sciences but in a singular way by the profession of medicine. The observance next year of the twenty-fifth anniversary of the founding of the Aero Medical Association is living evidence of the invaluable part that the biological sciences have played in the progress of flight… The earliest known medical publication to appear after the historical achievement at Kitty Hawk was a five page pamphlet by Naquet published in Paris in 1907, entitled 'Physiologiques (quelques Considérations générals et) sur les Ascenscionnistes, Aeronautes, et Aviateurs.' This was followed in 1910 by the investigations of Moulinier on arterial tension at altitude and, in the following year, by those of Cruchet and Moulinier on aviator's sickness. The first publication of aeromedical interest in English is believed to be 'Aviation and Common Sense' by Wilbur in Flight for May 6, 1911. These reports were actually a continuation of the vast collection of writings on man's exploration of the air which began even before the first balloon ascent of Pilatre de Rozier in 1783 and culminated in the publication of La Pression Barometrique by Paul Bert a hundred years later… These achievements may not have been readily apparent during the celebrations at Kill Devil Hill when the old-timers gathered around the Wright Memorial, but they are embodied in both pilot and plane wherever man flies" (2).

The problems of high altitude transport were discussed: "The new jet transports must be able to operate for prolonged periods at from 40,000 to 50,000 feet. Designers will have to provide safety features ensuring the safe return of all occupants. The problem is more critical… than at today's general level of operation of 18,000 to 25,000 feet. For example, at 45,000 feet useful consciousness can be as short as 25 seconds after exposure….There have been hundreds of thousands of flight hours with pressurized aircraft, with little structural difficulty. Thus the structural problem should not be too hard to solve, but extra margins of safety should be provided even though this involves some weight penalty…. [N]ew American transports have double windows installed, either one of which can fail without danger of blowing occupants out of the aircraft…. Suggestions are made from time to time that high-altitude transports be built like submarines, with a number of separate compartments each isolated from the others….There must be provision for occupant protection in case of loss of pressurization. The CAA requires American operators to carry protective oxygen equipment of varying measure, depending on minimum flight altitude and duration as a function of enroute terrain….We need more knowledge of physiological limits at altitude when related to jet transports' operating parameters…. Data on hypoxia indicate that flight crews should use supplemental oxygen during sustained flights at pressure altitude in excess of 10,000 feet.

See DECEMBER HISTORY, p. 1314.
DECEMBER HISTORY, from p. 1313.



FIRST FLIGHT--December 17, 1903. It was John T. Daniels, a surf man, who took this photo capturing the moment the world changed. The Wright brothers used a flag system to alert him when they needed help. (National Aeronautics and Space Museum photo).

Passengers need less oxygen than the flight crew because they are less active....It is believed impractical to provide pressure breathing masks for the passengers, since these masks must be individually fitted to be pressure tight" (4).

Coincidentally, some of the problems of space transport were also discussed: "Cabin pressurization is the only means of safe and comfortable flight above 50,000 feet. If sudden decompression occurs, the exposure temperature depends on the altitude, speed, and size of the opening... In escape at -55 C. temperatures, there would be a safe period of about 60 seconds before frostbite occurred in exposed skin... [R]adiation is a hazard above 50,000 feet. Ultraviolet rays are greatly increased in intensity; special lenses and aircraft goggles must be worn. Of more potential danger is the entirely new problem of cosmic radiation, for at 70,000 feet the daily dosage is 150 times greater than at sea level. This consists of primary radiation, chiefly protons, which form secondary showers when their nuclei disrupt, forming protons, neutrons, mesons, and cascade rays... Above 90,000 feet heavy nuclear rays have been detected; these have the highest specific ionization potential of any natural or artificially created atomic substances and can cause extensive tissue destruction... Above 50,000 feet, visual phenomena occur which are caused by the diminished reflection of light rays in the rarefied atmosphere. Looking down, the rays reflected from a surface appear intensely bright, while the sky overhead appears dark. This is very important in determining visual acuity and depth perception of pilots, and is of added importance at high speeds... [Additional hazards include] the possibility of exposure to radiation of unknown types and intensity, the possibility of collision with meteorites, and exposure to noxious gases known to exist about various planets. A suitable atmospheric environment must be maintained in the space ship" (1).

Some interesting crash survival observations were offered by the Office of the Chief of Naval Operations in Washington, DC: "With the advent of high speed jet aircraft, the fatality rate in aircraft crashes has increased somewhat in spite of personal safety devices. However, were it not for the inertia reels, shoulder harnesses, 40 g seats and protective helmets, the toll would be higher, as many of the jet crashed illustrate. The higher landing speeds of jets have increased the energy tremendously which must be absorbed in deceleration. In addition, the protection of the engine forward of the pilot is gone. One advantage has come with the jets, however - the tricycle landing gear. Instead of digging in and flipping the plane over on its back, they shear off and absorb considerable energy" (3).

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5. www.infoplease.com/ipa/A0004537.html

New Standard Reference Materials Catalog Available

The National Institute of Standards and Technology (NIST), of Gaithersburg, MD, has just published its new, comprehensive Standard Reference Materials Catalog. NIST supplies industry, academia, government, and other users with over 1,300 reference materials of the highest quality and metrological value. These standards are currently available for use in industrial materials production and analysis, environmental analysis, health measurements, and basic measurements in science and metrology.

Standard Reference Materials (SRMs) have been used by NIST as vehicles for transferring measurement science and technology, through channels of industry and commerce, to the nation at large. As such, SRMs are crucial reference points in the establishment of a comprehensive measurement system for the entire nation. This system has met the needs of U.S. industry and commerce for nearly one hundred years and continues to evolve to satisfy more demanding measurement requirements as well as increasing demands on quality and traceability. The Standard Reference Materials Catalog lists these reference materials with carefully assigned values for chemical composition and physical properties.

To receive a copy of the Standard Reference Materials Catalog contact NIST at 301-975-6776, visit our website at www.nist.gov/srm or email srminfo@nist.gov

Meetings Calendar

November 20-22, 2003, Bangalore, India. 44th Annual Meeting of the Indian Society of Aerospace Medicine. Institute of Aerospace Medicine. Info: Secretary, Indian Society of Aerospace Medicine (ISAM), Directorate General Medical Services, Air HQ (RK Puram), West Block 6, RK Puram, New Delhi 110066, India; Phone 11-26190645; Fax 11-26168098;email: isam@vsnl.in; www.isamindia.org

January 14-15, 2004, Brooks City-Base, San Antonio, TX. Military Aviation Fatigue Countermeasures. Info: Charlie Dean, charlie.dean@brooks.af.mil.

February 17-20, 2004, Galveston, TX. The University of Texas Medical Branch, Department of Preventive Medicine Residency and the U.S. Army School of Aviation Medicine will host "Pushing the Envelope V--Medicine in Challenging Environments", at the Moody Gardens Hotel in Galveston. For information see the website at www.utmb.edu/pte.

February 18-22, 2004, Orlando, FL. The American College of Preventive Medicine (ACPM) presents Preventive Medicine 2004. Caribe Royal Suites and Villas. Info: www.preventivemedicine2004.org; or Ginger Walters, ACPM Education Manager, (202) 466-2044, ext. 111.

March 22-25, 2004, Daytona Beach, FL. Human Performance, Situation Awareness, and Automation Technology Conference II. Info: Dennis A. Vincenzi: (386)226-7035; dennis.vincenzi@ erau.edu; http://faculty.erau.edu/vincenzd/hpsaa.

May 25-26, 2004, Sydney, Australia. Workshop on Remote Management of Mild DCI. Info: Undersea and Hyperbaric Medical Society (UHMS): (301) 942-2980; email: uhms@uhms.org; websites: www.uhms.org or www.iceaustralia.com/uhms2004/.

AsMA Future Meetings

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

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

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

Send information for publication on this page to: **LCDR Joe Essex, MSC, USN**
48110 Shaw Rd
Bldg 2187, Rm 1240-G3
Patuxent River, MD 20670
essexjb@navair.navy.mil

The History of the Aerospace Physiology Society---Part I

By Donald C. Choisser, Colonel, USAF, BSC (Ret)

Introduction

I am constantly reminded of the enormous contribution of the physiologists who have paved the way for the tremendous successes of members of our profession today. We have become highly respected partners in Aerospace Physiology and Aviation Safety. I wish to thank Col.(Ret) Don Choisser for documenting this history of our society. In doing this, he reminds us of our roots and gives us a hint of the challenges that still remain ahead of us.

CAPT Donna Murdoch, USN
AsPS President

[**Editor's Note:** Col. Choisser has done a great job of preparing this history article. In fact, it is so great that I have decided to split it into three parts to be published over the next three months! P. Day]

Historical Background

The specialty of aerospace physiology is diverse, involving many of the allied sciences and organizations, including several other constituent bodies within the Aerospace Medical Association (AsMA). Aerospace Physiologist Society members are active in the Department of Defense, academia and industry, including various levels of hands-on and administrative functions in bioscience education/training, patient evaluation and treatment, research, development and testing.

The Aerospace Physiologist Society (AsPS) has served as a focal point for many persons with physiology as the common thread throughout their careers.

Despite its diversity and commonality, the Aerospace Physiology Society is unique as compared with many of the societies and branches of the Aerospace Medical Association; however, the AsPS has a historic sense that precedes its founding. The Society's diverse membership can trace its ancestry to the pioneering French physiologist, Paul Bert.

Bert's work represents the first operational application of aerospace physiology and his book, *La Pression Barometrique*, represents a most notable contribution to the early experimental aviation physiology. Paul Bert gave the first physiological training to aircrew members when he used a low-pressure chamber to indoctrinate the ill-fated balloonists, Sivel and Croce'-Spinelli, on the hazards of high-altitude flight. Other scientists, Robert Hooke (1664) and Junod (1835), used low-pressure chambers for experimentation; however, Bert was the first worker to use this device to determine the body's need for additional oxygen during altitude exposure. The establishment in 1969 of two Paul Bert Awards, one for outstanding contributions to operational aerospace physiology and one for research in aerospace physiology, stands as a highlight in the history of the Aerospace Physiologist Society.

In 1972, Phillips Petroleum Co., Bartlesville, OK,. undertook sponsorship of the Paul Bert Award for Operational Aerospace Physiology. At that time, the award was most appropriately renamed the Wiley Post Award for Operational Physiology to honor the great pioneer aviator from Oklahoma. Today, the award is sponsored by Gentex Corporation of Carbondale, PA. Also in 1972, the Fred A. Hitchcock Award for Excellence in Aerospace Physiology was established, and is sponsored by International ATMO, Inc, San Antonio, Texas. The winner of this award receives a copy of *La Pression Barometrique*, translated by Dr. Fred A. Hitchcock and his wife, Mary Alice. Further, Dr. Hitchcock purchased the only remaining copies of the book from the publisher and donated them to the Society. In 1973, the Sierra Engineering Company of Sierra Madre, CA., undertook sponsorship of the Paul Bert Award for Physiological Research. Details of the current Society Awards are provided below.

These awards, in a large part, demonstrate a continuing effort by the Society to fulfill its objectives as stated in the original 1966 Constitution under which the Society was founded: "As a non-profit organization, the objective shall be to encourage, promote and advance the science and art of aerospace physiology by: a.) Establishing and maintaining cooperation between aerospace physiology and other sciences connected with man and his environment; and b.) Stimulating and accomplishing investigation and study, and disseminating knowledge and pertinent information through teaching and participation in meetings."

Over the years, these objectives have been slightly modified by constitutional revisions; however, the overall intent has remained consistent and has fostered the growth of the organization from a 1966 charter membership of 70 to its current active membership of 200. It also led to the establishment of the Aerospace Physiology Certification Program, which was recognized and approved by the Aerospace Medical Association in 1976. The Aerospace Physiology Certification program was developed as a method to improve both the professional stature of the physiologist who undertakes examination, and the professional stature of the Society.

In 1977, the first six members of the Society were Board Certified in the specialty of Aerospace Physiology by the Aerospace Medical Association. As stated by the members of the initial certification committee, "Perhaps the true value of certification will not be known until the program has been in existence for some time." However, the intent of the program was clear, in the past as it is today, "to advance the science and art of aerospace physiology." Details about the Aerospace Physiology Certification Program are enumerated below.

Formative Efforts, Founding and Charter Members

The Aerospace Physiologist Society actually began developing prior to 1966. With all due respect to the several aerospace physiologists from the Air Force, Navy, academia and industry, who from time to time informally discussed the creation of an organization of aviation physiologists, the first serious formative meeting took place at the AsMA Annual Scientific Meeting in New York in 1965. This first organizational meeting was, to a great extent, due to the inspiration and persuasive leadership of Capt. Giles W. Hall, USAF. Thus, on April 28, 1965, a group of 13 physiologists held a dinner at the LaScalla Restaurant in New York City and determined that an official organization for aerospace physiologists should be formed under the parent organization. The members present at the meeting were: Smith W. Ames, PhD, HQ USAF, Lt. Col. Truman Parker, USAF, Maj. Nicholas C. Nicholas, USAF, Maj. William A. Staub, USAF, Capt. Donald C. Choisser, USAF, Capt. Joseph N. Gagliano, USAF, Capt. Giles W. Hall, USAF, Capt.

See AsPS HISTORY, p. 1316.

AsPS Charter Members--(Left to Right) Richard Bancroft, Ph.D., CAPT Mary E. Keener, USN, Capt. Donald C. Choisser, USAF, Edwin G. Vail, Ph.D., Thomas H. Allen, Ph.D., Col. William W. Evans, USAF, Capt. George Pendergrass, USAF, and CDR Kenneth R. Coburn, USN.

AsPS HISTRORY, from p. 1315.
Rudolph A. Lucchesi, USAF, Capt. Domenic A. Maio, USAF, Capt. William E. Overacker, USAF, and Capt. Michael J. Parkhurst, USAF.

Since that time, this group of members has been referred to as the Founding members, who one year later went on to become Charter members, along with more than 50 other aerospace physiologists at the 1966 AsMA Meeting in Las Vegas, NV. At the charter meeting, Dr. Ames introduced Neal E. Baxter, President of the Aerospace Medical Association. He welcomed the Aerospace Physiology Section into the Aerospace Medical Association and expressed his confidence in the need for the future productivity of the Section. Subsequent to the welcome, Edwin G. Vail, PhD, spoke on the role of physiologists in industry. The charter meeting for the Aerospace Physiologists Section was conducted on 20 April 1966, at the Dunes Hotel in Las Vegas, NV. The first meeting was co-chaired by Dr. Ames and Capt. Overacker. The original Constitution was approved and the initial slate of officers was elected. The first President of the Aerospace Physiologist Section (later renamed Aerospace Physiology Society) was Charles F. Lombard, PhD. Capt Mary F. Keener, MSC, USN was elected Vice-President for the year 1966 and President for the following year. Col. James W. Evans, USAF, was elected Secretary-Treasurer, and Capt. Walter L.E. Goldenrath, MSC, USN, was elected Bibliographer.

During this first meeting in 1966, Dr. Lombard addressed the group concerning the organizational problems and goals of the organization. He introduced his discussion with the following statements:

"I suppose that the first item to be considered by the newly formed Aerospace Physiology Section of the Aerospace Medical Association is the definition of an aerospace physiologist. Any diplomat would sidestep the issue. However, diplomacy is not included in physiological teachings and certainly is not included in the areas of investigations. Consequently, not being a diplomat, and having spent a few years trying to bring physiology into aerospace use, I will try to give my definition(s) of an aerospace physiologist.

"Physiology, according to Dorland's Medical Dictionary, 23rd edition, is: 'The science which treats with the functions of the living organisms and its parts.' Listed also are animal, comparative, general, hominal, morbid, pathologic, special, and vegetable physiology, but no aerospace physiology. Historically, since physiology is one of the basic sciences in the medical field, one can assume that aerospace physiology started with the formation of the Aero Medical Association on 15 Dec. 1928, at the conference in Washington, DC, attended by 29 medical examiners in aviation medicine . . . Technically, aerospace physiology should be 'the science which treats with the functions of the living organisms and its parts in the aerospace environs.' This requires the further definition of: what are the aerospace environs? Aerospace environs can be from the optimum to the tolerable or even non-survivable extremes of temperature, acceleration, atmospheric composition and pressures, noise, vibration, light, ionizing radiations, etc.

"The various facets of aerospace physiology, when examined separately, are confusing since they all have an interface with one or more of the basic disciplines or sciences. Perhaps it is in this respect that a better definition and understanding is required if the aerospace physiologist is to come into his own . . .

"Truly aerospace physiology is a complex multifaceted field of endeavor and one which needs nourishment. It is far more than the staid physiology of the medical school; it has to be if the physical sciences are to supply man with the proper environment in the environs of the 'spaces.' The physiologist must be the connecting link between the living body and the world of the physical scientists. To do this, various types and degrees of aerospace physiologists are required. Needed are definitions of the complex tasks to be accomplished and the trained personnel to accomplish the tasks. To date, the aerospace physiologist tries to put the man in the can, but in the future must, with the physical scientist, plan to build the can for the man."

These comments by President Lombard have held their validity for the past 37 years. Aerospace Physiology is still a complex multifaceted field of endeavor, and the Aerospace Physiology Society is still composed of an extensive mix of various professional specialties. This fact was observed by Dr. Lombard and has been effectively recognized by the Society. The Aerospace Physiology Society awards recognize both operational and research oriented individuals. The Aerospace Physiology Certification Program is also organized to cover a broad range of interest and expertise. Further, the officers of the organization and the scientific sessions presented at the Annual Scientific Meeting are organized to represent the broad scope of the Society membership. This is a difficult task; however, over the past 37 years, the Society has been innovative and dynamic. The Society continues to grow despite changes in the aerospace industry and aerospace medicine that have resulted in constraints of resources, particularly dollar resources. The Society has well-supported its initial charge, "to encourage, promote and advance the science and art of aerospace physiology."

Evolution of Today's Aerospace Physiologist

What is an Aerospace Physiologist today? The Aerospace Physiologists of today are a diverse group of talented persons in a myriad of functions in industry, academia and the Department of Defense. The common thread of their education in physiology is wound around many areas of human factors and performance. This can range from traditional university environments to industrial applications, or highly sophisticated physiology problem solving and training in classified functions of the Department of Defense (DoD), and also Space programs. Each of these areas is worthy of its own review but is beyond the scope of this article. With regret, only some of the specialties are described.

Most of today's Aerospace Physiology Society members within the Department of Defense are equally divided between the US Navy and the US Air Force and serve in a variety of functions. However, the first physiological training officers, or aerospace physiologists, in the Army Air Corps were recruited from flying duties and were all pilots. It became apparent in the Air Force, a few years after World War II, that a mix of rated pilots, navigators/bombardiers and Medical Service Corp officers with strong physiology credentials would be more successful for many reasons, including cross-fertilization and stability. The Air Force policy of having a mix of rated, and now Biomedical Science Corp officers, remains true today and is considered successful, despite periodic insistence of the line of the Air Force to return their rated aircrew members. One of the reasons that the AF Aerospace Physiology Program retained the rated crewmembers was results of the work of Lt Col Donald C. Johnson, USAF and Lt Col William E. Overacker, USAF rated Aerospace Physiologists who served as the Assistant Chief of Aerospace Physiology and Aide to the Surgeon General, respectively, in the Air Force Surgeon General's office. They are also examples of Society members who also did much of the Society's formative, functional, and liaison work in Washington, DC. Don's outstanding performance in classified programs and his achievements and service to the Society appropriately qualified him for the 1973 Aerospace Physiology Society Wiley Post Award.

On the other hand, the Navy Aviation Physiologists were recruited and maintained in their Medical Service Corps. This has proven very satisfactory for their broad operational requirements, including flying as a crewmember, naval operations at sea, and use as an Aeromedical Safety Officer (AMSO), mainly with Marine Corps aviation.

Although the Aerospace Physiology Section was founded by a group of males in 1966, the charter members included several females: Mary F. Keener and Mary F. Foley, to mention only two of the past presidents. Female members soon followed the charter meeting and became officers, committee chairpersons and award winners. Capt Mary F. Keener, USN, Col Mary F. Foley, USAF, NC, CDR Elizabeth Reeves, Rita Rapp, Alice Stoll and others are a few of the early leaders and award winners in the Aerospace Physiology Section.

In 2003, female Aerospace Physiologists are involved in a myriad of civilian and DoD educational, research and management positions. Today, female Aerospace Physiologists in the US Air Force and US Navy are approximately 26% and 13 % respectively, and have assumed leadership positions. Susan E. Richardson, Col. USAF, BSC, is Chief of Aerospace Physiology, Surgeon General's Office, Bolling AFB, MD, and Past President of the Society. Donna M. Murdoch, Capt., MSC, USN, is Commanding Officer of the Naval Aeromedical Research Laboratory, Pensacola Naval Air Station, FL, and is the current President of the Society.

In 1977, at the USAF School of Aerospace Medicine, in the annual Aerospace Physiology Symposium titled, Operational Problems in Aerospace Physiology, with tri-service attendees and members of the civilian industrial complexes invited, a term, as follows, was used that grew in meaning and application. The speaker presented a picture of broadened education and career functions for the aerospace physiologists. He referred to the functional unit as a Man (or Woman) For All Seasons - the Human Factors Officer (HFO). These persons would perform all the existing duties of the Air Force Aerospace Physiologist, and would receive additional education and training in the specialties needed to evaluate, educate, resolve human factors issues, and effect solutions in fully performing in this vision. Several challenging points were also posed by the author, Choisser, who was the speaker for this AsP-HFO vision. Thus, the obvious questions were addressed. From where were the initial resources for this vision or effort coming? Funds and personnel, whether Biomedical Science Corps or line of the Air Force would have to be planned and budgeted for the future. Would all

See AsPS HISTORY, p. 1317.

AsPS HISTRORY, from p. 1316.
DoD services be involved, or would they go their own separate ways? The Human Factors Officer concept/vision was designed to continue the classic graduate education in physiology adding selected areas of the physical sciences, engineering and psychology programs that would more effectively equip the HFO to work at all levels of aviation, space and environmental operations. Circa 1980, the USAF Surgeon General's Office introduced graduate education programs at several universities for the Air Force Aerospace Physiologists to build the foundation for the needed expertise to enter this area successfully. The HFO vision, or percept with the Aerospace Physiologists did not replace, but built on to several career paths in aviation medicine, life support equipment, aircraft incident/accident investigation, etc. This concept has gone through much iterations in partial development in several services and is called by several names. Aerospace Physiologists are the starting point and mainstream of this type of effort. There are some elements in this new concept that would not remain exclusive to the Air Force. The USN Aeromedical Safety Officer (AMSO) is just one example of a program that also began its development in the 1970s with parallel aims. The AMSO was developed to counter the physiological threats of environmental and self-imposed limitations facing combat aircrews. The AMSO also offers consultations, technical liaison and recommendations in all aeromedical aspects of aviation safety. Most people look to the mid-1980s as the start of the AMSO program in Marine aviation. It had its beginnings as an expansion of the Flight Surgeon's program in the 1970s. Capt. Frank H. Austin, a USN flight surgeon, envisioned a team of Aeromedical Specialists providing direct support to the aviation community. Captain James Winger, also an USN flight surgeon, additionally was a strong proponent of the Aerospace Physiologist's role in the AMSO team. The Navy Aviation Physiologists that began the AMSO concept in the mid-1970s were Lts "Mac" McIntosh, Dave Kelly, Gary Smith, Jerry Patee, Bob Elzy, and Charlie Anderson. CMD Harold T. Pheeny became an AMSO in 1976 and was assigned to a new billet at Naval Air Training Command where he later wrote the first directive for the AMSO. This program was gently spurred and guided through its development in the mid-1980s by Commander Vince Musashe and associates.

Closely paralleling the impact that Aerospace Physiologists have had on flight safety and human performance in the aerospace environment is their impact on the development of clinical hyperbaric medicine across the globe. Originally pioneered through the US Air Force for treatment of altitude decompression sickness, and the US Navy for treating diving related decompression sickness, the field of hyperbaric medicine has grown geometrically since 1970. Initially indicated for life and limb threatening conditions such as decompression sickness, carbon monoxide poisoning, gas gangrene and air embolism, the field of hyperbaric medicine has now extended to over fifteen conditions for which hyperbaric medicine is indicated. Pioneering Aerospace Physiology Society members, such as Bruce Bassett, PhD; Paul Sheffield, PhD; and Tom Workman, MS, have been instrumental in expanding the role of Aerospace Physiologists in hyperbaric medicine. They provided a greater understanding of the risks of flying and diving, established the use of transcutaneous oximetry as the international benchmark for effective hyperbaric patient evaluation, and educated an international body of physicians, nurses, technicians and sports divers in diving and hyperbaric medicine. They developed hyperbaric facility safety standards and improved the quality of care being provided to hyperbaric patients through hyperbaric facility accreditation. Bruce Bassett, Paul Sheffield and Tom Workman are Past Presidents of the Society.

In the early 1960s to the mid-1970s, the role of the Aerospace Physiology really grew and broadened due to operational exigencies and individual initiatives. In the 1960s, the Air Force began the Personal Equipment Mobile Training Team (PEMTT) Program and aircrew parachute-parasail training. In the 1970s, the US Navy AMSO concept began to evolve. Then and now the Society's members have served very effectively in various roles dealing with life support equipment issues, human centrifuge evaluation and training of fighter pilots, accident/incident investigation, as synergist in flight safety programs, and supporting closely related aeromedical efforts. Both military services' physiologists also initiated and managed varying degrees of Water Survival Training: In the Navy, it was for the "Line Readiness Training." In the Air Force it encompassed some aircrews, but was primarily programs at the USAF School of Aerospace Medicine for flight surgeons, flight nurses, and aeromedical support personnel.

AsPS members have also served as faculty and staff in civilian academia and at the USAF Academy in Colorado for some years. At the Air Force Academy, they have provided both didactic instructions with altitude chamber and ejection seat training at Lowry Air Force Base until it closed, and then the Aerospace Physiology Unit at Peterson Field, Colorado Springs, CO, starting in 1976. These AsP positions, along with those established at the Uniform Services University of Health Sciences (USUHS), the Armed Forces Institute of Pathology (AFIP) and the Aerospace Physiologist exchange program between the USN and USAF at Barbers Point, HI, Wiesbaden AB and Okinawa have provided additional specialized opportunities for the Society's members in varied academic and global operations.

The Aerospace Physiology Society members of today may not have the predestination to fully perform in all or most of the HFO vision, in the AMSO Program, or hyperbarics. But they have a marvelous opportunity for advanced and experiential education, growth, unique performance and a broad variety of interactions that are rewarding with a patriotic challenge.

Many AsPS members , especially the more senior or retired ones, relate numerous anecdotal and evidentiary events that stimulated the changing scope and nature of the Aerospace Physiologists' responsibilities and, in turn, the job description during and subsequent to the Cold War. The preparation for and participation of the Society's members in Desert Shield, Desert Storm and Iraqi Freedom improved and expanded many of the functions developed in previous DoD Aerospace Phys-iology Programs. Only some of these can be discussed with respect to life support equipment, lasers, night vision devices, pressure suit utilization and support of nuclear, biological and chemical threat protection. These efforts and others not yet visible due to restrictions will be the legacy and jobs of the Aerospace Physiologist in the near term and for the future members of the Society. Working closely with the flight surgeons and other specialists in providing the direct interface and expertise between the aircrew "line" operations and the medical service missions, these AsPS members have served well the United States and its allies, bringing great credit to themselves and the programs they represent.

To be continued....Part II will appear in January 2004.

Nominations Sought for 2004 AsMA Awards

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

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

Nominations can be made by any member of AsMA.

The nominations must be submitted on forms available from the AsMA Home Office, and printed in the journal and on the website at www.asma.org (click on "About the AsMA", then "Committees", then go to Awards).

E-mail nomination form to: verba.moore@langley.af.mil; and jcarter@asma.org. Or Mail to Home Office, Attn: Awards Committee Chair, 320 S. Henry St., Alexandria, VA 22314.

Policies:

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

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

Letter from "Lady B"

To you and yours

As another year draws to a close I think of the things done, things to be done and those that will be put off for yet another time.

But all in all it has been a productive 12 months that included many miles travelled and many friends seen. Both mainly involving The WING and making plans for our meeting in Anchorage in May 2004. As President, I have taken enormous pleasure in writing these notes for the WING page and, I hope, have kept everyone updated on our plans.

It has been an uplifting year for those who have had additions to their families, sons and daughters making some of you new Grandparents and congratulations to our younger members who have brought new life and hope for the future.

Of course, there have been losses of friends and kin and as we look back over 2003, it is good to remember the happy times we shared.

On behalf of the Alaska Team may I wish everyone good health, happiness and sisterly love for the days ahead.

Marybaird

Meet Yvonne Silberman-- Our New Favors Chair

Yvonne, a native of Bristol, England moved to the USA at the age of 16 with her mom, new step-dad, and twin sisters. She still has close family ties to England, however, with another sister and a brother still living there.

Currently, Yvonne makes her home in Edmond, OK, just north of Oklahoma City where her husband, Warren, is the manager of Medical Certification for the FAA and the Oklahoma State Surgeon. The Silbermans have moved around the country quite a bit and Yvonne says that she has loved just about everywhere she has lived. "I always meet the nicest people and have made some wonderful friends throughout the years. There are good and bad things just about anywhere you live but I have never lived anywhere that I didn't enjoy." They have yet to decide where they will ultimately retire, but high on the list of possibilities is Oklahoma City, especially if their two daughters settle down there after they marry. Yvonne would like to be nearby to enjoy any future grandchildren, but she says that there is no hurry on that as her daughters are still in high school! Daughter, Jenna is 17 and a senior this year; Carly is 15 and a sophomore. They are both great kids and do very well in school, and are involved in many extracurricular activities. Both girls began dancing at the age of four and Jenna has put this talent to use on the Varsity Pom squad. Carly has found a new interest in debate at school, and is hoping to make the debate team this year and thinks that she might be interested in law.

Even with a very busy schedule as a mom, Yvonne still found time to return to school as an adult and graduated in 2000 from Oklahoma State University with her nursing degree. She is now an RN working at Deaconess Hospital in OKC in the Birth Center and says Yvonne, "I really love it. I am not sure why, but I have wanted to be a nurse my whole life and I find it very fulfilling." Staying fit is another thing which Yvonne enjoys, either by going for long walks or to the gym. And when she is not busy working or taking care of her family, you can often find Yvonne curled up with a good book, heading off to the latest movie, or especially enjoying a wonderful meal at a great restaurant with Warren and close friends.

The Silberman's household would not be complete without their little four-legged friends. They have a deaf cat named Sarah. She is white with blue eyes. Yvonne tells me that 90% of white-haired blue-eyed cats are deaf!. They also have a 12-year-old little dog named Buddy who is a mix of Lhasa Apso and Shitzu. Says Yvonne, "He is a delight and my best buddy! We also just got a new little puppy. He is a Chinese pug. We named him Ozzie! He is sooo cute!!! We are all in love with him. Of course he is chewing everything in sight right now, so I will be glad when he is out of the real puppy stage! We have him enrolled in puppy training classes at Petsmart, hopefully that will teach him some good manners. Needless to say, I am a huge animal lover and have never met an animal that I didn't like!"

Yvonne has been involved with the Wing for several years, having previously served on the Board, and says that now that her girls are a little older, she is looking forward to attending many of the AsMA meetings especially Alaska next year. We are all delighted to have her as this year's Favors Chair and part of the North to Alaska Team.

Reminder from our Favors Chair

Hi, Everyone, with the holdiday shopping season in full swing, I thought that this would be a good time to remind you to start collecting favors for our Anchorage meeting. Gifts should reflect the home region of the donor, and need not be expensive – in the 10 to 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. This year, as in San Antonio, favors will be distributed during the reception only.

Home Office Information

Phone: (703)739-2240
Fax: (703)739-9652 or
(703)739-9875
Website: www.asma.org
Home Office staff:
Russell Rayman, Exec. Dir.
Ext. 103; rrayman@asma.org
Jackie Carter, Admin. Assistant
Ext. 104; jcarter@asma.org
Membership Department
Gloria Carter, Membership Dir.
Ext. 106; gcarter@asma.org
Sheryl Kildall, Assist. Membership
Ext. 107; skildall@asma.org
Journal Department
Pamela Day, Managing Editor
Ext. 101; pday@asma.org
Rachel Trigg, Editorial Assistant
Ext. 102; rtrigg@asma.org

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"...and "to promote sociability among its members and their families." Each year at the scientific meeting, AsMA spouses meet new friends from every corner of the world, sharing in the many cultural experiences and educational opportunities of the host city. Dues are $20 per year. For further information, contact: Judy Waring, 4127 Kenyon St., Seattle, WA 98136; (206) 933-0884; e-mail: judymikewaring@msn.com

Send information for publication on this page to:
Corporate News
Aerospace Medical Association
320 S. Henry Street
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First Flight Celebration

Breakthrough technology developed by Environmental Tectonics Corporation now offers the world's first Authentic Tactical Flight Simulator [ATFS]. ATFS is a revolutionary new tool for tactical aircrews to build and refresh their combat skills with minimal risk at 20 times less cost per tactical hour of hands-on time than airborne training on flight test ranges. ATFS merges high fidelity aircraft and tactical environment simulation with a proven, high performance, multi-axis human centrifuge.

Stepping into the ATFS device, a tactical pilot enters a realistic cockpit with high fidelity controls and displays of a specific tactical fighter. The ATFS device actually "flies" like a tactical high performance aircraft so a pilot can safely explore the full scope of tactical flight while engaging enemy threats and being subjected to authentic stresses that match the real thing. ATFS enables combat aircrew personnel to experience the spectrum of present and future threat situations, will increase the service life of combat strike and fighter aircraft, and free up instrumented tactical ranges.

The key ingredient in ATFS is a unique technology called G-POINTING(tm). As a pilot maneuvers the simulated tactical fighter, G-POINTING(tm) precisely signals the ATFS motion control system to create the authentic G-forces and other physical motion effects experienced during tactical flight. This provides a powerful, truly authentic experience.

The first flight of the G-FET II ATFS was taken on Nov. 12.

ETC Sets the Record Straight on Mission:Space

ETC announced recently that they want to put the record straight on how the Mission: Space ride at EPCOT was created. In view of ongoing litigation, ETC had intended to remain silent in the press but recent public statements are, in the opinion of the Company, damaging to ETC's reputation and could stifle ETC's future business prospects in the entertainment industry. ETC is suing over a number of issues including the demand to finalize the safety analysis and safety testing of the Mission: Space ride. The ownership of intellectual property is also at issue.

The story of Mission: Space is not ETC's creation. ETC, however, determined how the story could be turned into a physical ride. ETC provided the concept, then built a prototype and demonstrated how the story could be told on an ETC Centrifuge motion platform. Recent news releases indicate that NASA engineers had substantial involvement in the creation of the Mission: Space ride, strongly implying the ride technology was NASA's. ETC states that NASA had nothing to do with the ride's technology. The ride concept was entirely ETC's, the core technology was all based on ETC's existing motion base technology, and is also the subject of ETC patents.

FDA Approves Paxil CR(TM) for the Treatment of Social Anxiety Disorder

GlaxoSmithKline recently announced the U.S. Food and Drug Administration (FDA) had approved Paxil CR (paroxetine HCl) Controlled-Release Tablets for the treatment of social anxiety disorder. Paxil CR is the first and only controlled-release SSRI (selective serotonin reuptake inhibitor) approved for social anxiety disorder, a highly debilitating condition that affects more than 10 million Americans.

The tolerability and efficacy of Paxil CR (paroxetine HCl) Controlled-Release Tablets in the treatment of social anxiety disorder were established in a 12-week, multi-center, placebo-controlled study of 370 patients with social anxiety disorder. Patients were randomized to receive either a flexible dose regimen of Paxil CR (12.5 mg - 37.5 mg per day) or placebo. Paxil CR was generally well tolerated, with a low patient dropout rate due to adverse events that was comparable to placebo (3% vs. 2% respectively).

Paxil CR offers the proven efficacy of paroxetine in a Geomatrix oral drug delivery system. The tablet is a multi-layered formulation that controls dissolution and absorption of the drug in the body and offers flexible dosing with three dosing strengths: 12.5 mg, 25 mg, and 37.5 mg.

About GlaxoSmithKline

GlaxoSmithKline -- one of the world's leading research-based pharmaceutical and healthcare companies - is committed to improving the quality of human life by enabling people to do more, feel better and live longer.

Study Shows Zelnorm Effective in Treating Chronic Constipation

Novartis's Zelnorm® (tegaserod maleate) was found significantly more effective than placebo during 12 weeks of therapy in improving the symptoms of chronic constipation that frequently result in patients seeking medical care. The pivotal trial was based on a placebo-controlled, multinational study of 1,264 female and male patients and was presented recently at the 68th Annual Scientific Meeting of the American College of Gastroenterology.

The study demonstrated that Zelnorm-treated patients experienced significantly more complete spontaneous bowel movements (CSBMs) than patients receiving placebo. Zelnorm also improved the quality of bowel movements, and laxative (rescue) use was significantly lower in Zelnorm treated patients. Additionally, the study showed that Zelnorm was generally well tolerated over the duration of the study.

Patients enrolled in the study had experienced chronic constipation for an average of 15 years. These constipation symptoms were confirmed for participants during the two-week baseline period. Eligible patients were randomly assigned to 2 mg b.i.d. (n=417) or 6 mg b.i.d. (n=431) doses of Zelnorm taken orally, or placebo (n=416) twice daily for a period of 12 weeks after the baseline period. Successful response was defined as an increase of at least one CSBM per week compared to baseline and a minimum of seven days of treatment.

About Novartis

Novartis Pharmaceuticals Corporation researches, develops, manufacturers and markets leading innovative prescription drugs used to treat a number of diseases and conditions, including central nervous system disorders, organ transplantation, cardiovascular diseases, dermatological diseases, respiratory disorders, cancer and arthritis. The company's mission is to improve people's lives by pioneering novel healthcare solutions.

FDA Approves PEG-INTRON REDIPEN(TM) for the Treatment of Chronic Hepatitis C

Schering-Plough Corporation recently announced that the U.S. Food and Drug Administration (FDA) has granted marketing approval to PEG-INTRON REDIPEN, a prefilled pen for administering PEG-INTRON® (peginterferon alfa-2b) powder for injection, the most-prescribed interferon treatment for patients with chronic hepatitis C. It is the first and only pen delivery system approved for administering pegylated interferon therapy. The REDIPEN is designed to be simpler to use than a traditional vial and syringe, thus enhancing patient confidence with dosing of their PEG-INTRON regimen.

The PEG-INTRON REDIPEN is a disposable, single-dose delivery system that allows patients to administer PEG-INTRON in three easy steps: mix, dial and deliver. Mixing occurs by simply pushing down on the pen to combine the PEG-INTRON powder with sterile water, both of which are stored in the pen; dialing allows the patient to accurately select their predetermined individualized dose; and delivery allows the patient to inject their individualized dose of the medication. The REDIPEN will be available in four different strengths: 50, 80, 120 and 150 mcg, each indicated by a color-coded label and dosing button.

The most common adverse events associated with PEG-INTRON were "flu-like" symptoms, occurring in approximately 50% of patients, which may decrease in severity as treatment continues. Application site disorders were common (47%), but all were mild (44%) or moderate (4%) and no patient discontinued. The PEG-INTRON REDIPEN is expected to be available in the United States in early 2004. It is currently available in the European Union (EU) and several other international markets.

Schering-Plough Research Institute is the pharmaceutical research and development arm of Schering-Plough Corporation, a research-based company engaged in the discovery, development, manufacturing and marketing of pharmaceutical products worldwide.

Early Virologic Response to Peg-Intron(R) Individualized Therapy Evaluated

Early virologic response (EVR) in patients with chronic hepatitis C following 12 weeks of individualized, weight-based dosing of PEG-INTRON® (peginterferon alfa-2b) powder for injection in combination with REBETOL® (ribavirin, USP) capsules demonstrates a correlation between the EVR and the success rate of a full, 48-week course of treatment, according to a paper published in Hepatology (1). As noted in the paper, 74% of patients demonstrated an EVR following 12 weeks of individualized, weight-based dosing of PEG-INTRON (1.5 ug/kg/week) and REBETOL (800 mg/day) combination therapy and, of those patients, 72 percent (positive predictive value) went on to achieve a sustained virologic response (SVR) after a full, 48-week course of treatment.

PEG-INTRON, recombinant interferon alfa-2b linked to a 12,000 dalton polyethylene glycol (PEG) molecule, is a once-weekly therapy that has been shown to exert both antiviral and immunomodulatory effects. REBETOL is an oral formulation of the antiviral agent ribavirin, a synthetic nucleoside analog.

About Shering-Plough

Schering-Plough Corporation is a research-based company engaged in the discovery, development, manufacturing and marketing of pharmaceutical products worldwide.

REFERENCE

1. Davis GL, Wong JB, McHutchison JG, Manns MP, Harvey J, Albrecht J. Early virologic response to treatment with peginterferon alfa-2b plus ribavirin in patients with chronic hepatitis C. Hepatology, Vol. 38, No. 3, 2003, pp. 645-652.

LEUKINE® Yields Positive Results for Crohn's Disease Sufferers

New data from a Phase II trial conducted at the Washington University School of Medicine indicate that a drug called LEUKINE® (sargramostim) may relieve much of the pain, discomfort, and other problems associated with Crohn's disease, a serious, chronic malady of the gastrointestinal tract that affects hundreds of thousands of Americans. There is no cure, and while Crohn's is believed to be caused by an overactive immune system, current treatments that suppress the immune system often do not provide adequate relief.

LEUKINE stimulates the immune system, a radical departure in current treatment methodology. Patients who received LEUKINE in the study had significantly greater clinical response and remission rates than patients treated with placebo. What's more, LEUKINE appears to be safe. The most common reactions included mild injection site irritation and bone pain.

Study results were presented on October 14 at the 68th Annual Scientific Meeting of the American College of Gastroenterology (ACG) in Baltimore.

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

Robert W. Elliott, Ph.D., ABPP, ABPN, Los Angeles, CA, has been elected President of the National Academy of Neuropsychology. Dr. Elliott, who serves as a consultant for most of the major airlines on pilot issues, is the Annual Convention Program Chair for the Division of Neuropsychology of the American Psychological Association for 2004.

CAPT Michael D. McCarten, MC, USN, FPO AE, previously Senior Medical Officer aboard the aircraft carrier *USS Theodore Roosevelt*, has recently been transferred to the U.S. Naval Hospital in Keflavik, Iceland, to become Executive Officer. While at his previous posting, he completed two combat cruises in support of Operation Enduring Freedom and Operation Iraqi Freedom.

CAPT Nicholas Webster, MC, USN, has succeeded **James Fraser** as Command Flight Surgeon for the Naval Safety Center, Norfolk, VA.

Focus on Members:
CAPT James R. Fraser, MC, USN, Retires

CAPT James R. Fraser, MC, USN, Command Surgeon, U.S. Naval Safety Center, retired from active duty in September 2003.

A native of Oklahoma, CAPT Fraser entered the U.S. Navy Health Professions Scholarship Program after earning a Bachelors of Arts in 1972 and a Masters in Public Health in 1973, from the University of Oklahoma.

Following graduation, from the University of Oklahoma College of Medicine in 1977, CAPT Fraser completed a Family Practice Internship at Naval Regional Medical Center, Charleston, South Carolina. After internship he served as the Squadron Medical Officer for COMDESRON TWENTY, where he made major deployments to the Mediterranean, around South America, and to West Africa.

He subsequently returned to Naval Regional Medical Center, Charleston, and completed the Family Practice Residency. Following residency, he served as teaching staff at Naval Regional Medical Center, Charleston. Thereafter he assumed the duties as the Senior Medical Officer and Officer-in-Charge of Subic Bay Branch Medical Clinic, U.S. Naval Communication Station, Philippines. After serving 3 years in the Philippines, CAPT Fraser transferred to the other side of the world to serve as the Senior Medical Officer and Officer-in-Charge of the Branch Medical Clinic, U.S. Naval Security Group Activity, Edzell, United Kingdom.

Following 3 years in Scotland, CAPT Fraser completed training as a Naval Flight Surgeon in Pensacola, FL. He subsequently completed the residency in Aerospace Medicine at the Naval Aerospace Medical Institute in Pensacola.

Following the Aerospace Medicine residency, CAPT Fraser joined the USS Theodore Roosevelt (CVN 71) in 1991 as Senior Medical Officer. During his tenure, his department was selected as the superior aircraft carrier medical department in the Atlantic Fleet and was honored with two sequential Commander Naval Air Force, U.S. Atlantic Fleet "Blue M" awards. CAPT Fraser then assumed the duties as Force Medical Officer for the Commander, Naval Air Force, Atlantic Fleet from 1993 to 1997. He most recently served as the Command Surgeon at the Naval Safety Center in Norfolk, VA.

CAPT Fraser holds degrees of Bachelor of Arts, Master of Public Health and Doctor of Medicine. He is certified in the specialties of Family Practice and Preventive Medicine (Aerospace Medicine). He is a Fellow of the American Academy of Family Practice and an Associate Fellow of the Aerospace Medical Association. He is a member of the Uniformed Services Academy of Family Practice, Association of Military Surgeons of the U.S., and the Society of U.S. Naval Flight Surgeons where he served as President 2002 - 2003.

During his 30-year Naval career he has been awarded the Legion of Merit (gold star in lieu of second award), Meritorious Service Medal (gold star in lieu of second award), Navy Commendation Medal, Meritorious Unit Commendation (with bronze star), Navy "E" Ribbon (two awards), National Defense Service Medal (with bronze star), Southwest Asia Service Medal, Armed Forces Service Medal, Sea Service Deployment Ribbon (with two bronze stars), Overseas Deployment Ribbon (with four bronze stars), Philippine Presidential Unit Commendation, NATO Medal, and Kuwait Liberation Medal (Kuwait).

New Members

Anger, Daniel J., Pine Island, MN
Burnett, Trevor M., M.D., Fruit Heights, UT
Carpenter, Lydia, Capt., USAF, MC, Fairfield, CA
Clay, Smokey J., Capt., USAF, MC, Bolt, WV
Clinton, Charles D., Maj., USAF, MC, Barksdale AFB, LA
Combs, Daniel J., Lt., MC, USN, Belle Chasse, LA
Connolly, Joseph, Maj., USAF, MC, APO AE
Curry, John M., D.O., Shaw AFB, SC
Delos Santos, Alan J., M.D., Dyess AFB, TX
Endorf, Rick L., Capt., USAF, MC, Bellevue, NE
Fay, Violeta Lee, B.Sc., Coral Gables, FL
Goddard, John G., Maj., USAF, MC, Bossier City, LA
Hageman, Patrick A., Capt., USAF, MC
Hendershot, Richard W., Capt., USAF, MC, Milwaukee, WI
Hochstetler, Bradley S., Capt., USAF, MC, Mountain Home, ID
Jaffery, Syed Arif A., Maj., USAF, MC, Metairie, LA
Jones, Roger E., Capt., USAF, MC, Bossier City, LA
Kurz, Christopher J., Capt., USAF, MC
Lindauer, Jacques M., M.D., Fresno, CA
Loyd, Frank L., Capt., USAF, MC, Dyess AFB, TX
Martin, Bryant R., Capt., USAF, MC, Ellsworth AFB, SD
Modi, Sheila J., Galveston, TX
Moorman, Matthew L., Maj., ANG, MC, Columbus, OH
Nussbaum, Lance M., Capt., USAF, MC, Rocklin, CA
Oberg, Erik D., Capt., USAF, MC, Mt. Pleasant, SC
Peitzmeier, Gary A., Maj., USAF, MC, Sparta, WI
Perino, Louis J., Lt. Col., NM-ANG, MC, El Paso, TX
Poppe, Matthew M., Capt., USAF, MC, Elmendorf AFB, AK
Quetell, Guillermo, M.D., Jamesville, NY
Ridge, Neal P., D.O., Orangevale, CA
Rivera, Chantal A., Ph.D., Houston, TX
Rodriguez, Fabian D., Capt., USAF, MC, Abilene, TX
Rossbach, Christine N., Capt., USAF, MC, Clovis, NM
Shah, Arti, Maj., USAFR, MC, Moorestown, NJ
Swiler, William E., Capt., USAF, MC, Mountain Home, ID
Tabatzky, Christiane N., LTC, ANG, MC, Woodbridge, VA
Teeter, Erin B., Kansas City, MO
Tuccillo, Mark W., D.O., Petersburg, AK
Valle, C. Anthony, M.D., Holloman AFB, NM
Wagner, Jason C., Capt., ANG, MC, Crestwood, MO
Waite, Christina M., Capt., USAF, MC, Haughton, LA
Whittingham, Sara A., Capt., USAF, MC, Steamboat Springs, CO
Wisco, Olliver J., Capt., USAF, MC, Rocklin, CA
Zapata, Mayerly, Miami, FL
Zelasko, Scott M., Capt., USAF, MC, Tucson, AZ

International New Members

Asobo, Emmanuel A., Bamenda, NW Providence, Camaroon
Connolly, Desmond M., M.B., B.S., Farnborough, Hants, UK
Duffy, Bradley T., B.Sc., Belrose, Australia
Husain, Aysha A., M.D., Manama, Bahrain
Mahony, Paul H., Katoomba, Australia
Parmar, Daljit S., M.B., B.S., Kota Kinabalu, Malaysia
Rennie, Fiona M., M.B., Ch.B., Callala Bay, Australia
Santos, Pierre, M.D., Dakar, Ponty, Senegal
Warmink, Harry H., M.D., Evian-Les Bains, France

CLASSIFIED ADS

POSITIONS AVAILABLE

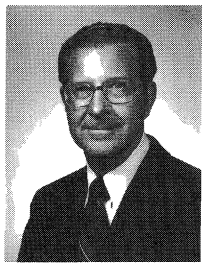
ACGME AEROSPACE MEDICINE RESIDENCY/MASTER'S PROGRAM accepting applications for two-year program starting July, 2004. Wright State University, Dayton, Ohio. ACGME PGY-1 year required. Salary, fee remission, health insurance, and training travel expenses provided. The Master's degree is open to both U.S. and international physicians. EOE/AA. Visit/Apply: www.med.wright.edu/asm/res/asmhome.html or call (937) 276-8338.

WORKSHOP ON REMOTE MANAGEMENT OF MILD DCI--MAY 25, 26, 2004, SYDNEY, AUSTRALIA. The management of DCI in remote locations where hyperbaric facilities are not available is complicated by the need for costly and logistically demanding evacuations. There is a growing body of expert opinion that mild or marginal cases may be as well served by local treatment with surface oxygen, fluids, and drugs followed by non-emergent evacuation. These issues will be discussed during this UHMS Workshop by a body of experts with the objective of developing consensus guidelines for managing mild DCI in remote locations. Co-chairs Drs. Simon Mitchell and Richard Vann. Co-editors Dr. David Doolette and Chris Wachholz, R.N. Continuing Medical Education Units have been applied for in the U. S. and Australia. Attendance fees for the two-day workshop is AUS $350. For further information, contact the Undersea and Hyperbaric Medical Society (UHMS): Phone +301-942-2980; e-mail uhms@uhms.org; www.uhms.org or www.iceaustralia.com/uhms2004/.

In Memoriam

James W. (Wally) Wolfe

James Wallace (Wally) Wolfe died on August 24, 2003 at the age of 71 from complications from cancer at his home in San Antonio, TX. He was born April 11, 1932 in Ludlowville, NY. He held a B.A. from the University of California at Riverside and a Ph.D. in physiological psychology from the University of Rochester, NY.



He served as a research scientist at the Army Medical Research Laboratory in Fort Knox, KY, from 1966 to 1968. He joined the U.S. Air Force School of Aerospace Medicine (USAFSAM) at Brooks AFB in 1968 as a research neurophysiologist. During his career there, he spent two years in Japan at an AFOSR research program. When he returned in 1986, he was appointed the first Chief Scientist of USAFSAM. He retired from that position in 1988. He continued pursuing his interest in research as an administrator/contractor at NASA Headquarters in Washington, DC. When he left NASA in 1997, he became Director of Research for the Ear Medical Group in San Antonio, TX, where he served until his death.

During his life, Dr. Wolfe was recognized both nationally and internationally for his basic and applied research contributions to the human vestibular system. In 1982, he received the Gen. Otis O. Benson award, given by USAFSAM annually to the individual making the greatest scientific advancement or discovery for that year.

Joanne M. Brinkmann

Joanne M. Brinkmann, Col., USAF, NC, died on August 17, 2003 in Puyallup, WA. She was born November 2, 1929 in Peoria, IL. She attended Saint Francis Hospital School of Nursing in Peoria and graduated in 1951. She earned a B.S.N. in 1966 from the University of Maryland in College Park, MD, and an M.N. in 1970 from the University of Washington.

In 1958, she received a direct commission as a First Lieutenant in the Air Force. From 1958 to 1960, she served as O.R. Staff Nurse at the USAF Regional Hospital at Carswell AFB, TX. In 1962, she became the O.R. Supervisor at the USAF Hospital at Harmon AFB in Newfoundland, and then served as Flight Nurse for the 21st Aeromedical Evacuation Sqd. in Pope AFB, NC. From 1972 through 1980, she served as Surgical Services Supervisor, Medical Systems Analyst, Project Manager, and Facility Design Consultant in a variety of locations. In 1980, she became Chairman, Department of Nursing at the USAF Regional Hospital at Carswell AFB, TX.

Colonel Brinkmann was the only Air Force nurse appointed to the office of the Secretary of Defense, Health Affairs as Project Manager for the Hospital Information Sytems proposal in the Tri-Service Medical Information Sytems office. She also held an appointment as consultant to the USAF Surgeon General for Nursing Administration and Automatic Data Processing. During her many years of service, she was awarded the Department of Defense's Meritorious Service Medal, the Air Force's Meritorious Service Medal with two oak leaf clusters, and the Air Force's Air Medal with one oak leaf cluster.

Colonel Brinkmann belonged to the National League on Nursing; Sigma Theta Tau, National Honor Society for Nursing; Association of Military Surgeons of the United States; American Society for Nursing Service Administrators; and was a Fellow of the Aerospace Medical Association.

****MEMBERS*MEMBERS****

Have you recruited a new member this year? If each one of us recruited at least one new member, we could actually double our membership with a mere stroke of the pen. Let's keep the momentum going. Adopt the slogan:

"EVERY MEMBER GET A MEMBER."

Convocation on Facilitating Interdisciplinary Research

January 29-30, 2004. The National Academies Keck Building, 500 Fifth St., NW, Washington, DC.

As part of the National Academies Keck Futures Initiative, the Committee on Science, Engineering, and Public Policy has launched a study on how funding organizations and academic institutions can best facilitate interdisciplinary research. The Study Committee is hosting a convocation to learn first-hand about effective practices for overcoming barriers to interdisciplinary research. Funders, educators, students, researchers, academic administrators, government officials, industrial representatives, and other interested individuals are invited to attend. In addition to plenary discussions, attendees will be able to share their experiences one-on-one during poster sessions.

The Convocation will open with a discussion of how federal agencies are supporting interdisciplinary research. Speakers will include Rita Colwell, Director, National Science Foundation; Raymond Orbach, Director, Office of Science, Department of Energy; Kathie Olsen, Associate Director, Office of Science and Technology Policy (invited); Lawrence Tabak, Director, National Institute of Dental and Craniofacial Research, Chair of Interdisciplinary Research Working Group, National Institutes of Health; and William Berry, Director for Basic Research, Department of Defense. Additional sessions will address private foundation support of interdisciplinary research, establishing a research team, model policies and procedures, education and training, and encouraging young researchers to engage in interdisciplinary research.

For more information and to register, please see the study website at http://nationalacademies.org/interdisciplinary. Final registration deadline is January 9, 2004.

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