I have just returned from our annual fall Council meeting and I would like to report on some of the proceedings.

First of all, I was very impressed by the attendance. Not only were most Council members present, but many other members attended as well. This seems to be a good indication of interest in the association's business and that can only be healthy.

Furthermore, as most of you know, Council is followed by one and a half days for the Scientific Program Committee meeting in preparation for next scientific meeting. Again, I was very impressed and very pleased by the attendance, probably the largest in a long time. Not only did we have a large attendance, but we also had a well-balanced group. Indeed most sections of the association and all age groups were well represented, which means we had the benefits of wisdom, corporate memory, knowledge, dedication, energy, and open-mindedness. It also means that we seem to be doing something right about succession planning.

This event also made me very proud of our association and reminded me how privileged I am to be leading it. How many voluntary associations can claim to be able to bring more than 80 people from all over North America and Europe to attend a scientific committee meeting and give their free time for the benefit of their colleagues? Also, keep in mind that a lot of these members are not supported financially to do so. On behalf of the association and its membership, I wish to say "thank you very much" to all those dedicated workers. This is also a good opportunity for me to thank Andy Bellenkes and his team for the magnificent job they are doing. San Antonio will be another memorable meeting.

What happened at Council? Quite a lot of "business as usual," but my intention here is to cover only a few salient points.

Our president-elect is working on an ethics statement for the association. Since most of us belong to other associations that have well-developed ethics statements covering most of the issues, ours will be reasonably short and will cover only the missing elements related to our field.

To continue on with the adaptation of the association's structure, a proposal was made to change the Bylaws so that the immediate past president becomes the chair of the Nominating Committee. This change would insure better continuity and would lessen the burden on the other past presidents. Council accepted the proposal which will be voted on next May.

While the finances of the association are very healthy, it was recommended by the Finance Committee and accepted by the Executive Committee that an audit of the financial and administrative processes of the association be performed. This audit will confirm what we are doing well and make recommendations on what the auditors believe needs improvement. Among other things, it will give us an expert opinion regarding our mortgage.

I know many of you are waiting for the position paper on age 60. It was planned for this Council meeting; unfortunately, developments beyond our control delayed the process. It will certainly be ready for the May meeting.

The chair of the Education and Training Committee and his team, in cooperation with the Journal editor will develop the process that will eventually give us the opportunity to provide continuing medical education credits through our Journal. This service, which represents one of our objectives, should be advantageous to many of our members and may possibly attract new members.

The chair of the Corporate and Sustaining Membership Committee reported on the preparation of the research workshop on astronaut safety and health; the meeting sponsored by AsMA will be mainly on the cardiovascular aspects of space medicine and will be held at the Rockefeller Center in Bellagio, Italy. By the way, I attended the C & S meeting on Thursday morning and let me assure you that this is another AsMA section that we can be particularly proud of.

The medical guidelines for air travel (for physicians) should be published early in the New Year and will also be on our Web site.

The position paper on psychiatric medication and flight crew is also well on its way and will be ready for our May meeting.

Last but not least, the web site. It is well recognized by the Executive Committee and Council that the AsMA web site is very important for the association. In fact, it is one of our major objectives to develop and maintain an excellent and fully functional web site. Since the infrastructure of the current site has significant limitations, it was collectively agreed that it will be necessary to allocate some funds for the renewal of the site and addition of as much functionality as necessary to conduct our business and provide services to our members.

This summary only gives you a glimpse of the work being done, but should certainly reassure you that our association is well and thriving.
This Month in Aerospace Medicine History--January 2003

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

Introduction
As I take up my pen to write this, the first installment of a series on the history of Aerospace Medicine, I realize that I am not taking up a pen at all. I am typing on a laptop computer at 30,000 ft en route from an enjoyable and educational annual Scientific Meeting in Montreal.

To prove once again that in history there is nothing new, I should point out past columns in this journal. From March 1980 to January 1985 by Dr. Benford, then from June 1986 to April 1990 by Dr. Dille, countless interesting articles on the history of aviation and aerospace medicine were published. The history of our specialty offers a fascinating study in the triumphs of man over his own physiological barriers.

Most of the excerpts in this column will be from this journal, which has transmogrified from The Journal of Aviation Medicine, begun bimonthly in 1930, to Aerospace Medicine in 1959, and to the present title in 1975. Excerpts may be used from other journals if the subject is of particular interest; information from prior to 1930 will be found in other sources.

One Hundred Years Ago
One of the most significant events in January 1903 was not directly related to aviation until 39 years later. On January 20, U.S. President Theodore Roosevelt issued an Executive Order placing the territory of Midway Islands under jurisdiction of the Navy Department.

Seventy-five Years Ago
Although lacking in significant aviation milestones itself, January 1928 came after a year of firsts. Charles Lindbergh made the first solo transatlantic flight from New York to Paris in May of 1927 (12). In December of that year Boeing Air Transport, the predecessor to United Airlines, began transcontinental passenger and airmail service between Oakland and New York (9). General aviation buffs will be interested to know that the Cesna Aircraft Company was also founded in 1927.

To give an idea of the capabilities of aircraft around that time, the Fairchild Aviation "FC-2...was powered by a 220 hp Wright J-5 Whirlwind... It was the first commercial airplane to be fitted with olive shock-absorbing struts and Bendix hydraulic brakes. The wing had conventional ailerons and independent flaps. The windscreen was made of panels of shatter-proof glass. Range, based on a 37 gal-lon fuel tank, was 600 miles. The ceiling was nearly 15,000 ft, cruising speed was a little over 100 mph and the landing speed was 53 mph. The machine was designed to carry four passengers in addition to the pilot" (7).

Fifty Years Ago
Landing aboard the first angled deck aircraft carrier, USS Antietam, were first tested on January 12 (8). This was a significant step in improving safety in Naval Aviation. Whether causal or coincidental, mishap rates dropped significantly in the U.S. Navy following this innovation (11).

Throughout history flight surgeons have contributed not only to the health and safety of pilots and aircrew, but also to those in related jobs such as air traffic control. The U.S. Armed Forces Medical Journal reported that "a disproportionate portion of radar operators complained of tiring and headache during or following their work. Only a small percentage had any refractive error or ocular muscle imbalance." The authors recommended that "not man should have to actually watch the radar gear for more than one-half hour at one sitting; and a shorter time than this is preferred. More frequent change-offs, with ocular rest, are recommended.... Posture is an important factor in tiring. Speed in pickup of aircraft contacts on the screen reeds further study" (10).

Failure to eject prompted a U.S. Navy study regarding the Martin-Baker ejection seat: "[The] question has been raised as to whether or not the failure to... eject was a result of physical failure to reach the face curtain handles... Thirty naval fighter pilots, of various anthropometrical measurements... were subjected to levels of positive radial acceleration about 2.0 g above their relaxed blackout tolerance level... The results suggest that, unless extremely fatigued, most suit-protected pilots should be able to perform the arm movements necessary... if the g were a constant one. There were no means available by which their ability could be tested under conditions of fluctuating g-levels... A marked degree of success would appear to depend on the pilot's pre-knowledge of the effects of such forces... and proper instruction as to procedure and techniques... of such success could be made available through lecture training and centrifuge indoctrination" (2).

The importance of safety and mishap survival was not overlooked in general aviation. Aviation Week reported that the "Beech Aircraft's Model 50 Twin-Bonanza is the first U.S. plane of its size deliberately engineered from the drawing board to incorporate newest approved postwar safety practices for crash survival." The Twin-Bonanza featured "three principal safety factors," including:

1. Design to an 8 G flight load safety factor
2. A forward compartment ahead of the cabin [to absorb] energy in a crash, and a heavy keel structure under the cabin [to safeguard occupants]
3. Passengers sit on top of the main weight factors in the airplane

Furthermore: "The collapsible nose section will act as a shock absorber... Air locked into the tightly sealed baggage compartment is expected to have a powerful cushioning effect... Fuel is away from the passengers in four wing tanks... Shoulder harness is standard equipment... None of the [occupants are] seated in line with the whirling propeller blades... Instrument panel (of ductile metal) has been moved forward... from the original design" (6).

Twenty-five Years Ago
In a study by Graybiel and Knepton: "The experimenters' task was to adapt, incrementally, the subjects to otherwise intolerable rotation levels... Two subjects, after executing approximately 14,000 head movements, were dropped because only small levels of adaptation had been achieved. The remaining seven, after executing 13,200 to 26,400 head movements, were adapted to terminal velocities ranging from 4.0 to 7.0 rpm; the criterion used was the execution of 1200 head movements, both at terminal velocity and after return to zero velocity, while remaining symptom-free... When the direction of rotation was reversed and head movements were executed in four quadrants, three of the subjects failed to meet the criterion. It was concluded that the phenomenon of overadaptation had been demonstrated" (4).

Another study considered motion sickness. "Nausea and disorientation are sometimes produced by head movements during turning maneuvers in aircraft. These responses are usually attributed to Coriolis cross-coupling stimulation of the vestibular system, although it has been indicated recently that many turning maneuvers of aircraft have insufficient angular velocity to generate such effects. The purpose of the present study was to further distinguish conditions in which Coriolis cross-coupling effects are disorienting and nauseogenic from conditions in which they are not... Both results and theory confirm that head movements made during the commencement of a turning maneuver in an aircraft are not apt to introduce disorientation or air sickness from cross-coupled Coriolis stimulation" (5).

A frequent occurrence between nations is the advancement of scientific relations preceding more amicable political relations. The Russians have contributed significant articles over the years, and January of 1978 was no exception. The Institute of Biomedical Problems in Moscow offered this: "[Biosatellite Cosmos-690 was] equipped with a gamma-irradiation unit that carried 35 rats. On the 10th flight day, the rats were exposed to radiation at doses of 220 or 800 rads. During the subsequent 10 d, radiation injury developed in a space environment. Similar ground-based experiments were carried out to simulate space flight environment effects. The results obtained were studied on a comparative basis. The conclusion is made that effects of a short-term space flight as long as 20 d do not essentially modify the radiobiological effect" (3).

A study from Ohio State University concluded that "[the] prevalence of hypertension in the general population was 30 times greater than for pilots. Though the overall prevalence in pilots was small, we still consider hypertension..." See HISTORY, p.96
Parachute Opening Shock Simulator to Determine Cervical Injury Tolerance

Glenn Paskoff
Crew Systems Dept., Naval Air Systems
Command, Patuxent River, MD

Parachute opening shock typically results in an abrupt deceleration of the body that occurs when the aviator's personal parachute achieves full inflation. Peak acceleration during this phase is a function of aircrew mass properties, barometric and dynamic pressures, and recovery parachute type, drag area, and opening aids. Opening aids such as spreader guns and pull-down vent lines decrease the time it takes the parachute to open, and thus increase the resultant acceleration on the aircrew. Lighter weight aircrew typically experience higher parachute snatch forces and opening shocks due to their lesser mass.

Depending upon the initial position of the body, the deceleration and angular acceleration may be aggravated as the body is twisted and snatched into alignment with the parachute's opening vector.

With the expansion of the Naval aviator population to include smaller males and females, an increased level of risk has been introduced into high speed escape systems. A recent study indicated the cervical injury tolerance of females to be 13% lower than same-sized males. In addition to occupant size and gender issues, the helmet is frequently being used as a platform for night vision and targeting acquisition devices. The effect of these systems is to increase head weight and shift the center of gravity of the head/helmet forward (a weaker condition for the neck physiologically). In order to quantitatively determine the overall effects on system performance and occupant safety, costly system level testing would need to be performed along the entire airspeed escape envelope. However, due to the chaotic nature of high-speed events, even under the most controlled initial conditions, manikins have recorded large variations in measured accelerations and head and neck loads. A system capable of reproducing the parachute opening shock phase in which the variables can be consistently controlled, regardless of other conditions, would allow a parametric comparison of occupant sizes, advanced helmets, and other man-mounded equipment. This system would provide invaluable data to new and ongoing programs in determining the total system level performance and safety early enough in the program to easily allow for design modifications.

The first part of the effort uses the MADM0 (Mathematical Dynamic Models, TNO) finite element program to model the internal dynamics of the NAVY Horizontal Accelerator (HA), specifically the pneumatic, hydraulic, and mechanical response of the system. The HA is a HYGE, Inc. pneumatically driven, hydraulically controlled linear actuator with a ten foot stroke. The HA can simulate vehicle/occupant forces, displacements and accelerations representative of high-speed crashes and ejections. It produces time-mirrored acceleration pulses that are programmable and highly repeatable. The pulses are controlled through the use of an internal metering pin within the load chamber of the piston. The ram and piston of the HA are modeled to provide an efficient method of designing, fabricating, and testing new metering pin designs to achieve desired pulses without extensive trial and error.

With the completed HA model, a low-cost mockup of the fixture will be built to test the concept. Existing parachute opening shock data from previous ejection testing will be compiled, analyzed and characterized according to manikin size, airspeed, helmet mass properties, clothing ensemble, and altitude. From this data, acceleration profiles consistent with specific aircrew population are determined and input into the HA model. Next, the results of the model will provide the required metering pin designs necessary to achieve the desired accelerations.

When the prototype and metering pins are complete, several baseline tests will be conducted to test the concept fidelity. Manikin instrumentation will include head and chest accelerometers, upper and lower neck load cells, chest angular rate sensors and a sled accelerometer. After the tests, the data will be analyzed and compared with the corresponding system level ejection tests for accuracy. Depending upon results of preliminary testing, changes will be made to develop the test fixture final design. At this point, once drawings are complete, the final test fixture will be fabricated. Once integrated with the existing HA test facility, series of tests will be conducted. Test conditions will examine the effects of such variables as initial seat pitch and yaw, occupant initial position, ejection airspeed (correlated by varying degrees of acceleration profiles from experimental data), helmet weight and mass properties, and airspeed. Analysis of the data will include head and neck loads and moments, head and chest linear and angular accelerations, and current head/neck injury criteria methods to determine the likelihood of injury.

Parachute opening shock typically represents the most severe loading to the aviator upon high-speed ejection. Currently, there is no capability to simulate this event for evaluating risks to aircrew, short of full scale system level testing, particularly a low cost alternative to system level testing. The development of this device will provide invaluable data in describing the effects on the body, particularly the head and neck, of parachute opening shock. It will, for the first time, enable factors such as aviator size, ejection airspeed and initial position to be fully controlled and analyzed. In turn, this allows for a comprehensive evaluation of personal protective gear and advanced helmet devices.
HISTORY, from p. 94.

REFERENCES
8. Oakland (California) Airport Web Site. www2.oaklandairport.com
11. www.infoplease.com/ipa/A0004537.html

Sunday Workshops to be Held in San Antonio--Sign up NOW!

1. A Human Factors Approach to Accident Analysis and Prevention
   Scott Shuppell, Ph.D., and Douglas Wegman, Ph.D.
   Civil Aerospace Medical Institute, Oklahoma City, OK, and University of Illinois at Urbana-Champaign
   Human error is implicated in nearly all aviation accidents. This workshop will provide tools and information needed to conduct human error analysis of aviation accidents. Six hours of didactic lecture and classroom exercises. The morning session is devoted to introduction of the problem, and then presentation of the Human Factors Analysis and Classification System (HFACS), concluding with an hour of summaries as teaching tools to be classified. The afternoon will be devoted to "hands-on" analyses of NTSB accidents using HFACS.

2. Aircrew Fatigue: Causes, Consequences, and Countermeasures
   John A. Caldwell, Ph.D., and J. Lynn Caldwell, Ph.D.
   U.S. Air Force Research Laboratory, Brooks AFB, TX
   The workshop will outline the importance of addressing fatigue as a danger in aviation, the basic physiological mechanism underlying fatigue, and the most common causes of fatigue in air transport and other settings. Ways to recognize fatigue in operational environments and information about the efficacy of various countermeasures, including specific information about countermeasure techniques such as proper work/rest schedules, adequate sleep, napping strategies, rest breaks, circadian entrainment, stimulants and others will be provided.

3. Medical Aspects of Aircraft Accident Investigation
   Alex Wolfbrink, M.D.
   Civil Aerospace Medical Institute, Oklahoma City, OK
   The objectives of this workshop are to relay a basic understanding of medical aspects involved in conducting an aircraft accident investigation, including the role and significant components of autopsy and pathological examination, specimen handling and toxicological analysis. Investigating pilot medical incapacitation as a contributing factor will be discussed. The differences between civilian and military accident investigations and responsibilities in various countries will be discussed.

For more information and to register, please visit http://headinjury.anteon.com
The Aerospace Physiology Certification Board of the Aerospace Medical Association will administer the certification examination at the 74th Annual Scientific Meeting in San Antonio, TX on Sunday, May 4, 2003. 

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

Application must be made prior to March 1, 2003, to assure consideration for the 2003 examination. Applications received after that date cannot be guaranteed consideration for the 2003 exam. Any late applications not considered for 2003, will automatically be held in abeyance for consideration for the 2004 exam. 

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

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

Aerospace Physiology Operational Excellence, Training, Research and Leadership--Award Nominations Due April 1, 2003 

The Wiley Post Award recognizes outstanding contributions in the areas of direct operational physiology and aeromedical training and education. The Paul Bert Award for Operational Physiology was originally established in 1969. It was replaced in 1972 by the Wiley Post Award for Operational Physiology, named in honor of the pioneer aviator Wiley Post, representing all crewmembers who have benefited from the efforts of operational aerospace physiologists. The Gentex Corporation, Carbondale, PA, sponsors the award. The award recipients the last 5 years are: Anthony P. Catanese, Donald J. White, William Schutt, Eric Sherman, and Simon Blett. 

The Fred A. Hitchcock Award recognizes excellence in either operational aerospace physiology or aerospace physiology research. The award was established in 1972 and is named in honor of Fred A. Hitchcock, Ph.D., co-translator of Paul Bert’s classic work, “Barometric Pressure.” The Jefferson C. Davis Wound Care and Hyperbaric Medicine Center, San Antonio, TX, sponsors the award. The award recipients the last 5 years are: Ryan Elchier, John Frazier, Vince Musashe, Jim Norton, and Robert Matthews. 

The standard format for the award submission is the same as the Aerospace Medical Association Awards. This package should include a citation to be read at the time of presentation in 80 words or less and a list of significant accomplishments in bullet format to be less than 300 words. Please include the time interval over which the nominee’s contributions were made. A current one-page biography, CV or resume should also be included. 

In recent years the number of award nominations has declined, however, the number of quality professionals within the aerospace physiology community remains high. Please take time to recognize the outstanding contributions by the professional with which you come in contact. 

Award nominations are due no later than 1 April 2003. Nomination package and Bio/CV must be in Microsoft Word and submitted on disk or by e-mail. 

Please send nominations to: 
LCDR Lynn Wheeler 
6860 Fairway View Cove 
Bartlett, TN 38135 
E-mail: p4151j@persnet.navy.mil
has grown to become one of the ten largest cities in the United States. This urban growth over the past century is reflected in the development surrounding Alamo Plaza. The buildings which border the plaza present a historical record of the many architectural styles during the past 100 years. The blending of architecture in Texas is well represented in the architecture of Alamo Plaza and the Paseo del Rio or River Walk. More about San Antonio next time.

Honorary Member

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

- Candidates must be submitting with accompanying biographies to the Honorary Member Committee Chair by February 15, 2003.
- Nominations can be mailed, faxed, or e-mailed to the addresses stated below.
- Biographies should contain information that clearly indicates the nominee is a woman who is distinguished in the field of aviation medicine, aeronautics, or related activities which could include areas of education and operation.
- Biographies should include the nominee's name, current address, professional membership organization and affiliations, and any other information which might assist the committee in its consideration.

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

Please send nominations and biographies to the Chair,

Joan Marinelli
3512 Alma Ave.
Manhattan Beach, CA 90266
PAX 310-680-8885
E-Mail lmjtm@earthlink.net

San Antonio Highlights

The Alamo in San Antonio is the most renowned structure and a shrine to Texas liberty. It was the famous siege of 1836 that ignited the rallying cry, "Remember the Alamo."

The cornerstone of the Alamo was laid on May 8, 1744. Founded as a mission, it later became a fortress. It was eventually abandoned until 1803 when a company of Spanish soldiers from Mexico occupied the mission until 1835, when it was surrendered to Texan forces. The siege of the Alamo lasted 13 days and climaxed on March 6 with a complete loss of all the Texans in the overwhelming assault. With the bloody defeat, the Texans gained the sympathy of the world.

The actual grounds of the Alamo have not changed drastically since the early part of this century, but the city has been transformed. San Antonio has a rich, diverse history, and has grown to become one of the ten largest cities in the United States. This urban growth over the past century is reflected in the development surrounding Alamo Plaza. The buildings which border the plaza present a historical record of the many architectural styles during the past 100 years. The blending of architecture in Texas is well represented in the architecture of Alamo Plaza and the Paseo del Rio or River Walk. More about San Antonio next time.

Join the Wing!

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

**Corporate and Sustaining Members**

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

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| International Federation of Air Line Pilots Associations |
| Japan Airlines                    |
| Latecoere International, Inc.     |
| Lockheed Martin Corporation       |
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| MEDJet International, Inc.         |
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| OSU-College of Osteopathic Medicine |
| Piot Medical Solutions, Inc.      |
| Scandinavian Airlines System      |
| Schering-Plough Corporation       |
| Science Applications International Corporation (SAIC) |
| 17 Wing Medical Clinic            |
| Stereo Optical Company, Inc.      |
| The First Call                    |
| United Airlines                   |
| United States Aviation Underwriters |
| Universities Space Research Association (USRA-DSLS) |
| Harvey W. Watt & Company          |
| World Aviation Systems, Inc.      |
| Wound Specialty Associates, P.A.  |
| Wyle Laboratories, Inc.           |
Leonard Kirschner, M.D., M.P.H., Litchfield Park, AZ, was elected to a 3-year term on the Board of Directors of the Arizona Hospital and Healthcare Association.

Tony Lynch PhD, MB.Ch.B., CCBOM, Dip Av. Med., CIME, MROCC, has been appointed Occupational Medical Consultant at Network Health, Columbia Rehabilitation Centre, Calgary, Alberta, Canada. He also passed two new exams: the certificant exam of the Canadian Board of Occupational Medicine, with the qualification of CCBOM, and the examination in Aviation Medicine from the University of Otago, New Zealand, with the Diploma in Aviation Medicine.

Maj. David I. Cunningham, USAF, MC, formerly with the Squadron Medical Element, 33rd Rescue Squadron, Kadena AB, Japan, has been transferred to the 86th Aeromedical Squadron, Ramstein AB, Germany. He was the 2001 recipient of the Society of USAF Flight Surgeons' Malcolm Grow Award.

Obituary Listing

Derrick M. Sutorius, M.D., Amsterdam, The Netherlands, died in October at the age of 48. He received his M.D. from the University of Utrecht in 1981 and did postgraduate studies in Occupational Medicine, Surgery and Cytology/OBSTetrics, as well as attending a General Aviation Medicine Course. He had worked in the Medical Department at KLM Airlines, Schipol Airport. He had been a member of the Netherlands Society of Aviation Medicine, and The Netherlands Association for Occupational Medicine.

New Members

Aunon, Serena M., M.D., Galveston, TX
Clydesdale, Raymond J., Capt., USAF, MC, Alamo, NM
Files, Douglas S., Maj., USAF, MC, Salt Lake City, UT
Leon, Gloria R., Ph.D., Minnetonka, MN
Marks, Fredric A., Col., USAF, MC, Maxwell AFB, AL
Molstad, Jeromy M., Maj., USAF, MC, Atwood, KS
Musselman, Brian T., Capt., USAF, BSC, Beale AFB, CA
Nocilla, Frank J., Capt., USAF, MC, Ocean Springs, MS
Sherwood, Daniel L., LCDR, MC, USN, Pensacola, FL

International New Members

Davies, Matthew T., Sqn Ldr., RAEM, D.M., Henton, Chinnor, Oxfordshire, England
Ireland, Brian J., M.B.B.Ch., Ballinderry, Upper Lisburn, Co. Antrim, N. Ireland
Jahr, Karl I., B.Sc., Brandval, Norway
Ryan-Sheridan, Debra, B.Med.Sc., M.D., Auckland, New Zealand
Yoo GuBu, ROKAF, Cheong won-gun, Chung Buk, Korea

New Member Dues

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

Home Office Information

Phone: (703)739-2240
Fax: (703)739-9632 or (703)739-9875
Website: www.asma.org

These are the phone extensions and e-mail addresses of your 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
Heather Crain, Editorial Assistant
Ext. 102; hcrain@asma.org

Membership Directory is now ONLINE!!!

Go to the website at www.asma.org and Click on "Members Only" to password. Contact Gloria Carter to receive your password or change your information in the Directory: gcarter@asma.org.

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Aerospace Medical Association
320 S. Henry Street
Alexandria, VA 22314-3579
pday@asma.org