

President's Page

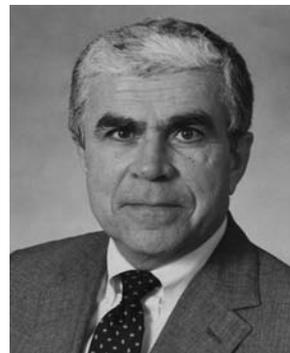
The May 2008 annual scientific meeting in Boston will be a short 90 days away when this message appears. When I took the watch in New Orleans, it seemed that a year would be plenty of time to fry some fish. Well, we have fried a few, but others have yet to see the batter. The months have passed far more quickly than I thought, and Andy Bellenkes will soon be lacing up his running shoes.

In recent months we have been somewhat immersed in the Association's "internal affairs." The independent position of Treasurer was established at the New Orleans meeting, and major review of finances and investments have been accomplished. An independent position of Secretary will be considered at the Boston meeting. Much work has been done by Jim Webb's Bylaws Committee to accommodate these changes. An in depth review of our membership database and its integration with the web site is underway. We seek a solution that will enhance our worldwide ability to communicate with one another and allow each member to easily update his or her profile. We want to make the web a user-friendly tool for meeting registration, committee work, and other transactions with the Association. Communications is the cornerstone for a global Association such as ours.

Come January 2009 we will lose the valued services of our Executive Director of over 15 years, Dr. Russell Rayman. Russell introduced me to AsMA and has been my valued friend and colleague throughout my years with the Association. His corporate knowledge and guidance will be sorely missed. His presence will be missed. Along with Russell the Executive Committee has extensively reviewed desired attributes for the position of Executive Director, and the Search Committee chaired by Bob McMeekin has been hard at work.

While important to the health and future of the Association, these inward looking measures are not very visible to the membership. I think it important now to look outward and remind ourselves that we exist to serve the needs and desires of those who love aerospace medicine. For this reason we will hold a 1.5 day extended meeting of the Executive Committee in March at AsMA headquarters, a significant proportion of which will be dedicated to strategy.

We will begin with the vision statement of AsMA: The International Leader in Aviation, Space, and Environmental Medicine. Note the word International Leader, not American Leader. The Association must be as global as aerospace medicine itself, and we must continue to develop the pathways that connect us all. One need only look at the global conversation that has occurred regarding the Age 60 Rule, periodicity of airman examinations, and the use of selective serotonin uptake inhibitors (SSRI's) in pilots with depression to illustrate the need for professional exchange. We will also review our mission statement: Apply and advance scientific



John D. Hastings, M.D.

knowledge to promote and enhance the health, safety and performance of those involved in aerospace and related activities.

When I ponder the health and future of the Association, I ask myself: Why do I want to be a member of AsMA and what does the Association do for me? I have an answer to the first half of the question. The fellowship of all of you is my prime reason for being a member of AsMA. The second half of the question (What does the Association do for me?) is a bit more problematic.

Microsoft's Bill Gates said "Your most unhappy customers are your greatest source of learning." With that in mind, I always return to our most recent survey when considering strategy. Let me share a few comments from that survey:

"journal is overweighed in military aviation research articles"

"I would like to see more operationally focused articles and less on biomechanics and cellular level studies"

"does not advocate issues of critical importance to aerospace medicine specialists and related life science fields"

"the civil side of aerospace medicine has very little visibility"

"as an international member I have felt somewhat remote"

"AsMA is American-centric, and that often leaves us feeling left out."

"I am unable to reach Fellow despite being board certified with 30+ years experience and strong participation in AsMA for 27 years."

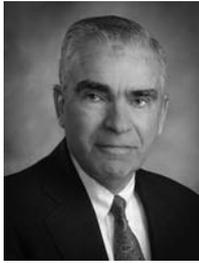
"more opportunities for nurses"

"I have to learn my practical clinical knowledge through other pathways, not through AsMA."

These are but a few of many comments from the survey that I find insightful. Together with our vision and mission statement, these and other comments will be the template for our discussion in March. Fish have yet to be fried. We must fry them.

Association News

Executive Director's Column



Rayman

AsMA and the AMA

The American Medical Association (AMA) House of Delegates meets twice a year with over 500 representatives representing the 50 States as well as the many specialty and subspecialty Associations and Societies. These meetings last 3 to 4 days with approximately 250 to 350 resolutions and position papers discussed and put to the vote. It is a very democratic process and anyone who has attended a meeting of the House of Delegates is most impressed not only with the process, but with the caliber of the AMA Officers. Most of them are in active clinical practice and are very familiar with the problems of health care. There is a sincere desire to meet these challenges and to find solutions that would be in the best interest of patients.

Although any issue related to the practice of medicine is fair game for AMA deliberations, the House generally focuses on big ticket items such as patient access, quality of care, tort reform, and major programs such as Medicare/Medicaid. There has also been a growing interest in preventive medicine in recent years. Incidentally, the current President of the AMA, Dr. Ron Davis, is a preventive medicine specialist.

I would like to describe the process by which the AMA makes its policy. Proposed resolutions can be submitted to the AMA Home Office by the various delegations. They are then categorized by topic such as advocacy, legislation, finance, public health, etc. The resolutions are then packaged accordingly and sent to all representatives (Delegates/Alternate Delegates/Representatives) prior to the meeting to allow time to digest this vast amount of material. Once at the House meeting, these resolutions are put to debate and vote at Reference Committees. Each Reference Committee has a topical area (as above) and is open to all members. The Committee itself has a Chair and about 10 members. At the Reference Committee meeting, any AMA member in the audience is free to approach the microphone to comment either positively or negatively as each of the resolutions is brought forward. At the end of the day, each Reference Committee then meets privately to make any changes as prompted by the testimony that was given. Once the Reference Committees have completed their work, the entire House meets as a single body. At that time, each

Reference Committee, in turn, presents its resolutions it had reviewed with its comments including a recommendation whether or not to adopt. Again, the Speaker of the House invites any of the Delegates to approach the microphone to voice an opinion. These opinions can either be personal or the opinion of the Association/Society/State that person represents. Once testimony has been exhausted, the resolution is then put to a vote. If it passes, it becomes AMA official policy and is then given to the AMA Political Action Committee for action.

In addition to Resolutions, position papers are also presented. Usually, these are prepared by special committees at the AMA Headquarters. Just like resolutions, they are brought forward to the Reference Committees and to the full House of Delegates for deliberation and vote.

This is only an overview of the AMA process. Suffice to say that the AMA provides a great service to the American public. It is absolutely vital that your Aerospace Medical Association is at the table and contributes to AMA policy. After each House of Delegates meeting, one of your AsMA representatives prepares an article on the meeting which is published in the back of the Journal. I would urge you to take notice of these articles and read them carefully. In that way you will know exactly what the AMA is doing and what your Association is doing to support aerospace medicine and preventive medicine at the National level.

MEETINGS CALENDAR 2008

Postponed until 2008. Human Performance, Situation Awareness, and Automation (HPSAA III) Technology Conference. Info: <http://faculty.erau.edu/hpsaa/>.

February 20-23, 2008; Austin, TX.

Preventive Medicine 2008. For more information, please fax 202-466-2662, e-mail Haydee Barno, or call 202-466-2044 x 103 or visit www.PreventiveMedicine2008.org,

February 26-28, 2008; Denver, CO. 3rd Space Exploration Conference & Exhibit: 50 Years of Space Exploration: Taking the Next Giant Leap. Held by the American Institute of Aeronautics and Astronautics (AIAA).

For more info, visit www.aiaa.org/content.cfm?pageid=230&lumeetingid=1989.

April 4-6, 2008; Chipping Norton, Oxfordshire, UK. Annual Scientific Meeting of the Association of Aviation Medical Examiners. For more information, please visit www.aame.co.uk/sd.aspx?pg=smeeting.

June 22-28, 2008; Angers, France. Annual Meeting of the American Society of Gravitational and Space Biology. Visit <http://asgsb.org/index.php> for more info.

August 22-24, 2008; Wairekei Hotel, Taupo, New Zealand. Annual Conference of the Aviation Medical Society-New Zealand. Held in combination with ANZSOM. For more information, visit amsanz.org.nz/conference/confindex.htm.

Aerospace Medical Association Seeks Executive Director

The Aerospace Medical Association (AsMA) is seeking applicants for the position of Executive Director. The Executive Director serves as the chief operating officer responsible for all management, administration and professional activities of the Association. Applicants should possess a doctoral degree and be familiar with the AsMA. Major responsibilities include membership services, planning and conducting an annual scientific meeting, publishing a scientific journal, and conducting liaison with related national and international organizations. Salary will be commensurate with these responsibilities and the experience of the applicant. Applications should include a 1- to 2-page narrative describing interest, professional qualifications, and vision for the Association. Also include a professional resume, salary history, and salary requirements. A position description may be obtained by calling (301) 469-5461. Mail applications to: Robert R. McMeekin, M.D., Chair, Search Committee, 7435 Arrowood Road, Bethesda, MD 20817-2822.

AsMA Future Meetings

May 11-15, 2008
Sheraton Hotel
Boston, MA

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

May 9-13, 2010
Sheraton Hotel
Phoenix, AZ

Proposed Changes to the AsMA Bylaws

In accordance with Article XII of the Bylaws of the Aerospace Medical Association, the following proposed changes to the Bylaws are printed herein. They will be voted upon at the next Annual Business Meeting, to be held Tuesday, May 13, 2008 at the Sheraton Hotel in Boston, MA. The Meeting is open to all members (no lunch purchase is necessary to participate in the meeting).

The omissions are listed in strikethrough. The additions are bold and underlined. The rationale for the changes is listed separately after each proposed change.

ARTICLE V. OFFICERS.

SECTION 1. Elected Officers.

The elected officers of this Association shall be a President, President-Elect, four Vice Presidents, Secretary, and a Treasurer. The President-Elect shall be elected annually to serve for 1 year or until their successors are elected and assume office at the close of the annual business meeting of the Association. The Vice Presidents, Secretary, and the Treasurer shall serve for 2 years or until their successors are elected and assume office at the close of the annual business meeting of the Association. The President-Elect shall automatically succeed to the office of President at the close of the annual scientific meeting next succeeding election to the office of President-Elect.

Rationale: Feedback from the 15 May 2007 AsMA Business Meeting, Council meetings in November 2006 and May 2007 and from the immediate past-President indicate a desire of many members that our officers should include a Secretary. A Secretary who attends the Council and Exexecutive Committee (ExComm) meetings, reviews and edits the minutes (coordinating with the Executive Director) for subsequent distribution to the Council or ExComm, provides them to the members of each group (email), and offers a vote and opinion as needed has a considerable responsibility and can provide critical input regarding our Association's legal proceedings. Also adds: Section 5. Secretary position description (see below) and adds a Secretary position to Council and ExComm.

SECTION 2. President.

The President shall chair all meetings of the Council of the Association and the Executive Committee. He shall appoint chairs of Association committees unless provided otherwise in these Bylaws. The President has the authority and obligation to provide specific tasking to committees and other functionaries doing work for the Association. **The President is an ex officio member of all Standing Committees except the Nominating Committee.**

Rationale: In most organizations, the President is an ex officio member of all Committees with full privileges. It would be the President's option to attend and the President would not be counted in quorum determinations by the Committee.

SECTION 5. Secretary.

The Secretary shall be responsible for reviewing the minutes of the Council and Executive Committee meetings and shall perform those duties as directed by the President. The Secretary shall have other duties usually performed by a Secretary which are not accomplished

by the home office staff. In the event the Secretary resigns, is incapacitated, or is otherwise unable to act, the President shall appoint an acting Secretary to perform the duties of that office until the next annual meeting or for the period of the incapacity.

SECTION 7. Unbudgeted Expenditure of Funds.

No Officer or the Executive Director, may make or authorize any unbudgeted expenditure exceeding \$15,000.00 without approval of the Executive Committee or the Executive Director. The Executive Director shall not make or authorize any unbudgeted expenditure exceeding the amount stipulated by the Policy and Procedures Manual without approval of the Executive Committee.

Rationale: There is little reason for officers of the organization to authorize unbudgeted expenditures without approval of the Executive Committee or the Executive Director and this has not been done in recent memory.

ARTICLE V OFFICERS. SECTION 5-

ARTICLE VI. Executive Director.

Section 1. Appointment.

The Executive Director shall be appointed by the Council, and shall not hold an elective office.

Section 2. Duties

B. A. The Executive Director shall be the chief operating officer of the Association and shall keep its records, and a file of its publications. The Executive Director shall notify all members of the time and place of meetings, notify Council members of the time and place of Council meetings, and shall prepare the programs of the meetings under the direction of the Council.

C. B. The Executive Director shall cooperate with the chairmen of various groups and committees of the Association in the execution of the policies of the Association as outlined by the Council, shall coordinate the work performed by the various committees of the Association, shall perform such duties as are assigned by the Council, and shall act under instructions of the Executive Committee.

D. C. The Executive Director is authorized to provide such assistance as is necessary for the proper conduct of the Association headquarters office, subject to the directives of the Executive Committee and the Council. The Executive Director shall employ and supervise the staff, authorize purchase of supplies and equipment, arrange for office and other facilities for operating purposes, within the budget and as approved by the Executive Committee, and is empowered to sign contracts and enter into agreements on behalf of the Association and within the policies established by the Council and the Executive Committee.

E. D. The Executive Director shall, with the Treasurer, prepare a budget covering estimated annual expenses, to be submitted to the Council for adoption, and shall prepare a financial statement at the end of the term of office which shall be audited by a certified public accountant.

F. E. The Executive Director shall serve as the general coordinator and organizer for the annual meeting and shall direct the chairmen of the committees appointed for the planning, preparation, and operation of the annual meeting of the Association subject to the supervisory authority of the Executive Committee.

G. **F.** The Executive Director may retain legal and professional services as may be required with the prior approval of the Executive Committee.

H. **G.** The Executive Director shall prepare for the annual meeting a concise and summarized report on the activities of the Association for the year, its membership, and other matters of importance to the Association.

I. **H.** The Executive Director shall report in writing the total membership of the Association as of January 1 each year to the chair of the group of Fellows prior to the annual meeting of the Fellows.

J. **I.** The Executive Director shall be bonded in an amount approved by the Executive Committee.

***Rationale:** Insert new Article VI and renumber subsequent articles. The Executive Director (ED) section was under Article V. Officers. Since the ED position has never been an officer of the Association, the duties of the ED should appear in a separate Article. The complexity of the ED's duties are easier to distinguish in a separate Article and this action consolidates the ED's duties in one article.*

ARTICLE VII. COUNCIL OF THE AEROSPACE MEDICAL ASSOCIATION AND EXECUTIVE COMMITTEE.

SECTION 1. The Council of the Aerospace Medical Association.

The governing body of this Association shall be the Council of the Aerospace Medical Association, hereinafter referred to as the Council. ~~The President shall preside at all meetings of the Council.~~

***Rationale:** The deletion of The President shall preside at... is because it is currently covered under duties of the President and duplication was not necessary in this case.*

SECTION 2. Membership of the Council.

Membership of the Council shall consist of the President, President-Elect, the immediate Past President, the four Vice Presidents, **the Secretary**, the Treasurer, 12 elective members, one member selected by each of the Constituent Organizations, 1 member selected by the Fellows Group, 1 member selected by the Associate Fellows Group, the Regent for Aerospace Medicine of the American College of Preventive Medicine, **the Parliamentarian (ex-officio member without vote; appointed by the President and approved by Council)**, and a student or resident representative selected by the Aerospace Medicine Student Resident Organization. The Executive Director shall be an ex-officio member without vote. Of the 12 elective members, four shall be elected to the Council each year for 3-year terms. No such elected member shall be eligible for more than two successive terms as an elective member. In the event a member of the Council resigns or is otherwise unable to complete a term on the Council, the Nominating Committee shall propose a nominee or nominees for election to fill the remaining year or years in that term.

***Rationale:** Addition of a Parliamentarian to Council is done in many similar organizations and provides a more official mode of communication. The duties of the Parliamentarian will be covered under Article XII (renumbered) Meetings.*

SECTION 3. Powers of the Council.

A. The Council establishes policy for the Association.

The Council shall be vested with the management of the funds, properties, and the affairs of the Association and shall act in the capacity of a board of directors. The Council shall adopt such regulations as may be appropriate for governing the Association. It shall have the power to approve proposed budgets, authorize expenditures, seek and accept contributions, authorize contracts in the name of the Association, define and promote the activities of the Association, approve applications for constituency or affiliation with the Association, determine special classifications of membership and the eligibility of applicants for membership, authorize employment of auditors, and provide for issuance and distribution of the official educational scientific publications of the Association, including the official journal of the Association. The Council shall have the power to approve the appointment of an **Executive Director and** the Editor-in-Chief of the official journal of the Association, or any educational or scientific journal or other publication, on recommendation of the Executive Committee.

***Rationale:** Restating the power of Council to appoint both the ED and Editor-in-Chief of the journal to match other references.*

SECTION 5. Executive Committee.

A. The Executive Committee shall consist of the President, the President-Elect, the four Vice Presidents, **Secretary**, Treasurer, Executive Director (ex officio without vote), and three members of the Council nominated by the President for the succeeding year, who shall be elected by a majority vote of the Council at its first meeting following the annual election of officers and councilors.

B. **Except as otherwise provided in these Bylaws**, the Executive Committee shall have the power to exercise all the functions of the Council between annual meetings of the Association and when the Council is not in session. The Council may delegate to such Executive Committee any or all of the powers granted to the Council by law or by these Bylaws, and not specifically delegated to any other committee or reserved to the Council by law.

[Note: Parts C-G, I, and J do not change.]

H. The Executive Committee shall create, review, and amend the Aerospace Medical Association Policy **and Procedures** Manual as necessary to be consistent with the Bylaws and submit it for approval by Council.

***Rationale:** Adds Secretary to the Executive Committee. Stipulates exception to Executive Committee powers. Reworded Policy Manual to Policy and Procedures Manual.*

ARTICLE VIII. ORGANIZATIONS.

SECTION 1. Constituent and Affiliated Organizations.

Remove reference to Certification Boards from this entire section. Create new Article IX. Certification Boards, and renumber subsequent Articles. See rationale below.

ARTICLE IX. CERTIFICATION BOARDS.

SECTION 1. Certification Boards.

A. Title: The Association may sponsor Certification Boards.

B. Qualifications: All Certification Boards shall have a similar mission and goal to those of the Aerospace Medical Association as outlined in Article II; have the

objective of furthering the goals of this association through evaluation and examination of individuals seeking certification by the Association on matters relating to aviation, space, undersea medicine, or their allied sciences; increasing the value of this Association to its members, and helping maintain and increase its membership.

SECTION 2. Membership.

All members of a Certification Board shall be members of the Association and be approved by Council. The Council shall select one of its members to represent each Certification Board at Council meetings. The representative should be certified in an appropriate field and will serve as a liaison between the Certification Board and the Council.

SECTION 3. Discontinuance of a Certification Board.

Discontinuance of an existing Certification Board shall be referred to the Executive Committee for study, whereupon the Executive Committee shall make a recommendation to the Council for appropriate action.

Rationale: Certification Boards operate significantly different from the way Constituent Organizations operate and have distinctly different goals. The separation makes this more clear and easier to find. The only substantive change is the description of the objective through evaluation and examination of individuals seeking certification by the Association.

ARTICLE XII. MEETINGS

SECTION 4. Rules Parliamentary Authority.

The current edition of Robert's Rules of Order **Newly Revised** shall cover the procedure at all meetings unless otherwise provided by these Bylaws. Unless provided otherwise by Robert's Rules of Order **Newly Revised** or by these Bylaws, all elections and questions shall be decided by a majority of votes cast.

SECTION 5. Parliamentarian.

The duties of the Parliamentarian will be as specified in the Parliamentary Authority, with the intent to help ensure the orderly progress of meetings and the fair and equitable treatment of all participants.

Rationale: The Parliamentary Authority should be the most current, which is Robert's Rules of Order Newly Revised (10th Edition as of November 2007). The new Parliamentarian's duties are appropriate to place near the section on our Parliamentary Authority, also changed to better reflect its role in our meetings.

ARTICLE XIV. FUNDING AND FINANCES

SECTION 2. Finances.

B. Bond: The President, Secretary-Treasurer, and Executive Director shall furnish surety bonds in an amount determined by the Council, the cost to be paid by the Association. The Executive Director, Secretary-Treasurer, and other bonded persons approved by Council may sign checks.

C. Budget: The Council, at its Fall meeting, shall adopt an income and expense budget covering all activities for the next fiscal year. No officer, including the Executive Director, may make or authorize any unbudgeted expenditure exceeding \$15,000.00 without prior approval of the Executive Committee. The Executive Director shall not make or authorize any unbudgeted expenditure exceeding \$15,000 without approval of the Executive Committee.

No Officer or the Executive Director, may make or authorize any unbudgeted expenditure exceeding \$15,000.00 without approval of the Executive Committee **or the Executive Director. The Executive Director shall not make or authorize any unbudgeted expenditure exceeding the amount stipulated by the Policy and Procedures Manual without approval of the Executive Committee.**

Rationale: Correction of error from last version; Secretary-Treasurer position doesn't exist. The unbudgeted expenditure limitation is needed in more than one place due to its importance and relevance to each Article in which it appears. The substantive change is that No Officer may make or authorize any unbudgeted expenditure without approval of the Executive Committee or the Executive Director. Note that Council must approve authority for the President and Treasurer to cash checks. This is not currently authorized.

AME 2008 Seminar Schedule

January 18-20	Irvine, CA	OOE†
March 03-07	Oklahoma City, OK	BASIC*
April 04-06	Minneapolis, MN	NPN†
May 12-15	Boston, MA (AsMA)	AP/HF‡
June 02-06	Oklahoma City, OK	BASIC*
August 01-03	Washington, DC	CARDIO†
November 03-07	Oklahoma City, OK	BASIC*
November 14-16	Reno, NV	NPN†

AP/HF = Aviation Physiology/Human Factors Theme

CARDIO = Cardiology Theme

OOE = Ophthalmology - Otolaryngology - Endocrinology Theme

N/NP/P = Neurology/Neuro-Psychology/Psychiatry Theme

The Civil Aerospace Medical Institute is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

* A 4½-day basic AME seminar focused on preparing physicians to be designated as Aviation Medical Examiners. Call your regional flight surgeon.

† A 2½-day theme AME seminar consisting of 12 hours of Aviation Medical Examiner-specific subjects plus 8 hours of subjects related to a designated theme. Registration must be made through the Oklahoma City AME Program staff: (405) 954-4258 / 4830.

‡ A 3½-day theme AME seminar held in conjunction with the Aerospace Medical Association (AsMA). Registration must be made through AsMA at (703) 739-2240. A registration fee will be charged by AsMA to cover their overhead costs. Registrants have full access to the AsMA meeting. CME credit for the FAA seminar is free.

Attention!

March issue is the Annual Meeting issue!

Remember! There will not be a news section in the March issue. That issue of the journal is devoted entirely to the abstracts and meeting program for our Annual Meeting.

There are lots of extra features, such as a listing of Past Presidents, the Members of Council, the complete Bylaws of AsMA, details of the Sunday Workshops and the Historic Film series, Biographies of the Annual Bauer and Armstrong Lecturers, and much more!

This Month in Aerospace Medicine History-- February 2008

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

Seventy-five Years Ago

Pushing the hypoxia envelope with using an airtight crew cockpit (from the Consulting Specialist in Aviation Medicine to, and formerly Medical Director of, the Aeronautics Branch, Department of Commerce, Hempstead, NY): "Previous articles have shown that there is a limit to the height to which man can go even with oxygen. This level has been set at not more than 45,000 feet. The recent balloon ascensions of Professor Piccard to the stratosphere in which he attained a height of about 52,000 feet have caused many questions to be asked as to how that can be correlated with the earlier statements....

"... These flights were accomplished by having the observers in an airtight metal ball in which the barometric pressure and consequent oxygen pressure were at a point compatible with life. In other words the balloon was at an altitude of 52,000 feet, but the metal ball with the observers, while the outside of it was in the same altitude, had a simulated altitude within it which was very much lower. Piccard in his description of the flight mentions how this was accomplished.

"He states, "After examining the various possibilities of construction, I decided upon a cabin or gondola of aluminum. ... The most important thing about my preparations was that the welding be solid and air-tight.... We had... a Draeger apparatus giving us by the minute approximately two quarts of pure oxygen and making circulate some 20 gallons of air from the cabin over alkali to absorb the toxic gases of respiration, especially carbon dioxide. This means we had about 20.5 gallons of air each minute without losing any oxygen."

"He calls attention to the fact that they had considerable difficulty in sealing the last opening in the cabin at about 15,000 feet, but finally he succeeded and remarks, 'the internal pressure dropped no more.'

"He states further '...our ascension demonstrated the practical possibilities of the air-tight cabin for future rapid travel through the stratosphere.' Piccard's work, therefore, confirms the statements as to the limit of altitude for man but opens up the practicability of flights at higher levels by the use of an air-tight cabin in which the pressure is kept at a point compatible with life and in which the expired air is purified by removal of the CO₂ - an excess of which is as bad as a deficiency.

"The medical profession having pointed out the dangers of high altitude travel it has become the task of the engineering profession to overcome these dangers by producing a life-saving artificial environment for pilot and passenger. This, they seem in a fair way to accomplish" (1).

Fifty Years Ago

Explaining unexplained accidents (7112th Central Medical Group Headquarters, U.S. Air Forces in Europe): "When aircraft accident investigations show that material failure, known pilot error, or severe weather were not present, suspicion is cast on hypoxia, vertigo, blackout and other aeromedical hazards of flight as the cause. In the unexplained accident, the investigator is nearly always confronted

with the question of the pilot's physical and psychologic fitness and whether or not he was incapacitated during flight. The importance of catastrophic medical events such as acute coronary thrombosis or an epileptic seizure is acknowledged, as are less dramatic but equally treacherous diseases that can produce aviation tragedies; however, the incidence of such events seems to be low. Much more important are the time-honored and ever-present aeromedical complications of flight that render incompetent or incapacitated the otherwise healthy pilot - acute hypoxia and spatial disorientation, to name just two which demand our enduring respect....

"The reported experiences of USAFE flyers show convincingly that hypoxia and spatial disorientation and, to a lesser extent, decompression sickness and hyperventilation, are important and continuing threats to flight safety and crew effectiveness. There is a serious and compelling requirement to improve the logistics and maintenance of personal protective flying equipment. The reported USAFE experiences firmly support present policy that requires thorough refresher training of jet aircrew personnel in flight physiology and protective equipment every 18 months. In the USAFE experience may be found ample justification for both fundamental and applied research for a better understanding of human performance capabilities and limitations, and for improving the design and reliability of the equipment that is essential to flying safety and aircrew effectiveness" (3).

Twenty-five Years Ago

The more things change, the more they stay the same (USAF Hospital, England Air Force Base, LA, and Air Force Inspection and Safety Center, Norton Air Force Base, CA): "During the period 1970-80, there were reported 146 cases of in-flight sudden incapacitation in the USAF. Of these, 62 involved pilots, 14 were navigators, and 70 were student pilots. The etiologies of sudden incapacitation included illness without loss of consciousness, loss of consciousness, spatial disorientation, and improper M-1 maneuver. Each of these categories is analyzed with emphasis upon prevention, for example, not flying with symptomatic preexisting disease, continued emphasis upon spatial disorientation training, and correct performance of the M-1 maneuver....

"Taking into consideration that USAF during the previous decade had 20,000-34,000 qualified pilots and navigators logging between 3 and 6 million hours (much of it unconventional or hazardous) per annum, in-flight sudden incapacitation is a rare event. Without question, USAF's physical standards for student pilot applicants, periodic physical examinations, and the aerospace medicine program, which requires and encourages a close association of flight surgeons with flying units, deserve much of the credit. However, regardless how good the record may be, we should strive for perfection in matters of flying safety. It is from this perspective that the following conclusions and recommendations are offered.

"1. Although sudden incapacitation in flight can affect any crewman, over half in our study were student pilots flying trainer aircraft.

"2. Crew members must be continuously cautioned against flying with preexisting illness. Of particular danger is infection of the upper respiratory passages (and sinuses) and gastroenteritis. This admonition should apply

as well to any ill-defined symptoms which may be the harbinger of serious illness, such as diabetes or heart disease.

"3. Although coronary artery disease is of great interest to the aeromedical community, it does not appear to be a significant in-flight problem in the USAF.

"4. Student pilots are particularly prone to incapacitation due to airsickness and anxiety/hyperventilation during critical phases of flight. They are also frequently remiss in performing a proper M-1 maneuver during +Gz maneuvers. These subjects should be fully discussed and understood during flight training. The proper anti-G coordinated straining maneuver should be demonstrated and mastered so that it becomes reflexive.

"5. There are a number of unexplained accidents occurring mainly in high-performance aircraft flying low over bombing ranges. Because most of the pilots are young, these accidents more likely reflect anomalies of attention, anomalies of perception, or an inadequate anti-Gz maneuver rather than a catastrophic illness. This situation will continue to challenge Safety Investigation Boards.

"6. In the event of loss of consciousness in flight, the flight surgeon must determine the cause with as much precision as possible in order to make an intelligent aeromedical disposition.

"7. Very careful consideration must be given before qualifying for flying duty anyone with a past medical history of illness which is potentially incapacitating.

"8. Airmen with a low G tolerance should be assigned to aircraft other than those which routinely subject its crew to significant G.

"9. Spatial disorientation will always be a significant flying problem since it invariably accompanies the loss of the horizon. It should be given on-going emphasis to all airmen regardless of their level of experience" (2).

REFERENCES

1. Bauer LH. A note on the limits of high altitude. *J Aviat Med* 1933; 4(1):15-8.
2. Rayman RB, McNaughton GB. Sudden incapacitation: USAF experience 1970-80. *Aviation Space Environ Med* 1983; 54(2): 161-4.
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Science & Technology Watch

Keeping You Informed Of The Latest Advances In Science And Technology

Long duration commercial flights often result in dehydration and other consequences of jet-lag. This month we present results of a novel in-flight assessment of product to ameliorate these effects.

A New Approach to Rehydration During Flight: Results of a Flight Trial Evaluation of a New Rehydration Product

*Dr. David G. Newman, MB, BS, DAvMed, PhD, MRaES, FAICD, AFAIM
Aviation Medicine Consultant & Managing Director, Flight Medicine Systems Pty Ltd, Melbourne, Australia*

One of the problems associated with long-haul flights on commercial aircraft is dehydration. This is due to the relatively low humidity level of the cabin air, which is a consequence of the aircraft cabin routinely being pressurized to a lower altitude than the one at which the aircraft flies most efficiently. Without this pressurization system the occupants of the aircraft would be at great risk from the low oxygen levels and extremely cold temperatures of the atmosphere at aircraft cruising altitudes. However, the dehydration suffered by passengers during aircraft flight contributes to problems such as travel fatigue and dryness of the nose, mouth, sinuses, and eyes.

A new product, known as Flight Recovery™ (FR) has recently come on the market. It is a rehydration formula specifically created to offset the dehydration inherent in long-haul aircraft flight. It contains a variety of carbohydrates, electrolytes, amino acids, and trace minerals aimed at enhancing fluid retention and replacement. According to the manufacturers, the product is designed to effectively make water "work better" in a relatively dry environment. It aims to prevent the ongoing loss of fluid from the body in such an environment, which should then result in passengers suffering much less (or no) dehydration and loss of body fluids. The end result of this should be that passengers feel better at the end of a long-haul flight than they otherwise would, as they would not be as dehydrated.

In an attempt to examine the efficacy of this product under real-world conditions, a flight trial was undertaken to examine the efficacy of this product at relieving flight-related dehydration.

There were 10 volunteer subjects, average age 48, who undertook 2 closely matched international regularly scheduled commercial flights of approximately 7 hours duration on a Boeing 777 aircraft. The subjects all flew in economy class. Both flights were daytime flights, and each was scheduled to depart the

origin airfield at approximately the same local time. Food and fluid intake were matched across the two flights. On one of the flights each subject used FR and on the other flight did not. Pre- and post-flight blood tests were performed on each subject for each flight. Blood was analyzed for hemoglobin (Hb) and hematocrit (Hct), and estimations were made of the change in plasma volume (PV) using these variables. Data was tested for statistical significance using analysis of variance and confidence limit-based tests for clinical significance. An indication of likely clinical significance/likelihood of true value was given by an assessment of confidence limits from each relevant statistical p value (where a 5% change in value was considered to be the smallest clinically important value of the effect statistic).

The subjects spent 3 days and 4 nights at the destination, thus allowing sufficient time between flight exposures to recover. During the stopover, each subject was allowed to do as they wished, provided prolonged exposure to the ambient weather conditions (hot and humid), strenuous exercise, and heavy alcohol intake were avoided. Each subject completed a food, fluid, and activity diary during the stopover.

After the pre-flight blood tests, the five subjects scheduled to take FR on each of the flights were informed of this requirement, and then took the product. These test subjects thus took FR approximately 2 hours prior to the scheduled aircraft departure. The FR product comes in a small sachet of powder, which was mixed in 200 ml of room-temperature water.

In accordance with the manufacturer's recommendations, the second dose was taken 4 hours after the first, approximately 2 hours into the flight. The third dose was taken 4 hours later, which was approximately 1 hour prior to landing.

All subjects completed the flights with no difficulty, and none experienced any adverse reactions to either the experimental protocol or the use of FR. Although not formally assessed, anecdotal reports showed that all participants subjectively felt that FR had worked, and that they felt better after the FR flight than the non-FR flight.

The flight trial results showed some evidence that FR is an effective rehydration product for the flight environment. On Flight 1, it resulted in a clinically significant increase in PV in those taking it compared with those not taking it (8% increase in PV compared with 3%). The results of Flight 2 were not as clear cut - there was a modest and similar decrease in PV for both groups, with no significant difference between them.

However, those who took FR on the first flight appear to have protected their PV during the stop-over period, as shown by an additional 2% increase in PV and a 0.74% decrease in Hct over this period. By contrast, the non-FR users on Flight 1 had opposite results, with a 4% decrease in PV and a 0.76% increase in Hct. These changes were statistically significant. These data suggest that the non-FR users were not able to preserve their PV during the 3-day stop-over, while the FR users were. This is interesting, given the hot and humid ambient conditions to which none of the subjects were acclimatized. All subjects spent some time outdoors during the stop-over, being exposed to this thermally challenging ambient environment, and to a certain extent developing at least some partial acclimatization to it by the morning of the return flight. Despite

all of this, the two groups showed quite significantly different abilities to maintain their hydration status during the time spent on the stop-over.

This suggests that FR has a persistent effect on hydration status, and is able to maintain or protect PV over a longer time period than was perhaps originally estimated. As such, at the beginning of Flight 2 the original FR users had not completely returned to the same normal state as at the beginning of Flight 1. During Flight 1 the use of FR boosted their PV by 8%, and 3 days later their PV had increased a further 2%. By contrast, the non-users of FR on Flight 1 had an increase in PV of 3% after Flight 1, but lost 4% of their plasma volume after 3 stop-over days.

The findings of this flight trial demonstrate that FR appears to be effective at preventing the dehydration associated with commercial air travel, as shown by an increase in plasma volume. There also appears to be a persistent effect of FR on plasma volume, which confers ongoing protective benefits for a number of days. Furthermore, the study highlights the significant research opportunities that exist with a carefully conducted and planned flight trial. Such real-world testing conditions confer some important advantages for researchers in the aviation medicine community.

The AsMA Science and Technology Committee provides the Watch as a forum to introduce and discuss a variety of topics involving all aspects of civil and military aerospace medicine. Please send your submissions and comments via email to: barry.shender@navy.mil. Watch columns are available at www.asma.org in the AsMA News link under Publications.

SMA Jeff Myers Young Investigator Award

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

The applicant must submit a draft manuscript of their presentation to the chair of the Young Investigator Award sub-Committee. To be considered for the 2008 award, manuscripts must be submitted by March 15, 2008 to:

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

AEROSPACE PHYSIOLOGY REPORT

Send information for publication on this page to: **Lt. Col. Andrew Woodrow, USAF, BSC Chief, Aerospace Physiology Formal Programs, Brooks City Base, TX 78235 210-536-6441 Andrew.Woodrow@brooks.af.mil**

Education and Training Day Panel

The Aerospace Physiology Society's Education and Training Day panel for 2008, titled "Physiology in the Extreme Environment: Operational Considerations", has been scheduled for Tuesday morning, 13 May at 10:30. The panel is being sponsored in conjunction with the Science and Technology Committee as part of a broader look at human performance issues and performance optimization.

A change in operational tempo coupled with a diverse range of challenging environmental extremes creates challenges for mission planners and the operational forces who are asked to carry out the mission. It is incumbent upon the aeromedical professionals who provide operational commanders with a wide range of clinical, training and safety related support to have an understanding of the various environments, and their unique aeromedical issues, so they can provide sound recommendations to mitigate detrimental physiological risks and enhance performance.

This year's panel, featuring speakers from both the U.S. and Canada, will present information on altitude, circadian dysfunction, sustained operations, thermal stress, and nutritional considerations. Presenters and their topics include:

Dr. Michel Paul (DRDC Toronto)- "Circadian desynchrony in military operations and countermeasures to sustain operational readiness"

Dr. Barry Shender (NAVAIRSYSCOM)- "Helicopter in-flight environmental conditions during summer desert missions"

Dr. Stephen Muza (USARIEM)- "Work Performance and Altitude Illness Aspects of Military Operations in High Mountainous Regions"

Dr. Tom McLellan (DRDC Toronto)- "Use of Caffeine to Maintain Physical and Cognitive Performance during Sustained Operations"

Dr. Harris Lieberman (USARIEM)- "Cognitive Performance during Field and Laboratory Simulations of Military Operations"

As indicated above, the panel has been scheduled for Tuesday morning. This time

slot was requested in order to de-conflict with our annual luncheon (normally held on Wednesday), so members will not need to rush out early to get a seat. Special thanks to Maj. Julia Sundstrom and Lt.Col.(Ret.) Ken Glass for rounding up this panel of experts! We are looking forward to a great day of training, and hope that you can attend and bring a friend!

Certification in Aerospace Physiology

Applications for Aerospace Physiology Board Certification are available from the Admissions Committee Chairman:
CDR Thomas J. Wheaton, MSC USN, MS, CaSP
13529 Osprey Lane, P.O. Box 202
Dowell, MD 20629
Email: thomas.wheaton@navy.mil (professional); tjwheaton@comcast.net (personal)
Deadline for Application: 07 March 2008.

ASSOCIATE FELLOWS GROUP NEWS

Send information for publication on this page to: **Chris Borchardt 102 Sevendales Dr. Goldsboro, NC 27534 christopher.borchardt@gmail.com**

Message From the Chair

Peggy Matarese

Your AFG continues to be very active. Our primary goal this year has been to put into place processes and documents that allow for better continuity, given the transient nature of our membership. We have changed the term lengths for some Officers (see Call for Nominations in this journal); are writing a Manual of Operations to help Officers and Committees know what their responsibilities are; and are putting a lot of effort into our website. No matter what level of effort you can give the organization, we can use your help. If you've been active and are ready to hold an Office, contact Lance Anicelli per the Call for Nominations. If you haven't been active and just want to get your feet wet or have a specific idea you'd like to work, contact me at margaret.matarese@pentagon.af.mil and we'll find a place for you. We hold monthly telecons and all are welcome to call in; if you want to participate, contact me and we'll get you set up. The AFG is in a position to do great things for AsMA - what part will you play?

Nominations

Lance Anicelli

It's that time of year to submit nominees for AFG officers. Nominations are being sought for Chair-Elect (2008 - 2009)

and *Secretary (2008 - 2010). (*Note: The Secretary and Treasurer positions are 2-year term obligations with biennial elections occurring on alternating years. Nominations are being accepted for Secretary for the period of 2008 - 2010. Nominations for Treasurer will be accepted next year for the period of 2009 - 2011. The Chair-Elect office will remain a 1-year term with an annual election). Deadline for names of nominees is 1 March 2008.

Please send your nominations to Lance Anicelli at: lance.annicelli@us.af.mil. Candidates will be presented to the AFG Chair for final selection before posting to the AFG website (www.asmaafg.org) for official ballot vote during April and May 2008.

Reception/Breakfast

Deb Hinkley

The Breakfast meeting will be held the following morning (Tuesday) and will be the business meeting for the upcoming year.

I look forward to you joining the current officers and me for another exciting meeting in Boston!

Program

Gente Bopp

This year, for the first time ever, the AFG will endorse a scientific panel. Look for "Patient Validation for Aeromedical

Reception

The Reception is going to be held in conjunction with the Nurses again this year on Monday evening. We are planning on having a good value for the cost of the ticket! For those of you who joined us in New Orleans, it was the step off point for a great evening and we had plenty of filling options on the buffet!

Evacuation" at the Annual Meeting and show your solidarity by filling the room. Additionally, five Associate Fellows selected as presenters will receive an honorarium which will be presented at the Business Meeting. Show your support by attending. As a reminder, all are welcome to the business meeting - while tickets are required for the breakfast, admission is open and free to the meeting immediately following.

As a bonus value the hotel hosting the annual meeting will charge the Federal Government rate so plan to stay onsite and take advantage of the fantastic offer.

**For current AFG news check in at: www.asmaafg.org
Update your Biography Data at: www.afgbio.org**

NEWS OF CORPORATE MEMBERS

Branson Trains at NASTAR Center

Sir Richard Branson, Founder of the Virgin Group, successfully completed a spaceflight training course in December at the National Aerospace Training and Research Center (NASTARSM). He undertook this training in preparation for a flight aboard SpaceShipTwo, the suborbital vehicle his company Virgin Galactic is developing along with Burt Rutan of Scaled Composites. Several other participants from Virgin Galactic trained along with Branson, including his son Sam; Will Whitehorn, Virgin Galactic President; Alan Watts, who earned a flight aboard SpaceShipTwo through cashing in his Virgin Atlantic frequent flyer "Flying Club" miles; and Professor James Lovelock, the scientist who created the concept of Gaia Theory. All of them successfully completed the training.

Training at the NASTARSM Center is an integral part of Virgin Galactic's spaceflight program, because during a flight, passengers will experience the same physiological stresses as professional astronauts, including elevated, sustained G. Through training at the NASTARSM Center, spaceflight participants become accustomed to these stresses, and realize that for most people, these effects, while intense, are survivable and even enjoyable. About 60 of the first 100 Virgin Galactic spaceflight customers, known as Founders, have gone through the 2-day NASTARSM Center space flight training course. All of them found the experience worthwhile, and several laughed or whooped during their space launch simulation.

NASTARSM Center is a wholly-owned subsidiary of Environmental Tectonics Corporation.

— Adapted from a news release at <http://www.nastarcenter.com/news/view.php?volume=2&issue=3&article=96>

Andrews Space Awarded U.S. Army Contract

Andrews Space, Inc. recently announced that it had been awarded a Phase I contract by the U.S. Army through the Small Business Innovation Research program (SBIR). Phase I of the contract is valued at \$70K over 6 months, with an optional Phase II at \$50K over 4 months. The Army selected Andrews' proposed approach in a competitive procurement out of hundreds of other SBAs.

Urban warfare poses unique challenges for the Future Combat System (FCS) and other Army systems that require high-fidelity terrain information. The shape of the terrain is an important component, and dense networks of elevation data are needed to represent the complex shape of an urban landscape. Applications like line-of-sight or drive-through in an urban area also need high-resolution terrain data. Currently, transmission of terrain data is done via hand-carried external hard drives. Under the terms of the contract, Andrews will develop a new approach that helps the military reduce the burden required to manage data.

Andrews will use two approaches to reduce the size of elevation data files to be stored and transmitted. The first approach is to develop a better compression algorithm that works well on discontinuous data, which will provide high fidelity urban elevation data with a minimum file size. The second approach is to develop an innovative way to transmit the data that will dramatically reduce the amount of data that needs to be transmitted to, and stored by, a soldier or vehicle in the field.

Commercial applications of this technology include computer scene generation, mapping software such as Google Earth/Maps, Microsoft Live Search/Terra-Server, and Mapquest. It will allow them to more efficiently store 3D buildings for larger portions of major cities and then transmit and reconstruct the information for users. This will also allow enhanced capabilities for GPS and car navigation, and GPS capable cell phones.

— Adapted from a press release at <http://andrews-space.com/news.php?subsection=Mjk2>

Wyle Acquires RS Information Systems

Wyle, a leading provider of high tech aerospace engineering, testing, and research, recently announced a definitive agreement to acquire RS Information Systems of McLean, VA, a premier federal systems integrator providing advanced technical and business services in information technology, systems engineering, telecommunications, scientific support, and management consulting.

The acquisition of the privately held company is expected to increase Wyle's 2008 annual revenues to approximately \$800 million and the number of employees to more than 4,200. Upon completion of the acquisition of RS Information Systems expected in early 2008, Wyle's revenues will have more than tripled since 2004, before Wyle acquired the Aeronautics Information Engineering Services unit of General Dynamics.

— Adapted from a press release at <http://www.wylelabs.com/news/2007/12-03.html>

IFALPA Supports Canadian RESA Recommendations

The International Federation of Air Line Pilots' Associations (IFALPA) wholeheartedly supports the recommendations made by The Transportation Safety Board of Canada concerning Runway End Safety Areas (RESA) dimensions in its report of its investigation into the overrun by an A340 operating flight AF358 at Toronto Pearson International Airport in August 2005. In the report the Board calls for the 240-m RESA recommended by ICAO Annex 14 or an Engineered Materials Arrestor System (EMAS) to be installed as an alternative if terrain does not permit a full size RESA. IFALPA strongly agrees with this recommendation. The Federation believes that the RESA recommendation set out in ICAO Annex 14 should be upgraded to a Standard since only a full size 240-m RESA + 60 m of runway strip beyond the threshold or RESA/EMAS combi-

nation provides adequate protection for passengers and crews of overrunning aircraft.

— Adapted from a press release found at http://www.ifalpa.org/Press%20Release/08PRL15_AF358_Accident_report.pdf

Kelsey-Sebold Opens New Clinic

Kelsey-Seibold Clinic, Houston's largest community-based physician group, opened a new 28,000-ft², state-of-the-art clinic and pharmacy in northwest Houston in mid-November. Kelsey-Seibold Clinic-Cypress is part of an existing 80,000-ft² medical building. The move comes because of the continuing growth in northwest Houston and the much-needed space to serve patients effectively. The Cypress Clinic is the new home for physicians and staff previously housed at Kelsey-Seibold's Copperfield Clinic, which has been closed.

The Cypress Clinic offers local families many new services and improved parking areas. Patients have immediate access to pharmacy services and several new medical specialists including orthopedics and sports medicine, as well as existing care in obstetrics and gynecology, family medicine, internal medicine and pediatrics. Further expansion of services is planned for later in 2008 and includes state-of-the-art diagnostic services like magnetic resonance imaging (MRI), CT, and a new electronic medical record (EMR). The EMR technology will roll out in this month and will ultimately streamline patients' experiences at their visit, as well as enhance the quality of care they receive.

EMR will enable Kelsey-Seibold physicians practicing in various specialties to consult on patients' cases, and will provide them with real-time access to a patient's medical record and available lab and radiology test results at the point of care. It will also automatically prompt physicians of abnormal test results, enabling physicians to more easily monitor and treat patients who have complex or chronic medical conditions. Additionally, if a physician prescribes new medication, he or she will be able to send the prescription to Kelsey-Seibold's onsite pharmacy electronically, so that patients can pick it up after their visit.

— Adapted from a press release found at http://www.kelsey-seibold.com/Whats_New/Kelsey_Seibold_Opens_Cy_Fair_Clinic.cfm

Eagle Awarded Three New Contracts

Eagle Applied Sciences, L.L.C., has been awarded three major support contracts in the past year: one for epidemic outbreak surveillance for the U.S. Air Force Advance Diagnostic Laboratory at Wilford Hall, Lackland AFB; one for Warrior in Transition Ombudsman for U.S. Army Medical Command at Fort Sam Houston, TX; and one for Administrative and Medical Support for the U.S. Air Force School of Aerospace Medicine at Brooks City-Base in San Antonio, TX. — For more information on Eagle Applied Sciences, please visit <http://www.eagle-app-sci.com/>.

NEWS OF MEMBERS

Send information for publication on this page to: **News of Members**
Aerospace Medical Association
320 S. Henry Street
Alexandria, VA 22314-3579
pday@asma.org

In Memoriam Randall M. Chambers

Submitted by Malcolm Cohen

Dr. Randall M. (Randy) Chambers, 80, died suddenly on Dec. 6, 2007. Randy was a true space pioneer, and one of the world's leading authorities in many areas of space human factors research. He helped NASA to develop and implement new and innovative centrifuge training programs for the astronauts in the Mercury, Gemini, and Apollo missions, and worked on the human factors and life support systems of Skylab and the Space Shuttle.

While at the U.S. Navy Aviation Medical Acceleration Laboratory of the Naval Air Development Center in Johnsville, (Warminster) PA from 1958 to 1968, he directed the development of countermeasures for crew operations under the hypergravity conditions of launch and re-entry; his human centrifuge simulations for training the original Mercury 7 astronauts to perform under such conditions was instrumental in the success of those missions.

Dr. Chambers later served as Chief Life Scientist and head of human factors engineering at NASA Langley Research Center between 1968 and 1972, when he joined the faculty of Georgia Tech. Upon leaving Georgia Tech in 1977, he continued conducting important human factors research at US Army Research Laboratories in Lawton OK, until 1980, and then in Washington D.C. until 1988.

Dr. Chambers subsequently had a second academic career as Distinguished Professor of Industrial Engineering at Wichita State University, beginning in 1988. He was the author of several hundred scientific articles, and with his wife, Mary Jane, was co-author of a book about the early space program, "Getting Off The Planet," published by Apogee in 2006.

Over his long and distinguished career, Dr. Chambers received numerous awards and honors for his work. He was a long time member of the Aerospace Medical Association, and a Fellow of several other scientific organizations, including The American Psychological Association, the Human Factors and Ergonomic Society, the American Association for the Advancement of Science, and the Washington Academy of Science.

News of Members

Daniel J. Callan, D.O., M.P.H., has left academia and is now in clinical practice in Occupational and Aerospace Medicine in Vonore, TN. He continues to practice as an FAA AME and provides Travel Medicine services.

David Canton, D.O., M.P.H., J.D., CAPT, USPHS, has retired after 34 years of uniformed federal service. Since June 2005, CAPT Canton had served as the Chief Medical Officer for the National Disaster Medical System in Washington, DC. CAPT Canton spent 15 years with the U.S. Public Health Service and 19 years with the U.S. Army.

Col. Victor A. Folarin, USAF, MC, formerly the Commander, 52nd AMDS, 52nd MDG at Spangdahlem Air Base, Germany, is now serving as Interim Command Surgeon & Chief, International Health Programs, USAFRICOM Kelley Barracks, in Stuttgart, Germany.

New Members

Butel, Paul A., M.B., Ch.B., Kogarah, Australia
Byrne, Jonathan A., M.Sc., Farnborough, UK
Chihrin, Stephen, B.Sc., London, Ontario, Canada

Foutz, Thomas, B.S., Oberlin, OH
Hartman, Joshua A., Capt., USAF, MC, Derby, KS

Karacic, Mirko, M.D., Zagreb, Croatia

CLASSIFIED ADS

POSITION AVAILABLE

MAYO CLINIC Executive Health Physician

Mayo Clinic is known nationally and internationally for outstanding achievements in patient care, research, and education. In Arizona, Mayo Clinic is a 360-physician integrated practice, focusing on high quality, compassionate medical care delivered in a multi-specialty academic environment. Education and research are an integral part of the Mayo Clinic Model of Care.

The Division of Preventive, Occupational, and Aerospace Medicine is seeking a physician to provide clinical services to executives in the Mayo Clinic Executive Health Program. Candidates must be board eligible or board certified in Internal Medicine. Board certification or eligibility in a Preventive Medicine specialty or a related clinical specialty (e.g., Cardiology, Endocrinology) and/or several years working experience in Executive Health are highly desirable. Experience or a special interest in women's health issues and an interest in expanding a growing women's executive health program is highly desirable.

This position includes an academic appointment with the Mayo Clinic College of Medicine and offers competitive compensation and comprehensive benefits, including a relocation package. Our desirable location in the beautiful Sonoran Desert of Arizona offers every opportunity for a rewarding lifestyle.

For more information about Mayo Clinic and Arizona, please visit our Web site at <http://www.mayoclinic.org/physician-jobs/>

For consideration, please forward a letter of interest and curriculum vitae to: Michael A. Covalciuc, M.D., Chair, Division of Preventive, Occupational and Aerospace Medicine Mayo Clinic – MCB CC 13400 E. Shea Boulevard Scottsdale, AZ 85259

POSITION WANTED

I am interested in exploring employment opportunities in the space life-sciences area. I am a science and engineering specialist with a broad and in-depth background in the physical and life sciences, computer programming/simulations, applied math, and data analysis/statistics.

My fields of expertise include neuropsychopharmacology, developmental neurobiology, acoustics, microscopy, stereology, molecular biology, histology, histochemistry, and general psychology / human factors. I also have a background in physics & astronomy, aerospace engineering, materials science, economics, and business administration. This year, I graduated from Brown University (Experimental Psychology Department), where I worked in two labs that specialized in neuroscience, pharmacology, and acoustics.

Some highlights of my educational and professional background are as follows:

- Successfully completed challenging PhD program (research, teaching, coursework; 4.0 GPA), voluntarily took courses at other universities at the same time, and reduced my labs' expenses by securing funding from other sources (fellowships, teaching assistantships; \$114,873 altogether).

- Cut experimental failure rate in half (no shortcuts, no sloppiness, uncompromising quality control).

- Routinely worked on complex projects that required work during non-core business hours.

- Proven written, oral, and graphic communication skills, as demonstrated in laboratory training and classroom teaching settings.

Also: Habit of working across disciplinary boundaries and outside professional comfort zone; acquire new skills rapidly. Great accuracy, attention to detail, continuous quality control, and troubleshooting skills. Strong concern for health and safety. Ability to work independently and in a team and to supervise the work of others. Commitment to excellent work in biomedical science or engineering.

I am happy to discuss job opportunities with any interested employer (academic or non-academic). A résumé/CV is available on request. I am willing to relocate for the position. My contact information is: Thomas Templin, (401) 351-2397, Thomas_Templin@cox.net.

I would be happy to hear from you!

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