

Science & Technology Watch

Keeping You Informed Of The Latest Advances In Science And Technology

Medical logistics is a common challenge for military as well as aeromedical operations. In this column, we introduce recent advances in production of sterile water that meet the needs of current military and future aerospace medical applications.

Sterile Water for Injection Field Technology (SWIFT)

Lixiong Li, Ph.D., and Jean J. Renard, Ph.D., Applied Research Associates, Inc., Panama City, FL; and Deborah J. White, LT, MSC, USNR, Naval Air Systems Command, Patuxent River, MD

Every medical professional and healthcare specialist recognizes the importance of sterile water for injection which is the predominant constituent in intravenous (IV) solutions and is needed for various clinical and medical procedures. However, not everyone realizes the logistics and costs of supplying and storing this essential material for field use. The current sterile water logistical challenges facing the military are very similar to those that will be faced for future space stations and extended space travel. The ability to generate sterile water on demand and in the field to prepare IV solutions, reconstitute frozen red blood cells, and fulfill needs for other medical procedures has become a much sought-after strategy. As such, a deployable sterile water production system for these applications must take a minimal amount of storage space, operator training, and maintenance.

Until 1923, the pyrogenic reaction (a rapid rise in body temperature) that sometimes occurred following parenteral administration of drugs had remained a mystery. Florence Seibert was the first to recognize the fever-producing agent (pyrogen) was bacterial in origin, and demonstrated the elimination of pyrogens (bacterial endotoxins) by distilling the water. Since this classic breakthrough, there has been little advancement in the technology associated with sterile water production.

Currently, there are two FDA-approved methods being used to prepare sterile water: distillation and multi-stage reverse osmosis followed by the UV irradiation for sterilization. The distillation process involves boiling water from liquid to vapor to prompt the separation of water from its high boiling point impurities: inorganic solids, microorganisms, pyrogens, and organics with boiling points higher than 100°C. Traditional stills are bulky and energy-intensive. Reverse osmosis (RO) uses semi-permeable polymeric membranes to separate water from the chemicals suspended or dissolved in it. Under natural osmosis,

water flows from a less concentrated solution through a semi-permeable membrane to a more concentrated solution until concentrations are equal on each side of the membrane. RO requires the use of an external pressure to reverse the natural osmotic flow. As feed water pressure is applied to the one side of the semi-permeable membrane, water flows through and the microorganisms, the pyrogens, and most dissolved salts and organic compounds are left behind. The RO method lacks a final heat treatment step preferred by FDA for sterilization.

In the past 20 years, the U. S. Navy has made a significant commitment and investment in developing compact sterile water for injection systems for shipboard use. This foresight coupled with persistent efforts has led to the recent advances in Sterile Water for Injection Field Technology (SWIFT) (Applied Research Associates, Inc., Panama City, FL). This technology is based on ARA's patented hydrothermal processing concept to achieve rapid depyrogenation and sterilization of water with minimum space and energy requirements. Unlike the distillation and RO methods, which physically remove endotoxins from water, the technology used in SWIFT ensures pyrogen-free by a final heat treatment step to inactivate pyrogens. This method has demonstrated six-fold logarithmic inactivation of endotoxins in water that is subjected to temperatures greater than 250°C and high pressures to prevent water from boiling with a contact time of less than one minute. The high-pressure approach also allows the process to be more compact and heat recovery more efficient than the conventional stills. The result of this approach is ultra-pure water which meets the sterile water specifications of the USP XXIV

The SWIFT generator can supply field medical operations with a steady, reliable stream of sterile water on demand and thereby simplify the logistic support of expeditionary forces, reduce the number and cost of supply flights, and liberate precious space aboard Navy ships for other mission-critical equipment and supplies. The SWIFT generator was developed to support medical applications

such as the production of intravenous fluids, blood washing, and clinical irrigation procedures aboard amphibious assault and hospital ships in the fleet. This technology may also find a considerable civilian market including a number of opportunities in bio-technology and pharmaceutical research laboratories, isolated medical facilities, mobile medical units, and emergency relief operations in case of natural disasters or terrorist attacks.

Acknowledgments

The authors are grateful for the following individuals who have made significant contributions to the success of this project: Mr. John Williams - ONR SBIR/STTR Program Director; Dr. Michael Given, Dr. Jeannine Majde-Cottrell, and CDR Stephen Ahlers, - ONR Program Managers; Dr. Dave Artman - Senior Vice President, ARA; Mr. Edward Coppola and Ms. Erica Becvar - ARA Project Managers; and Tim Campbell, Kris Cozart, and Bob Nichols - ARA SWIFT Generator design team.

The AsMA Science and Technology Committee provides this Science and Technology Watch Column as a forum to introduce and discuss a variety of topics involving all aspects of civil and military aerospace medicine. The Watch can accommodate up to three columns of text, which may include a figure or picture to illustrate your concept.

Please send your submissions via e-mail to: ShenderBS@navair.navy.mil

AsMA Future Meetings

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

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

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

MEETINGS CALENDAR

September 17-19, 2003, Catania, Italy.
2nd International Conference--The Impact of Environmental Factors on Health: Environmental Health Risk 2003. Organized by Wessex Institute of Technology, and University of Catania, Italy. Info: www.wessex.ac.uk

September 18-20, 2003, Berlin, Germany. 5th Congress of Medicine and Mobility and 41st Annual Meeting, German Society of Aerospace Medicine. Info: www.rg-web.de; www.dglrm.de.

September 22-24, 2003, Jacksonville, FL. 41st Annual SAFE Symposium, Adam's Mark Hotel. Dedicated to ensuring personal safety and protection in land, sea, air and space environments. Info: e-mail safe@peak.org; www.safeassociation.com;

October 5-9, 2003, Madrid, Spain. 51st International Congress of Aviation and Space Medicine. Organized by The Spanish Society of Aerospace Medicine under the auspices of the International Academy of Aviation and Space Medicine. Info: Viajes

Vie-Congresos. Herosilla 30, 28002 Madrid, Spain; 34-914264750; icsm03@vie.es.

October 8-11, 2003, Seattle, WA. Civil Aviation Medical Association Annual Meeting. Info: Jim Harris (405) 840 0199; JimLHarris@aol.com.

October 16-17, 2003, London, UK. International Aviation Conference: Air Quality in Passenger Aircraft, sponsored by the European Commission and Royal Aeronautical Society Aviation Medicine Group. Info: BRE Events, www.bre.co.uk/aviation. e-mail: events@bre.co.uk.

October 22-25, 2003, Mexico City, Mexico. XX International Meeting of Aerospace Medicine, Gala Hotel and Resorts, Playa del Carmen, Q.R., sponsored by the Mexican Association of Aviation Medicine. Theme: Medical And Sugical Therapeutics Of The Modern Medicine ; Its Application In Aviation. Info: Grupo Destinos, attn: Claudia Palomeque, (52-55) 55-75-18-60; cpalomeque@grupodestinos.com.mx.

This Month in Aerospace Medicine History-- July 2003

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

Introduction

What a terrific annual meeting this year in San Antonio! I look forward to our meeting every year, and this was no exception. I presented a poster featuring a timeline of the history of our specialty, and was pleased to not only see the "seasoned" members pausing to reflect, (some of whom remembered certain historical events first-hand!), but to also see many of the younger members finding the history of our specialty somewhat more fascinating than they had before realized. I only wish that I had had the entire length of the ballroom to present this timeline, since so many notable events had to be left off.

My research for these columns is at least half the fun of writing them. In fact, they practically write themselves. The difficulty in putting them together is much like the poster, however. What excerpts do I include? Which ones do I exclude? Sometimes it nearly comes down to the flip of a coin.

If you have some spare time and would like something fascinating to consider, pick up one of the old issues from the thirties or forties and peruse its pages. How wrong we were about some things, and even more importantly how right we were so early in the specialty will be revealed. I hope I am giving a glimpse of that with these columns.

Fifty Years Ago

Even as far back as 1953, we were considering human factors in cockpit design: "In getting the best man-airplane combination, there are many factors to be considered. 1. Size.--Arrangement and sizing of the cockpit have a direct influence on the operational efficiency and safety of the pilot and crew....2. Data.--Perhaps one of the greatest improvements in cockpit design can be made in the simplification of flight data presentation. All unnecessary information should be eliminated, so that a minimum of mental interpretation or translation is required...3. Personal Equipment.--This equipment should provide the greatest safety in an emergency and interfere as little as possible with the pilot's comfort and maneuverability. Instead of shoulder harness, perhaps the ultimate would be to use normal flight clothing as the restraining medium...4. Emphasis on Vision.--This will increase in importance. As the rate of response requirements of airplane control increases, probably man will be increasingly bypassed and used only as an intelligence monitor to set up the performance program and make decisions on -on-predetermined conditions....5. Acceleration.--In present aircraft, accelerations imposed on the pilot may be small but of relatively long duration. For longer periods of *g*, better protective clothing and rotatable or reclining seats may be desirable....6. Temperature.--One of the most important heat transfer problems for space flight will be concerned with structural temperature control." (4).

Medical evacuation during the Korean conflict was proving to be primarily by air: "In August, 1950, when the Communists

threatened to overrun Korea, the wounded were taken back to Japan by any means available - plane, LST, Japanese merchant vessels, Chinese junks, et cetera. Today air evacuation in the U. S. Air Force has reached the point where not a single hospital train is running in the United States and no hospital ship carries patients across the seas. U. S. hospital ships stationed in Korea serve as floating base hospitals, and all casualties are flown from Japan to the United States.... The Royal Australian Air Force is bearing its share of air evacuation, evacuating all casualties from the First Commonwealth Division from Korea to Japan. The RAAF uses 'Dakota' aircraft, which carry twenty-four litter patients or twenty-seven ambulant patients; a nursing sister and a medical orderly are carried on all trips... The air evacuation sisters and orderlies are given a special course in air evacuation before being posted to Japan." (3).

Twenty-five Years Ago

Just as tobacco smoke was being formally recognized as an instigator of disease, this interesting study came from the Naval Submarine Medical Research Laboratory in Groton, CT: "One of the major contaminants from tobacco smoking aboard a nuclear submarine is carbon monoxide (CO). While this gas is controlled to 15 parts per million or lower by catalytic burners, there still remains a residual low level in the atmosphere. This study has shown that, on one submarine, the average ambient concentration was 7 ppm, which produced an average carboxyhemoglobin level in 15 nonsmokers of 2.1%, 1.7%, and 1.7% at the start, middle, and end of a 40-d patrol. Because submariners are generally healthy and young, it is concluded that CO exposures at these ambient levels do not constitute a major risk factor to the physiological well-being of these submariners, nor are they expected to cause any decrement in performance." (1).

Some interesting speculations on space stations and living in space were put forth by Ames Research Center at Moffett Field, CA: "While the establishment of large self-sustaining communities in free space is possible with present day technology, our understanding of the physiological design criteria determining habitat mass, structural configuration, cost, and ultimate feasibility, is inadequate. This paper briefly summarizes the biomedical findings of an engineering workshop cosponsored by the American Society of Engineering Education, Stanford University, and NASA's Ames Research Center (Summer, 1975). It is the conclusion of the study that a viable, economically productive space community of 10,000 people could be established with very conservative, centrifugally generated earth-normal gravity, general population maximum ionizing radiation dose standards (i.e., 0.5 rem/year, using passive shielding techniques), and a normoxic but reduced nitrogen partial pressure atmosphere. It is the conclusion of the author that although, in theory, some of the physiological constraints might in certain cases be partially relaxed, extensive research must be done to establish the degree of any such relaxation." (8).

In the civilian arena, the Concorde was looked at by the University of Virginia from the passenger's point of view: "On four

Concorde flights, recordings of environmental characteristics during flight were made and questionnaires were distributed to passengers to assess their reactions during and 24 h after their flight. The Concorde users were mostly traveling for business reasons. Most respondents were flying the Concorde for the first time. Passengers were satisfied with the Concorde, found it comfortable, and were able to perform a variety of activities in flight. On the day after their flight, respondents felt good, rested, and active. They reported less jet lag as a result of their Concorde flight than they had previously experienced on other trans-atlantic flights. Most respondents are likely to use the Concorde again." (7).

The Naval Aerospace Medical Research Laboratory in Pensacola, FL, was studying means of combating motion sickness: "Ten flyers, grounded because of nausea and vomiting, were referred as potential candidates for adaptation to cross-coupled angular accelerations in a slow-rotation room; such adaptation has been shown to 'transfer' to flight maneuvers. There was no opportunity to attempt treatment in two candidates. Among the remaining eight, five regained flight status (62.5%); follow-up periods of those five candidates ranged from 10 to 27 months. In one of the three remaining candidates, a satisfactory level of adaptation was achieved but more than 4 months elapsed before his assignment to a duty squadron. After becoming sick in his first flight (F-104), he submitted a request to be removed from duty involving flying. In the remaining two candidates, the rate of their acquisition of adaptation not only was very slow but also, after leveling off, actually declined. In other words, poor as well as good performance is demonstrable in the slow-rotation room." (2).

Emergency locator transmitters (ELT) were not as effective as hoped: "[ELTs are] required to be installed in most general aviation aircraft since 1970, often don't work at all and, even when they do, their signals are rarely of any use. [The] Air Force [claims] that during 1975 and 1976, of all the ELT signals reported, less than 1% resulted in actually locating the crash sites with the aid of an ELT. The overwhelming majority of the ELT signals reported are false. Furthermore, nearly 90 of ELT signals emanate from the vicinity of airports." (5).

The year 1978 marks the birth of Wright State's Aerospace Medicine program: "One of the nation's newest medical schools is programmed to become, on July 1, 1978, the only civilian medical school in the country with a specialized aerospace medicine residency. The medical school is Wright State University School of Medicine, Dayton, Oh. John R. Beljan, M.D., Dean of the School, believes the Wright State program in aerospace medicine will fill a vacuum produced when the aerospace medicine residency at Ohio State University closed not long ago. At the time, the OSU program was the only non-military residency available in the country.... Roy L. DeHart, M.D., Acting Director of the new program, said the 3-year residency will include a year of academic training resulting in an MS degree in biology; a second year of the kind of clinical experience needed to pass specialty boards; and possibly a third year leading to a Ph.D. in biomedical science." (6).

See HISTORY, p. 805.

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AEROSPACE PHYSIOLOGY REPORT

Outgoing AsPS President's Remarks

Our 2003 meeting in San Antonio has come and gone, and I'm left with wondering where the year went. And what a year it was, filled with every kind of joy, tragedy, and challenge for the future. Coming together as we did gave us all a chance to reflect and refocus our efforts in pushing man's envelope in the aerospace environment.

San Antonio always feels like a homecoming, and it was made even more special by the attendance of so many of our "grey beards" at our luncheon and social event. We stand on the shoulders of giants, and those that went before us set the stage for the accomplishments of the current generation. It was great to hear the wisdom of our elders mixed with the raw enthusiasm of our younger physiologists. That is a dynamic combination that will serve our profession well into the future.

Our goal this year was to stress the Three R's of Renewal, Relevance, and Recognition. We wanted to reach out to physiologists everywhere and welcome them into our society, either as a new member or a returning former member. We wanted to stress the need for excellence in aerospace physiology as evidenced by attainment of board certification from the Aerospace Medical Association. And finally, we wanted to recognize the many accomplishments of our members, both past and present. I think we were successful in all three.

This year saw our membership swell to well over 240 paid-up members. As mentioned before, we were honored with so many of our esteemed elder colleagues attending our events. We established a committee chair mentor concept whereby a more senior physi-

ologist guides a junior member through the process of being a chair of a society committee. This way we promote involvement in our society at an early age, and foster participation in the committees of the parent organization. Two of our major committees, Education & Training and Luncheon & Social, followed this concept and resulted in outstanding panels, presentations, and social events. My thanks to Col Jim Dooley and Jim Webb for their willingness to help develop our junior members, and to Capt Jim Allen and Capt Julia Sundstrom for doing all the leg work as chairs of those two committees in making our contributions to the AsMA meeting such a success. Our training session on Controlled Flight Into Terrain was well-attended and received many fine comments. Our Smith Ames Memorial Lecture on space suit technology, given by Ms Amy Ross of NASA, was an outstanding verbal and visual presentation. My hope is that we will expand the mentor concept into other committees in the future, and build upon the initial success.

Although not a specific part of the AsPS, the Certification Committee headed by CDR Dave Service serves as the link to AsMA to certify our members in aerospace physiology. This year we had three sit for the examination, and we're glad to say all three were welcomed into the community of board certified physiologists at our luncheon. I thank Dave for all the work he and his committee have done to advance the study of aerospace physiology.

My special thanks to our awards sponsors who continue to partner with us in recognizing outstanding achievement by our members. Our long time sponsors (David Clark Company, Gentex Corporation, and International ATMO) were joined this year by NTI, who now sponsor our Paul Bert Award for Physiological Research. LCDR Lynn

Wheeler and her committee provided us with a slate of award winners that show the diversity and excellence of our membership. Our Partnership in Education Award Program, headed by CDR Tom Wheaton, once again found an excellent recipient in Ms Carol Leibl. Ms Leibl is a science master teacher in the San Antonio School System whose work with the development of other teachers and curricula was lauded. It was also a privilege for me to honor Mary Foley as the recipient of the President's Award, recognizing her many years of dedicated service to our society and leadership she has provided to all of us.

And while we're talking about recognition, I'd like to personally thank all the members of the Board of Governors, including the membership of all of our society committees, who willingly gave their time and talent to help me throughout the year. And finally, I'd like to thank all of you for your unwavering support this past year. It was indeed an honor to serve as your President. As I pass the lead to CAPT Donna Murdoch, I ask that you support her as strongly as you've supported me. Best of luck to all, and I hope to see all of you next year in Alaska!

CAPT Vince Musashe, MSC, USN

AsPS WEBSITE

Visit us online at our website, www.aspsociety.org, where you can register for membership, update membership information, contact society officers and committee chairs, learn about certification in Aerospace Physiology, vote for society officers, read about society awards and more.

From the AsMA Gift Shop

Polo Shirts	\$20.00
White on navy or navy on white 100% cotton AsMA logo Polo shirts in sizes S, L, XL, XXL.	
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Tie s	\$20.00
The tie is navy blue polysilk with "Aerospace Medical Association" printed as a gold stripe.	
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Publications

Self-Assessment CD-ROM	\$15
The newest version (2nd ed.) of our very popular aerospace medicine self-evaluation. With both questions and answers, it's a great way to prepare for boards and other professional exams. Plus: Hypobaric Decompression Sickness, Decompression Illness Workshop, Raising the Operational Ceiling, and Aircraft Accident Investigation Primer. Ask for details!	

To order please contact: Sheryl Kildall at (703) 739-2240, ext. 107 or Gloria Carter, Ext. 106; or write to the Aerospace Medical Association, 320 S. Henry Street, Alexandria, VA 22314-3579; or fax (703) 739-9652.

HISTORY, from p. 804.

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Operation HOMECOMING Mini-Reunion in San Antonio

By Lt Col (Ret) Charles R. Tupper (ANS Past-President)

Thirty years ago this past spring marks the return of our POWs from North Vietnam (12 February - 29 March 1973) on Operation HOMECOMING. Many members of the Aerospace Medical Association and the then "Flight Nurse Section" were a part of these historic aeromedical evacuation events and turn in US military history. The Aerospace Nursing Society marked this anniversary with a mini-reunion of former POW Brigadier General (Retired) Robinson Risner and Medical Crew Director Colonel (Retired) Beatrice Marin at the San Antonio Scientific Meeting, Aerospace Nursing Society Luncheon.

USAF Lieutenant Colonel Robinson Risner, a prisoner for seven and a half years, was on the second C 141A Starlifter (tail number 50243 - along with 33 other exPOWs) out of Gia Lam Airport in Hanoi North Vietnam on 12 February 1973. The medical crew onboard included:

Captain Beatrice M. Marin
Captain Patricia M. O'Reilly
First Lieutenant Dale G. Bloom
Master Sergeant Courtney H. Reid
Staff Sergeant Wayne L. Everingham
Staff Sergeant Roberto Garcia
Captain James L. Erwin

The ANS luncheon flyer included the following inspiring quotes:

"We went to Gia Lam, three miles from Hanoi, and were held there for a few hours. While sitting in buses on the ramp, we saw three C-141s make a circle. It was so beautiful. We couldn't believe a bird that big could be so graceful. Along the sides of the fuselage was painted UNITED STATES AIR FORCE with a big red cross on the tail."

BG Robinson Risner, USAF (Ret) from "The Passing of the Night, My Seven Years as a Prisoner of the North Vietnamese - © 1973 On second C-141 (50243) out of Gia Lam N Vietnam; 12 Feb 73 @ 1405 hrs

And from POW Captain Bob Certain, USAF, still at the "Hanoi Hilton":

"That morning [12 February 1973], we heard in the distance distinctive whining of C-141 engines. Immediately, we were at the windows watching it make its approach to the airport - a beautiful gray and white transport with a big red cross on its tail. At the last minute it made a missed approach, turning right toward the Zoo [prison complex]. As he approached, he waved his wings in a salute to us and reentered the landing pattern. We were shouting and jumping for joy. The guards tried to quiet us down, but it was no use."

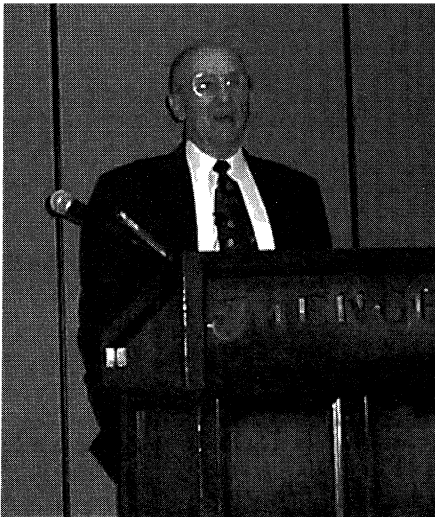
Chaplain (Colonel) Robert G. Certain, USAF (Ret) from, "Unchained Eagle: From Prisoner of War to Prisoner of Christ - © 2003 On the last C-141 (50280) on 29 Mar 73 @ 1832 hrs out of Gia Lam N. Vietnam

On 7 May 2003, 30 years and 84 days after "wheels up" out of Gia Lam Airport, Retired Brigadier General Risner and Retired Colonel Marin were reunited at the Aerospace Medical Association, Aerospace Nursing Society's (ANS) Annual Scientific Meeting luncheon in San Antonio, Texas. General Risner was on hand as a luncheon speaker for the ANS. He related his long captivity to his release and interface with the medical crews and hospital staff along the way. His speech was emotional and moving for all to hear ... especially those in the audience who had been involved with the missions (Col Marin; AsMA Executive Director, Secretary/Treasurer and Fellow, Dr. Russell Rayman; and AsMA member and Fellow, Dr. Frank S. Pettyjohn).

As an invited VIP guest, Colonel Marin had a chance to talk with General Risner and also talk with the ANS international membership of today.

Also on hand and our first luncheon speaker was Brigadier General Barbara Brannon, Commander of the 89th Medical Group at Andrews AFB, MD (and on her way to HQ USAF/SG as Deputy Surgeon General of the Air Force). General Brannon was recently nominated for a second star and will be the first active duty USAF nurse to wear 2-stars (Maj. Gen. Roberta Mills, TNANG and Maj. Gen. Irene Trowell-Harris, NYANG were the first 2 nurses in Blue to wear the second stars). General Brannon spoke on leadership, while General Risner gave us the important link to our historical past.

The Aerospace Nursing Society would like to extend their sincere thanks to Brigadier General Brannon, Brigadier General Risner and Colonel Marin for making this one of the most unforgettable luncheon presentations in our rich 39-year history.



OPERATION HOMECOMING--Brig. Gen. Risner recounts some of the memorable moments of his captivity as a POW during the Viet Nam War.

Aerospace Nurses Society Logo Design Contest

The Aerospace Nurses Society is on a fast-track to design and integrate a new logo for our organization.

As you might recall, the ANS started in 1964 as the "Flight Nurse Section". In the 90's, the organization decided that "Aerospace Nursing" better described the scope of our organization's interest. In 2002, we elected to change from a "Section" to a "Society" to better align our group with the other groups within the Aerospace Medical Association.

Since early in ANS's history, the logo has simply been Air Force Flight Nurse Wings encircled with the organization's name.

We have grown over the past 39 years. We have international members, and both civilian and military members. We also have members in the technician (military aeromedical evacuation technicians, flight EMTs/ Paramedics, etc) level. Quite simply, our organization has evolved ... but our symbol still reflects just a portion of the population.

It is time to design a new logo. The new logo should incorporate symbols which reflect our purpose, to enhance and improve patient care in the air through education and international collaboration. The logo should not be limited to any particular set of wings or symbol and should show the scope of our operations (earth to space). It should be simple, yet impressive; recognizable, yet unique.

Creative minds unite! Please provide your idea in a sketch format (use color or monochrome ... on an 8 1/2 x 11 sheet) with a narrative description of what you think your design communicates. The design selection will be made by the ANS Executive Committee, the logo design will be managed through the Awards Committee.

The logo design winner will receive a unique numbered ANS Coin (to be designed based on the selected logo) and a special ANS shirt.

Please submit your design to:
Charles R. Tupper
2326 Blue Shutter Road
Edisto Island, SC 20438-6620
e-mail: chatupper@comcast.net

Your design must be in no later than 31 October 2003 so we can select the design and incorporate into the ANS 40th Anniversary meeting in Anchorage, Alaska, in 2004.

Join the Aerospace Nurses Society!

Dedicated to the advancement of aerospace nursing...

Dues are just \$10. Membership is open to allied health professionals for \$5 a year. For further information, contact:

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WING NEWS & NOTES

Letter from "Lady B" The Wing, Travels, and Friendships

29th April 2003

James Boswell: "I do indeed come from Scotland, but I cannot help it..."

Samuel Johnson: "That, Sir, I find, is what a great many of your countrymen cannot help."

The deadline for this article is May 15th and I haven't even packed yet for the trip to San Antonio! This contribution will appear in July and is the first to be edited by our new Publicity Chair, Dale Orford.

On behalf of the WING, I should like to thank our out-going editor Elina Takahashi for her busy year in post and welcome Dale who has agreed to do the job for 2 years!

Please keep articles coming; we really are interested in what is going on in your lives.

Why, you may ask, do I have to write this now? The answer is that we will still be on American soil until the last week in May.

One of the great pleasures of being associated with AsMA and a member of the WING means that every year we meet up with friends from many years ago. Susan and Jack Bassick, Edward's AFB, CA, 1970 are the longest-standing.

In addition to these annual reunions, we have been able to visit many parts of North America where a number of our friends have settled. Last year for example, after Montreal, we flew on to the very beautiful Nova Scotia where my dear friend from nurse training days lives—we had great fun and almost had friction burns on the tongue!

When we were in Reno we travelled south down the Big Sur to Santa Barbara and Los Angeles meeting up with several families including Dutch and Dottie Ferryman who were more than generous with their hospitality. This year is no different as a friend from the 70's is flying over from California to see us post-conference.

That will be a great weekend, for in addition, and purely coincidentally, another family is gathering from LA for the Graduation of their son at San Marcos, just up the road, on Saturday 10th and we are thrilled that we are able to attend the ceremony.



BOAT TOUR--Wing members heading down the San Antonio River.

After those hectic days we fly down to Shalimar, FL, for another reunion again from our days in California in the 70's.

We shall be nursing severely abused bodies by the time we get home but will have so many more happy memories of important friendships.

My membership of the WING has given me wonderful opportunities to make truly good friends over the years and I am indebted to them for all the kindness of spirit and love that has been shown to us.

John and I are always thrilled when our friends from all over the world come to stay—so if you are in this neck of the woods just let us know.

Friendship Start Here: The WING of AsMA
Mary Baird
2003-04 Wing President

San Antonio Recap

Hats off to Marilyn Brath and her organizing committee for a very successful and enjoyable meeting in San Antonio. Terri Ireland, Jo Ivan, and Yona McNish outdid themselves in providing us with a varied and interesting program of activities. From the welcoming reception held out at Brooks City-Base, in the oldest wooden hanger still in use, to the wonderful luncheons with a TexMex kick, and two terrific tours highlighting the area's history, we were well entertained.

Our week began with Marilyn opening the meeting and welcoming everyone at the reception, and Dr. Claude Thibeault bringing us greetings from AsMA. Susi Bellenkes and Miyong Lee delighted us by wearing their native costumes. While we renewed old friendships and met our many new members, we sampled the Mexican buffet, all to the lively tunes of a Mexican band.

Then it was off to see the sights of San Antonio. Our first tour took us down the San Antonio River by boat, a very pleasant way to experience the River Walk area. We disembarked at the Old Ursuline Academy, once a private school for girls. The lovely old buildings, including the chapel and meeting rooms have all been refurbished, and are now part of the Southwest School of Art & Craft. We saw many examples of their most interesting work! Afterwards, we were ready for our delicious luncheon at the Club Giraud.

Thursday found us heading out to the Missions of San Antonio by bus under the guidance of our very knowledgeable and entertaining tour guide. We learned that the Missions were a way of acculturating the indigenous population into that of Spanish settlers. The Mission of San Jose, the first stop on our tour, was a beautiful semi-restored settlement. One could almost feel the presence of the Franciscan fathers and their native converts, and an informative diorama told of their daily activities. Next, we headed off to see several other examples of early missions, before experiencing another very tasty TexMex lunch. Our last stop was the Alamo, where we wandered at our own pace, before returning to our hotels. All in all, a wonderful week.

News from our Membership

We were delighted that Lorna Brown, a Past President, could be with us once again in this her 50th year with the Wing. She also noted that her horse, Harbro, has been very successful at both the San Anita and Bay Meadows race tracks.

Charter Member, Helene White reports that she has a new great grandson, born in February 2003. We were all very happy to see Helene looking so well after her recent quadruple bypass surgery.

Congratulations to Harriet Hodgson on being awarded the 2003 Olmsted County Lyle Weed M.D. Healthy Community Award "in recognition for leadership in helping solve public health problems through work and service." Harriet's book for children on nutrition was distributed to schools in Olmsted County, MN. Our ever busy Harriet was also installed as President of the Minnesota Medical Alliance, an affiliate of the AMA, on May 16th.

The Wing welcomed back our 1st international President, Val Nicholson. Val, a Canadian, was president in 1994, and presided over our previous meeting in San Antonio, so it was a bit of a nostalgic reunion for her. She and husband, Brent Haskell, are currently living in Cedar Falls, IA, and she is practicing emergency medicine in Des Moines. Val remarked on the wonderful sense of camaraderie and fellowship amongst Wing members, reminding us that the fellowship and support we have for each other is what gives the Wing its strength and makes it unique.

And last but not least, our multi talented Susi Bellenkes will once again lay down her artist's brushes and take up hammer and saw when she and husband, Andy, head home to Austria for their third labor camp. Susi reports that renovations to her ancestral home are nearing completion and that new wiring, plumbing, and a new roof, have all been installed. She is eagerly anticipating her future in Austria where she will continue her very busy and successful life as an artist. But before she can savor her Tyrolean lifestyle, Susi and Andy will relocate to Washington, DC, from California. We look forward to hearing about her adventures in our nation's capital.



THE COURTYARD OF THE URSULINE ACADEMY-- Mitzi Hansrote, Elizabeth Breuder & Kelly Taylor.

Send information for publication on this page to: **News of Members**
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Sharon A. ("Shari") Falkenheimer, M.A., M.D., M.P.H., was awarded a Master of Arts in Bioethics by Trinity International University, Deerfield, IL, in 2002. She was recently appointed by President Bush to the Board of Regents of Uniformed Services University of the Health Sciences in Bethesda, MD, and by the Secretary of Health and Human Services to the Advisory Committee to the Director, National Center for



Environmental Health of the Centers for Disease Control in Atlanta, GA. She holds academic appointments in bioethics in the Department of Medical Humanities and Ethics at the University of Texas Health Science Center in San Antonio and in aerospace medicine in the Department of Preventive Medicine and Community Health at the University of Texas Medical Branch in Galveston.

Col. Alan B. Berg, USAF, MC, Vacaville, CA, has recently completed Air War College in residences and has assumed command of the 50th Air Medical Dental Squadron at Ravis AFB, CA.

In Memoriam Corrie Lategan

(Adapted from a submission from Chris le Loux)

Cornelius J. "Corrie" Lategan passed away on 19 April 2003 at his home in Wilderness, South Africa.

Corrie was born on 18 September 1931 in the rural town of Parys, Free State, S A. He grew up on a farm and received a Diploma in Agriculture from the Potchefstroom Agricultural College.

He commenced flight training at Rand Airport, Johannesburg, in 1952 and had been flying ever since. He obtained a commercial pilot's licence with instrument rating and spent 6000 hours as pilot in command. In 1974 he commenced a domestic commercial air service, Transavia, in SA, which grew to a fleet of 9 to 14 light aircraft. His passion for flying was so strong that his wife, Dalene and all four their children obtained their pilot's licences.

In 1957 he commenced his medical studies at the University of Pretoria, receiving his M.B.Ch.B. in 1963. In 1965 he commenced private medical practice in Vanderbijlpark, which soon expanded into neighboring towns and grew to the largest partnership practice in SA.

In 1991 they built a private hospital under Corrie's leadership, which to this day serves the community.

It was natural that he would combine his passions for flying and medicine; hence he became a founding members of the SA Society for Aerospace and Environmental Medicine (SASAEM) in 1975 and also one of the Past Presidents of SASAEM. SASAEM awarded him with their medal for Meritorious Service.

Similarly he joined the Aerospace Medical Association, attended conferences regularly and was elected a Fellow of AsMA.

Corrie was also an Academician of the International Academy of Aviation and Space Medicine. He played a significant role in the development of Aviation Medicine in South Africa and abroad.

Obituary Listing

Owen G. Blackwell, CAPT, USN Ret., Pensacola, FL, former AsMA member, died March 26th at the age of 69.

Richard C. Sanbvor, CDR, MC, USN, Pensacola, FL, former AsMA member, died April 19 at the age of 48.

Reminder for Prospective Associate Fellows

The Chair of the Associate Fellows Group reminds prospective Associate Fellows that their applications must be received by August 1 each year in order to be considered for the annual selection.

Update forms are available from the Associate Fellows website at: www.homestead.com/ASMA/AFGHOME.html

Electronic Journal Archive We Need Old Journals

The Aerospace Medical Association seeks UNBOUND copies of the *Journal of Aviation Medicine* (1930-1959) and *Aerospace Medicine* (1960-1975) for scanning into a searchable data base. The purpose is production of an archival CD to provide all members with access to complete articles in all back issues either on line or through a personal copy of the CD.

Please contact us if you can provide unbound journals for this historic project. We need complete sets journals for 1930-1943 and certain later issues. To learn more, please contact Dougal Watson at watsondb@caa.govt.nz, or Pam Day at pday@asma.org (703)739-2240, ext. 101.

Membership Directory is now ONLINE!!!

Go to the website at www.asma.org and click on MEMBERS ONLY!

The site is secure and requires a password. Contact Gloria Carter to receive your password or change your information in the Directory: gcarter@asma.org.

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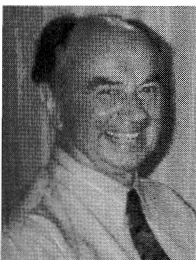
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GOLF TOURNAMENT--Members and friends played a 4 man/woman scramble tournament at Brooks City-Base golf course, on Sunday May 4, 2003. The tourney was sponsored by Wyle Laboratories, and the trophies were awarded at the end of the event.