

Orbiter

The Official Newsletter of the Aerospace Medicine
Student and Resident Organization



Orbiter is Back!

Welcome the first of the new Orbiters, AMSRO's newsletter. Together with AMSRO's website (www.amsro.org) and mailing list (groups.google.com/group/amsro), this newsletter will serve as the resource to keep in touch with what is happening in aerospace medicine, as well as training and career development opportunities.

In each of the next issues we will be also featuring one of the different aerospace medicine residency programs, so as to have a full collection by the end of the series. We will also feature a brief bio of one of the AMSRO officers currently working for you, so you can meet the team that is working to make AMSRO happen.

President's Message: The Role of AMSRO

by Alex Garbino

It is an honor to serve as the president of AMSRO. AMSRO has been in existence for fifteen years and during that time has served as the nexus for student and resident involvement in aerospace medicine. It is not just a forum for members to communicate with each other: AMSRO advocates for students in AsMA through a permanent seat on the executive council, offers an annual travel scholarship, facilitates mentoring, and provides leadership opportunities for its members. However, membership in the recent past has lost strength. At the 2008 AsMA Annual Meeting in Boston, I was proud to be elected as president of a new class of officers. We are eager to get every student and resident on the AMSRO membership rolls, and return AMSRO to its role as a gateway for incoming aerospace medicine professionals.

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NSBRI Internship

by Heather Mann

The National Space Biomedical Research Institute (NSBRI), funded by NASA, leads a science and technology program to develop countermeasures, or solutions, to the health-related problems and physical and psychological challenges men and women face on long-duration spaceflights. The research results and medical technologies developed have impact for similar conditions experienced on Earth, such as osteoporosis, muscle wasting, shift-related sleep disturbances, balance disorders, and

cardiovascular and immune system problems. To prepare the next generation of space life scientists, NSBRI offers a robust education and outreach program encompassing a variety of activities from curriculum and teacher professional development to summer internships, undergraduate and graduate education, and postdoctoral fellowships.

NSBRI's summer internship program provides the opportunity for undergraduate, graduate or medical students from across the country to join ongoing project activities and gain hands-on experience in space biomedical research at NASA Johnson Space Center in Houston. Interns have participated in research projects looking at the effects of radiation on human bones during spaceflight, developing models to predict solar particle events, examining physiological changes due to microgravity, documenting the effects of isolated, confined

environments on behavior and cognitive performance, and improving interaction between the human body and spacesuits.

Since 1998, 99 students representing over 70 colleges and universities have participated in the 10-15 week program. The program pays interns an hourly wage but does not cover housing or travel. Applicants must have completed their second year of undergraduate studies by the start of the internship. The program is open to U.S. citizens.

"Working at NASA through the NSBRI program was a totally unique experience. It was neat to be a part of something so huge. Specifically, working in the Cardiovascular Lab, I learned a lot about clinical study design and implementation, which has given me perspective in my career in biomedical research."
- Rena Burbey, Intern 2006.

To be considered for the program, applicants fill out an online application and upload a CV or resume and a letter of interest, which includes dates during the summer that they would be available. Two letters of recommendation, either professional or academic, are also required.

The deadline to apply for the 2009 program is January 31. Applications must be completed at the deadline to be considered for review. Faxed or emailed letters of recommendation will not be considered. Applications are reviewed in March, and applicants are informed of the status of their applications as soon as possible.

For additional information visit
www.nsbri.org/Education/SummerInternship.html
or contact Heather Mann, Summer
Internship Coordinator, at 713-798-7896 or
hmann@bcm.edu.

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This year, AMSRO will focus on strengthening and expanding its activity in five fundamental fields.

Student Advocacy

This newsletter is the first step in reaching out to all current AsMA students and residents. Many AsMA members are not aware of AMSRO's role. We will make sure that by next year's conference all potential members know what AMSRO offers and are aware of what they can contribute to AMSRO. We also represent students and residents on the Executive Council, ensuring that our voice is heard. However, we do not limit ourselves to working within AsMA: we will use our members to reach out to their academic institutions, increasing awareness of aerospace medicine to students and residents who are not familiar with the field. Furthermore, it is our intention to improve our outreach potential providing on-line information to AsMA members via an Internet portal. Our aim is to offer AsMA members an easy way to address interested students towards our Association.

Research and Scholarship

AMSRO's role goes beyond connecting people. We provide an annual 1000 USD travel scholarship that can be used for any aerospace medicine conference, as well as our Annual Meeting. Furthermore, we offer a scientific paper award to the best paper by an AMSRO member at the Annual Meeting. We are also working on sponsoring a panel at each meeting, including opportunities for talk rehearsal.

Professional Development

AMSRO provides strong peer group, which

gives new members an easily accessible network to get answers. Additionally, a peer group of this kind facilitates integration into the field of aerospace medicine. For example, AMSRO provides a mentorship program, connecting new members with aerospace medicine veterans. This ensures that the new members are exposed to the opportunities a career in aerospace medicine offers.

Education

Outreach in academic institutions to recruit members is important for the growth of the organization. However, it is important to give the wider community and young generations of students an opportunity to learn about aerospace medicine, since the challenges it faces as well as the related solutions have a significant impact on society. Our members will thus conduct outreach events in elementary and high schools as well as their own institutions.

Leadership

As a national organization, AMSRO provides a multitude of leadership opportunities. AMSRO's executive committee is certainly not the only one. We need members to represent AMSRO in each of AsMA's committees. Regional chapters are waiting to be established. We are always looking for members to write articles for Orbiter. We also need members in AMSRO's internal committees (including the Scholarship, Scientific Award and Membership Outreach committees). I invite you to contact any of the officers and we will be happy to provide you with all the relevant information. The experience you will acquire holding office

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within the organization and the skills you will develop early in your career will prove invaluable, no matter where your career takes you.

I hope this cursory overview of what AMSRO offers will encourage you to join the organization. We are always happy to answer questions, help you get acquainted with your field of interest, and serve as your peers in your future in aerospace medicine whether you are an interested observer or intend to make of it your lifetime's career. We also established a mailing list, so members can easily stay in touch with each other, discuss topics of interest, and use it as a forum for any questions members have. Because we are an organization spread all over the world, we rely heavily on the web as a means of communication, so do not wait for the annual meeting to contact us. You can find more information at AMSRO's website, www.amsro.org, including details on how to join the AMSRO mailing list.

The Launching of the Aerospace Medicine Association at McGill

by Laura Drudi

The Aerospace Medicine Association (AMA) seeks to promote the new field of aerospace medicine to the students and faculty at McGill University, as well as the Montreal community. Aerospace medicine consists of an international cooperation and an interdisciplinary approach to this medical field. AMA will provide the

opportunity to discover aerospace medicine, network with aerospace medicine specialists around the world, and provide guidance and resources to pursue aerospace medicine as a career. AMA will be a hub for space and medical enthusiasts and those seeking to discover this branch of medicine.

This club will invite speakers in the fields of medicine, aerospace research, and engineering. The hope is to have one speaker a month commencing with Dr. Dave Williams as a potential guest in October. Furthermore, this club will interact directly with the Montreal community through participation with Montreal elementary schools. We will plan activities with students and teachers spreading knowledge about space and medicine, and opening the young minds and imaginations to the limitless possibilities awaiting them in this field.

This club will further provide the opportunity for members to research career options and educational paths in order to see their dreams realized. It will provide a database of all available institutions offering diplomas, electives and residencies in aerospace medicine. AMA will also promote aerospace conferences occurring within our community and around the world. Space travel and aerospace medicine now complement each other and now the future of medicine lies in space.

*All interested participants, please e-mail
Laura Drudi at laura.drudi@mail.mcgill.ca.*

Hope to hear from you soon!

<http://aerospace.medicine.googlepages.com>

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JSC Aerospace Medicine Clerkship

by Derek Nusbaum

If you are a medical student, a resident, or even a practicing physician and are looking for a good opportunity to explore the field of aerospace medicine, I highly recommend the aerospace medicine clerkship at the Johnson Space Center.

I just finished the rotation in October and had a phenomenal experience. JSC is the epicenter for space medicine, and if you are interested in this field, there is nothing like learning from those who are responsible for shaping it.

During the rotation, you get a behind-the-scenes tour of JSC, led by faculty with an in depth knowledge of space medicine, as well as NASA and its history. You are given the opportunity to test the shuttle simulators, explore the International Space Station mock-ups, tour the space food laboratory, watch as astronauts train for extravehicular activities in the Neutral Buoyancy Laboratory, test the astronauts' countermeasure equipment, tour the space medicine clinics, and even watch Apollo 13 in historic mission control itself! We even had the chance to meet Michael Collins, the command module pilot for Apollo 11. Having the opportunity to meet those who are our childhood heroes and who have shaped the history of our country and our human race is an indescribable experience, and JSC is one of the few places where it can happen.

While at Johnson Space Center, you have the opportunity to listen to briefs and learn about space medicine from the premier experts in the field. You learn about the current challenges facing space exploration, and how to practice medicine in a completely new environment, with

all the challenges that come with it. You are given the opportunity to participate in important research, which not only helps to expand your knowledge, but may also have a profound impact on the field of space medicine for the future.

If you have an interest in space or space medicine, or are looking to try an elective that is new and different, there really is nothing like this aerospace medicine clerkship. I cannot recommend it enough!

Details can be found at

<http://spacemed.jsc.nasa.gov/education/Amc.aspx>

AMSRO Officers

This section features one of your current AMSRO officers

President: Alex Gabino

Vice President: Joseph Novak

Secretary: Rebekah Campbell

Treasurer/Membership Coordinator: Derek Nusbaum

Parliamentarian: Tovy Kamine

Chief Editor: Charles Mathers

Website Coordinator: Jennifer Law

President - Alex Garbino

Alex Garbino is an MD/PhD candidate at Baylor College of Medicine, in Houston, TX. Before entering medical school he completed a Bachelor's degree in Physics, at the University of Houston, in Houston, TX. It was there that he developed an interest for the physiological aspects of space flight, as well as the particular radiation environment astronauts are exposed to. In medical school,

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he joined AsMA and began attending meetings. He attended the Introduction to Aerospace Medicine Short Course at UTMB in Galveston, became a member of the Space Medicine Association, and at the AsMA Annual Meeting in 2008 was elected president of AMSRO.

As president, his goal is to grow AMSRO's rolls to include the majority of student and resident members of AsMA, make AMSRO the leading forum for aerospace medicine student discussions, and to increase awareness of aerospace medicine in medical schools.

Wings over Houston

by Greg Shaskan

The Wings Over Houston Airshow was a great success for all who helped out. This year we added a triage/mass casualty exercise with the Ellington Fire Dept as well as a preventive medicine health fair. This was in addition to our two medical tents and three roving bike teams.

Current estimates from WOH staff are that 40,000 people attended the show each day. In

total, our tents treated 57 people, 5 of which were transferred to the ER. Our bike

teams were amazingly fast and crucial in getting initial support to our more critical patients, as well as being our front line and public face. Our preventive medicine tent outreached to several hundred of the community, providing exercise, blood sugar, and blood pressure screenings, as well as information on basic nutrition, cholesterol and diabetes. Lost and found teams, working with bike teams and the paramedics quickly reunited 6 families. I could not be more proud of the work that all our staff did. They did this among the sacrifices of recent family crises, personal illness, long distance relocation and family time constraints, not to mention the recent weather event named Ike.



The show itself was a classic with the Thunderbirds ripping through the sky and Tora Tora filling the sky with WWII fighters. For those of you who are interested in helping out next year email gregshaskan@gmail.com.

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Scholarship Opportunities

Are the entry fees, flights and hotels keeping you from attending events? There are many scholarships being offered in aerospace medicine!

Make sure to check with your own school for travel scholarships to meetings; many schools set aside a fund specifically for student travel.

AMSRO Travel Scholarship (\$1000)

Sponsored by AMSRO, for travel to an aerospace medicine conference.

Deadline: February 14 (forward applications to garbino@bcm.edu)

http://www.asma.org/members/AsMA_scholarship_app.doc

Davis Scholarship (\$500)

Sponsored by the University of Texas Medical Branch for attending a UTMB-sponsored short course in aerospace medicine or the AsMA Scientific meeting.

Deadline: January 31

http://www.asma.org/members/Davis_Scholarship_App.doc

IAASM Scholarship (\$15000)

Sponsored by the International Academy of Aviation and Space Medicine this scholarship aims to help young physicians starting a career in aerospace medicine attend a formal course of instruction or gain research experience in aerospace medicine.

Deadline: June 30

<http://www.iaasm.org>

IAMFSP Scholarship (\$500)

Sponsored by the International Association of

Military Flight Surgeon Pilots for attending the AsMA Scientific Meeting.

Deadline: January 31

Send a letter describing your interest in the scholarship and why you would be the best candidate (less than 250 words) to:

IAMFSP Scholarship Fund; c/o Kris Belland; 5910 Osceola Rd.; Bethesda, MD 20816

Space Medicine Association Scholarship (\$500)

Sponsored by Dr. Jeffrey R. Davis to encourage students to pursue a career in Space Medicine; the recipient will also receive free registration for the AsMA Scientific Meeting.

Deadline: March 1

<http://www.asma.org/Organization/smb/scholar.htm>

On the Horizon

MICE - Medicine In Challenging Environments

February 2-6 2009, Galveston, TX

<http://www.trueresearch.org/mice2009/>

American Occupational Health Conference

April 26-29, 2009, San Diego, CA

<http://www.acoem.org>

15th International Symposium on Aviation Psychology

April 27-30, 2009, Dayton, OH

<http://www.wright.edu/isap>

AsMA Annual Meeting

May 3-7, 2009, Los Angeles, CA

<http://www.asma.org>

Aerospace Medicine Student and Resident Organization



MEMBERSHIP APPLICATION / RENEWAL FORM

Membership in AMSRO is open only to Members of the Aerospace Medical Association

NAME:		
LAST	FIRST	MI
CONTACT INFORMATION		
ADDRESS		APT
CITY	STATE	POSTAL CODE (ZIP)
COUNTRY		DAYTIME PHONE
EMAIL		ALTERNATE PHONE
OTHER INFORMATION		
AREA OF SPECIALITY/INTEREST AREA	LEVEL OF TRAINING (UNDERGRADUATE, MEDICAL SCHOOL, RESIDENT)	
ARE YOU CURRENTLY AN ASMA MEMBER? (Y/N)	ARE YOU CURRENTLY AN AMA MEMBER? (Y/N)	

Yearly membership into AMSRO is \$6.00.

Please Note:

- *You must be a member of AsMA to join AMSRO.*
- *Membership in the AMA is strongly encouraged as an adjunct to membership in AMSRO.*
- *The \$6.00 application fee can be submitted via paypal on the AMSRO website (www.amsro.org).*
- *This application can be electronically mailed to either Alex Garbino or Derek Nusbaum at garbino@bcm.edu or nusbaum1@msu.edu, respectively.*