



Arizona Branch AALAS Newsletter

Vol. 22 No. 2
June 2009

Arizona Branch of the American Association for Laboratory Animal Science

Have you sent in your membership renewal? If not, see form on last page.

Be Sure to Join Us for the Summer Video Conference - July 17 at 11 a.m. for Guest Speaker Rick Roth

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President's Message

Our Spring Symposium held April 10 at the Sheraton Tucson Hotel & Suites provided some interesting and valuable information for technicians and veterinarians. The rodent wet lab was well received and the exhibitors were very supportive.

A Summer Video Conference is being planned for July 17 with guest speaker, Rick Roth, President and CEO of the Arizona Heart Foundation. It should be an informative presentation. There will be a short general meeting after our speaker so be sure to tune in at one of our regional conferencing sites.

Our Fall Fun Event is being planned for the Phoenix area after the weather cools off a little. After several suggestions were received the most interest was for a behind-the-scenes of the Wildlife World Zoo & Aquarium. More information will be distributed in the coming months. Thanks to President elect Tedd Brandon who is working on plans for a great time.

It is time again to consider attending the Leadership Academy at the National AALAS meeting in Denver on November 8th. Member Lani Rathke attended last year in Indianapolis and had this to say, "I was honored to be chosen to attend the 2008 National AALAS Convention in Indianapolis and attend Leadership Academy. I learned about the back bones to AALAS. There were many different presenters that gave tips on how to function as a board or committee member, and guidance in dealing

Upcoming Meeting Dates

July 17: 11-noon - Summer Video Conference with guest speaker Rick Roth from Arizona Heart Foundation

Sept 17: noon-1pm - AZAALAS Board Meeting

October 2009 - Fall Fun Event: Behind-the-scenes tour at the Wildlife World Zoo & Aquarium

with the media and public relations. I never realized there were so many committees that are needed to maintain AALAS and how much effort is put forth to make it all happen. The end result of the meeting was: get involved with your local branch, your district, and at the national level. There are some great things that AALAS and the foundation does and needs all members to volunteer and support the cause." If you or someone from your institution plans to attend the meeting and would like to attend this informative and inspirational leadership training skills workshop, let me know.

The District 8 meeting is going to be held in Tempe in 2010 in conjunction with the MSMR SwAEBR 31's Conference at the end of April. It is not too early to beginning plans for a poster or presentation on a favorite topic of animal care. Volunteers will be

**Many Thanks to those companies who made our 2009 Spring Symposium a success!
Please show your support for them by thinking of them first when making a purchase!**

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**Special Thanks to the Following Companies Who
Sponsored this meeting Financially & Materially**

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needed as well for the various committees. Anyone interested in getting involved contact us at azaalas@ahsc.arizona.edu.

If you have any questions or comments feel free to contact me - Jane Criswell, 520-626-6747 or criswell@u.arizona.edu.

Minutes of Past Meetings

Minutes of the 11/20/08 Board Meeting

The meeting was held at the University of Arizona, Northern Arizona University, and Arizona State University via conference call. President Jeff Williams called the meeting to order at 12:02 p.m.

Jeff asked for corrections or changes to the minutes of the last board meeting from 9/18/08. The minutes were accepted as written.

Treasurer Grace Aranda reviewed the financial report. She reported that there was \$8,011 in all accounts, not including some outstanding checks for printing costs, donations and mailing costs.

An updated roster was distributed. We have two new members bringing our total up to 132 current AZ AALAS members. As these members joined so late we will prorate their membership for 2009.

Southern board member Paula Johnson reported that plans for the Holiday Installation event are coming along. We need to define a good time to allow for those driving into Tucson to attend. Early

afternoon was agreed as the best option. We are planning an Italian dinner with lasagna, salad and everyone bringing desserts. Soda and waters will be supplied by the branch. BYOB. A map has been created and will be distributed to the membership with a flier. We need to make sure we have a table available for the raffle items.

Grace gave an update on the Louise Brooks Memorial Raffle. Donations have been going well and she has been updating the list on the website accordingly. Ticket sales have been going well and Chrystal deserves a big congratulations for her progress. Please encourage members to send in their ticket stubs and money ahead of time to make recording easier. Anyone needing more tickets just needs to call. We

Member Profiles

James Grieco - Animal Technician, ASU

Jim Grieco is approaching his first year anniversary at Arizona State University. He moved to Arizona from New York state in 1995, attended ASU, and graduated with a BS in Conservation Biology. Jim worked as an Equine Vet Tech at Chaparral Animal Hospital and an Equine Care Taker at the Phoenix Zoo before coming to ASU. He has experience with chickens, rodents, guinea pigs, rabbits, and, of course, a variety of horse breeds. He is familiar with cage washing systems, autoclaves, Bio-Bubble, regular micro-isolators and conventional housing, Horsfal units, and Allentown Isolators.

After graduating, Jim found his Animal Technician position at ASU. He joined AzAALAS right away and has earned his LAT. One of his primary areas of interest is animal behavior. He enjoys breeding snakes and has 14 ball pythons at home along with two cats. Jim is engaged to a wonderful lady who not only shares and helps with his passion for snakes, she is a speech therapist and used their snakes as a learning tool because "s" is a difficult letter for the kids to pronounce. Jim loves being outdoors, camping, and observing wildlife. When asked, "How would you influence others to follow in your footsteps?" he said, "I try to lead by example."

Marion Sarmiento - Associate Director of Vet Services, Covance

Marion Sarmiento moved to Arizona last year from Texas before settling in Chandler, AZ. She was born in Lima, Peru and moved to the US at an early age. She earned a BA in Psychology/Biology from St. Louis University, her MS in Microbiology/Virology from the University of Chicago, a PhD in Microbiology, University of Chicago, and she received her DVM from Texas A&M University College of Veterinary Medicine. After receiving her DVM, she was faculty member, researcher, and lab animal veterinarian at the University of Texas M. D. Anderson Cancer Center, Houston, TX. Marion went into an entrepreneurial small business venture as the owner of a new, multi-species clinic - the first of its kind in the Houston area. She developed this clinic for over 10 years and sold it before coming to Arizona to join Covance as the lead veterinarian for their new site in Chandler. She has worked with a wide variety of research, exotic, and domestic species in her career and has been a National AALAS member for 23 years. The use of appropriate species in animal representation is important to her and her experience with many species helps in that goal.

Marion is married and has two parrots and one dog. She is an avid fisherman, photographer, public speaker, educator, loves the outdoors, and she enjoys attending the symphony. She tries to influence others by example and teaching through her love of life and the world around her.

need an emcee as Dr Martin will not be attending.

President elect Jane Criswell reported that we need to get the committees up and running for the Spring Symposium. Registration rates have yet to be set. The call for abstracts is already up on the webpage and has been announced. Committee chairs are as follows: Vendor - Frank McFadden, Registration - Jaime White James, Raffle - Chrystal Redding, Program - Jane Criswell, Poster - Jeff Williams, Publicity - Grace Aranda, Security - Wendy Keswater, and Speakers - Paula Johnson. Chairs are encouraged to recruit the necessary volunteers for their committees. Duties were distributed with today's agenda and chairs should feel free to get started on their preparations. Anyone with questions or needing

help can put word out on the board listserv.

Officer nominations went well though those willing to run came up short. Ballots will be counted by Jane Criswell and April Wagner after the due date and announced as usual at the installation event. We had 5 nominees for Technician of the Year and 4 nominated for member of the year. Our judging panel will finalize their decision and the results will be announced at the installation as well. As usual awards and ribbons will be presented.

Grace reported that the branch might consider branch membership in the AALAS Learning Library. For a cost of less than \$800 we can offer access to 16 members. Pam Grabeel from national stated that we can offer access to interested members for about \$50, half the cost of usual access, which would allow those interested in

training online. We might get Pam to come out to our symposium in April to explain how things work.

The board meeting schedule for 2009 will include extra meetings leading up to the symposium though these meetings can be cancelled if the board decides they are not necessary.

The meeting adjourned at 12:22 p.m.

Minutes of the 1-29-09 Board Meeting

The meeting was held via conference call at the University of Arizona, Northern Arizona University, Arizona State University, Arizona Heart Institute, and St Joseph's Hospital. President Jane Criswell welcomed and thanked the new officers for their willingness to serve

TBR Corner by Cindy Madura

Symposium Wet Lab a Success

The Rodent Techniques lab went very well here at Arizona Health Science Center. Dr. Rand showed participants anesthesia; Bethany Skovan and April Wagner demonstrated injections and blood collection. Basic handling and mice identifications were also demonstrated. Dr. Besselsen and Justin Towne did the necropsy portion of the lab as well as collection of specimens for routine health monitoring. Attendees were encouraged to participate.

The response from attending technicians was extremely positive. Everyone really felt they had learned something new. Although the lab went well it was suggested by attendees and instructors that a little more time should be added to future wet labs. This would give the instructors more time to talk about the techniques and attendees more time to participate and ask questions.

If you would like more information feel free to contact me at madurac@u.arizona.edu.

on the board and called the meeting to order at 12:03 p.m.

The minutes of the meeting on 11/20/08 were distributed and reviewed. Jane asked for corrections or changes to the minutes. The minutes were accepted as written.

Secretary Grace Aranda distributed the membership roster and reported that we currently have 30 members in good standing for the year with more coming in each week. She has sent the report of the new board to the National AALAS office. She reminded the board members that they have to have their dues paid by the end of January to remain in good standing.

Treasurer Wendy Keswater distributed the end of year financial report for 2008 as well as January

2009. She reported that there was \$10,779.90 in all accounts, not including some outstanding checks for: SwAEBR membership, new certification materials, installation event, awards, quicken update, video conferences, tech week items.

Grace distributed a summary of the 2008 Louise Brooks memorial raffle. We received a total of \$3,349 in receipts. With \$180 in expenses the net receipts come to \$3,169. Tim Martin has kindly offered to donate \$131 to even the total up to \$3300 for the Pediatric Unit of the Flagstaff Medical Center, Arizona Special Olympics and The Child life Activity Center.

Grace distributed the draft of the newsletter. Corrections were suggested and it will be going to the printers next week. Anyone with ideas for the next newsletter and member profiles should contact Grace.

Jane reported that we have only received 2 abstracts for the Spring Symposium on April 10th and encouraged all board members to solicit entries. The Symposium will be held at the Sheraton Tucson Hotel & Suites with speakers, a keynote, poster contest with cash prizes, exhibitors and a wet lab. She asked Technician Branch Representative Cindy Madura about the progress of the rodent wet lab. Cindy reported that she will be meeting with Dr Besselsen and April Wagner to finalize plans and needs. Jane reminded all board members of their assigned committees which they will be chairing: Jane Criswell - Program committee; Registration committee - Cindy Madura; Southern Board Representative Paula Johnson, President elect Tedd Brandon and SwAEBR Representative Tim Martin - Speakers committee; Wendy Keswater - Security; Northern Board Representative - Sponsor committee; Vendor Liaison Frank McFadden - Vendors committee; Grace Aranda - Audiovisual committee; and Central Board Representative Emily Radomski - Exhibitors raffle committee. She reminded everyone they will be responsible for forming their own

committees of volunteers and reporting at the next board meeting of progress and needs.

Jane mentioned that the board had received some member concerns about the need for more member input, opportunities to interact and the need for more certification materials. The messages were forwarded to all the board members prior to this meeting and some discussion has already gone on. As mentioned we had already agreed to purchase more training materials in a graduated manner beginning with the ALAT. The comment about interaction is supposed to come in part via the video conferences before or after speakers which may have been overlooked at recent events and this is a good reminder that it does need to be part of these programs. The biggest opportunities for networking and interaction is the fun events, installation and of course the symposium. Jane mentioned that we had not had a survey of the membership for some time and she suggested a subcommittee to begin work on this project. Anyone wanting to be included in this committee should contact Jane.

Jane mentioned that February 1-7 is International Tech Week. The branch has once again ordered pins, calendar strips, pamphlets, posters, etc which we will be mailing out to our member institutions. Be sure to get your count to Grace today. As usual the branch will reimburse \$25 for smaller groups (29 and under) and \$50 for 30 or more. Submit your receipts to Wendy.

Grace reported that we have requested Pam Grabeel from National AALAS to come out to the symposium to speak about the AALAS Learning Library. She will give something along the lines of the workshop she provided at the national meeting in Indianapolis. With the poor economy this might not be the best time to consider joining as a branch and providing deferred access to members but it will be good to get the word out should things improve.

Jane mentioned that some changes are needed to the board meeting schedule. The February and March meetings need to be changed to Tuesdays instead of Thursdays to allow for lab meetings. The board members agreed the change would be alright and the schedule was changed accordingly.

Tim announced that the District 8 Council is in the planning stages for the 2010 meeting and it is possible it could end up being piggy backed with the MSMR SwAEBR 3 I's Conference in the Tempe area. If that is the case we will need volunteers so give folks a heads up. He will keep us informed of further updates.

The subject of the events was raised. With the symposium in April there will be no Spring Video Conference. We need suggestions for the Fall/Summer Fun Event. Tedd suggested something water related like Sunsplash or Golf land in the Phoenix area. He will look into venues and report back. We will need to do a Fall/Summer Video Conference and need ideas for speakers. Suggestions for speakers should be sent to Tedd.

The meeting adjourned at 12:38 p.m.

Minutes of the 2-24-09 Board Meeting

The meeting was held via conference call at the University of Arizona, and Arizona State University. President Jane Criswell welcomed and thanked the board members who took the time to attend. She called the meeting to order at 12:03 p.m.

The minutes of the meeting on 1/29/09 were distributed and reviewed. Jane asked for corrections or changes to the minutes. The minutes were accepted as written.

Secretary Grace Aranda distributed the membership roster and reported that we currently have 62 members in good standing for the year with more coming in each week.

The financial report was distributed. There was \$10,261.05 in

all accounts, not including some outstanding checks for: SwAEBR membership, new certification materials, raffle disbursements, installation event, awards, teleconferences, and newsletter printing.

Grace distributed a Buyers Guide summary. We have already received a total of \$900. Board members should check the list and be sure to distribute information to their institutions vendors. All forms are up on the website. The deadline is May 1st.

Grace announced the January newsletter was printed and mailed as reminder to members to renew their membership as usual. We will be printing our next newsletter after the symposium to include information from that event. We have used all our member profiles and need to obtain more. Grace will distribute the form to all members via the listserv. Anyone with ideas for the next newsletter and member profiles should contact Grace.

Jane reported that we have only received 4 abstracts for the Symposium and encouraged all board members to solicit entries. Those submitting posters will be asked to make a presentation to fill out the program. She asked Technician Branch Representative Cindy Madura about the progress of the rodent wet lab who reported that she will be meeting with Dr Besselsen and Treasurer Wendy Keswater to finalize plans, pricing and needs. Jane reminded all board members of their assigned committees and that they are responsible for forming their own committees of volunteers and reporting at the next board meeting of progress and needs. Grace announced that the registration form that was distributed has been updated according to the suggestions by the board. The biggest change was to the exhibitor registration to allow for easier servicing. She will distribute information on the symposium to the membership, district, etc.

Jane mentioned that the board had received some member

concerns about the need for more member input. Jane encouraged board members to survey their regions for areas of concern and ideas will also be brought before the members at the symposium. A subcommittee will be set up to work on this project. Anyone wanting to be included in this committee should contact Jane.

Jane reported that we have made a purchase of certification materials for all three levels. We now have multiple copies of ALAT, LAT, and LATG certification manuals and workbooks including the regulator workbook. Members in good standing may borrow materials for up to six months as need allows. Those needing materials for a longer period need to check materials back in according to schedule, but can resign items out for another 6 months.. Anyone needing to sign out materials should contact Grace or email azaalas@ahsc.arizona.edu.

Jane requested each institution report on their Tech Week events: ASU had a tech week party with raffle items; UA had a large event with Animal Care and investigators and distributed certificates, calendar strips, dvds, pins, posters, and membership forms. Jane suggested that each region have someone write up a paragraph of two on their events and submit it to Grace for inclusion in the newsletter.

Jane mentioned that President elect Tedd Brandon has suggested something water related like Sunsplash or Golf land in the Phoenix area for our summer fun event. He is checking into venues and we expect him to report back at the next meeting. We will need to do a Fall Video Conference and need ideas for speakers. Suggestions for speakers should be sent to Tedd.

The meeting adjourned at 12:44 p.m.

Spring Symposium Review

The 2009 Arizona AALAS SwAEBR Symposium was held April 10th in Tucson, AZ. The primary goal of SwAEBR (the Southwest Association for Education in

Biomedical Research) is “developing and implementing a strong proactive campaign to educate school children, as well as the general public, in the vital role biomedical research plays in their everyday lives.”

The symposium was an all day event. There were 17 exhibits in the vendor room giving away lots of promotional goodies. Thirteen industry professionals from around the country presented on topics ranging from an evaluation of a new serodetection method for rodent health monitoring to learning how to get the most from the AALAS Library. Some attendees were able to participate in an educational rodent wet lab, as well. Perhaps the highlight of the day was key note speaker, Dr. Gail Stevenson from the University of Arizona. Dr. Stevenson discussed the connection of pet behavior to their neurochemistry. She provided everyone with a lot of useful information when it comes to understanding their pet’s behaviors and various ways to train and treat the behaviors that need modification.

It was a beautiful day in Tucson. The symposium was a great time and several raffle prizes were given out at the end. Everyone left with a lot more knowledge and it was nice to meet so many of our wonderful colleagues. If you would like more information about SwAEBR, please visit www.swaebr.com. - Emily Radomski

**Cost of Caring Brochure
Enlightens Techs on the
Grieving Process**

The Cost of Caring brochure, an old AALAS favorite, has been updated with a new look. This brochure covers the emotional experience and the grieving process that technicians experience in working with animal illness and death. It also honors the satisfaction that technicians feel from providing affection to the animals and not just meeting essential needs in providing food, water, and sanitation. The brochure offers suggestions for dealing with these important

emotions and provides tips for management in helping personnel adjust to these feelings. Managers can learn to recognize the signs of stress in personnel, rotate personnel to distribute job responsibilities accordingly, and implement policies respectful to staff choices regarding euthanasia. Technicians can learn more about the grieving process, acknowledge their feelings are valid, and learn how to cope with their emotional reactions. By learning about the grief process and considering how we can console others, everyone can find ways to support co-workers in the laboratory animal workplace. Such support helps to maintain a healthy and productive climate in the animal research environment for both humans and animals.

Follow the link below to get a copy of this important brochure to share with your coworkers: <http://www.aalas.org/pdf/06-00006.pdf>

Spring Is in the Air

By Scott E. Perkins, VMD,
National AALAS President

It is now officially spring, which means all of the regional and district AALAS meetings are just around the corner. I encourage everyone to take the opportunity to attend these meetings to earn continuing education units, visit vendor exhibits, and network with your colleagues. These events are excellent venues to learn new things, see new products, and meet up with both old and new friends.

The AALAS Board of Trustees met in mid-March for the first board meeting of 2009. The agenda was full, and the board was very efficient with getting through all of the business items. I am happy to report that AALAS remains in a strong financial position despite the global recession. And all of the available indicators are showing that the National Meeting in Denver will be as successful as ever. In fact, the Program Committee will have the difficult task of selecting meeting topics from a record-breaking number of submissions. To

complement the Diabetes Spotlight Forum, the opening session will feature three-time Olympian Gary Hall, Jr. as the keynote speaker. Gary is both a world-class athlete and a champion for diabetes research and awareness. The Local Arrangements Committee is working hard to put together a fantastic reception to welcome us all to Denver. And although the National Meeting is more than enough reason to visit Denver in November, there should be snow on the mountains for those who choose to extend their stay and hit the slopes! Don’t forget to check out the website for further details about the National Meeting at <http://nationalmeeting.aalas.org/>.

The BOT made several important decisions at their meeting, including taking the initial steps to transition the AALAS elections to an online format. This will require a change in AALAS bylaws, but it is anticipated that the 2010 elections will be conducted online; for those without email, paper ballots will be made available. In addition, the BOT is examining a cost reduction for program participants at the National Meeting starting in 2010. This will be a member benefit for those that participate in the National Meeting. Once finalized, AALAS will announce the fee structure. Finally, AALAS welcomes its 51st branch with the addition of the Hawaii Branch!

The ballots for the 2009 elections are almost set, with an April 15th submission deadline for the district trustees. AALAS is fortunate to have two outstanding candidates for vice president-elect, Dr. Kathy Laber and Dr. Kim Saunders. The ballot is equally strong for secretary/treasurer, with Deb Benner and Dr. Laura Conour running this year. I strongly encourage all AALAS members to take the time to vote in this year’s election for your district trustee and secretary/treasurer.

Lastly, I want to take the opportunity to thank the AALAS staff for their dedication and hard work each and every year. As an active volunteer of AALAS for the past 14 years, I was always aware of how important the AALAS staff is to the

success of our organization. However, as president, I have an even greater appreciation of just how important they are and how well the organization is managed. I am sure that most AALAS members know our Executive Director Ann Turner, and many of you know one or more of the 5 department directors and administrative manager. But how many of you know that the AALAS staff consists of 36 dedicated individuals? We can all be thankful for these people that keep our organization running efficiently and productively, at or below budget each year! I encourage you to thank the AALAS staff members as you interact with them.

I look forward to seeing many of you at upcoming meetings. Don't forget to start making your plans for Denver, November 8–12, 2009!

(AALAS in Action, April 2009)

ALLENTOWN OFFERS FREE IN-HOUSE AND OFF-SITE TECHNICAL TRAINING PROGRAMS

Training Programs Satisfy AALAS Standards and Requirements and Provide Continuing Education Credits

Allentown, Inc., the global leader in research animal housing, today rolled out its latest schedule of in-house and off-site technical training programs. The training seminars – which satisfy AALAS standards and requirements, provide continuing education credits for eligible participants, and meet mandatory institutional requirements for LAS Veterinarians – are offered free of charge and can be held at either Allentown Corporate Headquarters or a participant's facility.

"Our goal is to provide unsurpassed service as a complement to our exceptional product line," said Mike Sidelsky, Sr., RLATG, facility specialist for Allentown, and the program's primary instructor. "To that end,

we've dedicated ourselves not only to direct instruction on our cages and racks, but to the continuing education of the biomedical research community as a whole through ongoing training and support."

Mr. Sidelsky has over 45 years of experience in the field of lab animal science, including 40 years as a supervisor, manager, and director of animal facilities. Prior to joining Allentown, his previous 28 years were dedicated to rodent housing – including working with infectious disease and its containment, and husbandry – including breeding and producing 39,000 SCID mice. He has served on Institutional Animal Care and Use Committees, is a faculty member of the Institute of Laboratory Animal Management, and has maintained accreditation by AAALAC International.

"We were preparing for an upcoming AAALAC site visit," said a facility manager who was an early participant in the training program. "And the instruction we received from Allentown not only helped us pass through with flying colors, but provided our staff with comprehensive training that we could continue to apply going forward."

Training topics include IVC Systems, Animal Health Monitoring, Husbandry Techniques, Animal Transfer Stations, Air Flow Technology and many others. To schedule a training session at your facility or at Allentown, please go to www.allentowninc.com/training.

About Allentown, Inc. - Allentown, Inc. is the global leader in research animal housing with more than 15,000 IVC installations worldwide. For more than 40 years, Allentown has provided quality products and services to the biomedical research community. For more information, visit www.allentowninc.com.

Nominations are now being sought for the 2009 Leadership Academy

National AALAS has for the past several years held a leadership

skills training seminar in conjunction with the AALAS National Meeting. The AALAS Leadership Academy this year will be held in conjunction with our 60th National AALAS Meeting in Denver, Colorado. The training is open to representatives from each branch who are attending the national meeting at no additional cost to the individual.

Branch members may nominate themselves or someone else; however, **the nomination must be endorsed by the Branch President.** Each branch is allowed one primary and one alternate individual to attend. A branch may submit additional alternates to be placed on a waiting list, this list will be used to fill any available vacancies that may be created should a branch not nominate any attendees. Branch officers are asked to ensure that this information is relayed to all branch members and we suggest this information be printed in your branch's newsletter as a resource. In order for an attendee to receive their certificate of completion from Leadership Academy they must be prepared to attend the entire session.

Beginning this year the Leadership Academy sessions will be held one day only on Sunday, November 8th 2009. The sessions will be held in the Hyatt Regency Denver Hotel on Sunday, November 8, 2009 and will begin promptly at 7:00 a.m. Breakfast will be served and the Leadership Academy materials will be provided for each participant upon their arrival. A noon luncheon will be provided and the attendees will have an opportunity to meet with members of the AALAS Executive Committee and Board of Trustees.

Anyone interested in attending for the AZ branch needs to be attending the meeting in Denver (no travel costs are included) and let President Jane Criswell (criswell@u.arizona.edu) know by June 30. Nominees who submit the nomination form to the AALAS office no later than July 1st will be notified of their acceptance on or before July 2nd, and they will be

able to make their hotel reservation prior to the time when the National Meeting housing opens to the general membership. Any questions contact azaalas@ahsc.arizona.edu.

Regulation Update

M. Shalev, MSc, VMD

OLAW'S New Guidance on Timing of Protocol Reviews - On January 16, 2009, OLAW stated in its section of frequently asked questions that, with rare exceptions, the IACUC must review proposed animal research activities at the time of grant award if the animal research activities will not be conducted until year four or five of a grant.¹

PHS requires investigators to provide the information below about use of animals in the Vertebrate Animal Section of the Research Plan of grant applications and in contract proposals:

1. Detailed description of the proposed use of the animals in the work outlined in the Research Design and Methods section. Identify the species, strains, ages, sex, and numbers of animals to be used in the proposed work.
2. Justification of the use of animals, the choice of species, and the numbers to be used. If animals are in short supply, costly, or to be used in large numbers, an additional rationale for their selection and numbers are required.
3. Information on the veterinary care of the animals involved.
4. Description of procedures for ensuring that discomfort, distress, pain, and injury will be limited to that which is unavoidable in the conduct of scientifically sound research. A description of the use of analgesic, anesthetic, and tranquilizing drugs and/or comfortable restraining devices, where appropriate, to minimize discomfort, distress, pain, and injury.
5. Description of any method of euthanasia to be used and the reasons for its selection. And a statement whether this method is consistent with the recommendations of the American Veterinary Medical Association

Guidelines on Euthanasia, or if not a justification for not following these recommendations.

The IACUC must approve the proposed use of animals described in the grant application or contract proposal. A prospective awardee institution and all other awardee institutions must verify the approval by the IACUC of those components of the application, proposal, or contract related to the care and use of animals before conducting PHS-supported animal activity.

IACUC approval is valid for a maximum of three years, but animal protocols may change during the life of the protocol which, if significant, require prior IACUC approval of the proposed changes. (See below for OLAW's examples of changes it considers significant.) In rare cases, IACUC review of animal activities may be conducted later during the period of grant or contract, e.g., when animal activities in a given grant or protocol start later than the start of the grant or contract. In such circumstances, the funding component will issue a Notice of Award with a special term and condition indicating that no funds may be drawn from the grant or contract for animal activities until a valid IACUC approval date has been provided to the funding component.

OLAW's examples of significant changes to a project that require IACUC review

- in the objectives of a study;
- from non survival to survival surgery;
- resulting in greater discomfort or in a greater degree of invasiveness;
- in the species or in approximate number of animals used;
- in Principal Investigator;
- in anesthetic agent(s) or the use or withholding of analgesics;
- in the method of euthanasia; and
- in the duration, frequency, or number of procedures performed on an animal. [A4, A7, A13]

Changes in personnel other than the Principal Investigator need not be considered significant provided that an appropriate administrative review mechanism is in place to ensure that all such personnel are appropriately identified, adequately trained and qualified, enrolled in applicable occupational health and safety programs, and meet other criteria as required by the IACUC. See NIH Guide for Grants and Contracts NOT OD-03-046.

The IACUC has some discretion to define what it considers a significant change, or to establish a mechanism for determining significance on a case-by-case basis. Because significant changes require IACUC approval (using one of the valid methods described in question 3 under Protocol Review, and using the criteria described in question 6 under Protocol Review), it is critical that the IACUC clearly define and communicate to investigators its policy and mechanism for determining significance.

Scientists Link Influenza A (H1N1) Susceptibility to Common Levels of Arsenic Exposure

The ability to mount an immune response to influenza A (H1N1) infection is significantly compromised by a low level of arsenic exposure that commonly occurs through drinking contaminated well water, scientists at the Marine Biological Laboratory (MBL) and Dartmouth Medical School have found.

Joshua Hamilton, the MBL's Chief Academic and Scientific Officer and a senior scientist in the MBL's Bay Paul Center; graduate student Courtney Kozul of Dartmouth Medical School, where the work was conducted; and their colleagues report their findings this week in the journal *Environmental Health Perspectives*.

"When a normal person or mouse is infected with the flu, they immediately develop an immune response," says Hamilton, in which immune cells rush to the lungs and produce chemicals that help fight the

infection. However, in mice that had ingested 100 ppb (parts per billion) arsenic in their drinking water for five weeks, the immune response to H1N1 infection was initially feeble, and when a response finally did kick in days later, it was "too robust and too late," Hamilton says. "There was a massive infiltration of immune cells to the lungs and a massive inflammatory response, which led to bleeding and damage in the lung." Morbidity over the course of the infection was significantly higher for the arsenic-exposed animals than the normal animals.

Respiratory infections with influenza A virus are a worldwide health concern and are responsible for 36,000 deaths annually. The recent outbreak of the influenza A H1N1 substrain ("swine flu")--which is the same virus that Hamilton and his colleagues used in their arsenic study--to date has killed 72 people in Mexico and 6 in the United States.

"One thing that did strike us, when we heard about the recent H1N1 outbreak, is Mexico has large areas of very high arsenic in their well water, including the areas where the flu first cropped up. We don't know that the Mexicans who got the flu were drinking high levels of arsenic, but it's an intriguing notion that this may have contributed," Hamilton says.

The U.S. Environmental Protection Agency considers 10 ppb arsenic in drinking water "safe," yet concentrations of 100 ppb and higher are commonly found in well water in regions where arsenic is geologically abundant, including upper New England (Massachusetts, New Hampshire, Maine), Florida, and large parts of the Upper Midwest, the Southwest, and the Rocky Mountains, Hamilton says.

Arsenic does not accumulate in the body over a lifetime, as do other toxic metals such as lead, cadmium, and mercury. "Arsenic goes right through us like table salt," Hamilton says. "We believe for arsenic to have health consequences, it requires exposure day after day, year after year, such as through drinking water."

Arsenic exposure not only disrupts the innate immune system, as the present study shows, it also disrupts the endocrine (hormonal) system in an unusually broad way, which Hamilton's laboratory discovered and first reported in 1998.

"Most chemicals that disrupt hormone pathways target just one, such as the estrogen pathway," he says. "But arsenic disrupts the pathways of all five steroid hormone receptors (estrogen, testosterone, progesterone, glucocorticoids, and mineralocorticoids), as well as several other hormone pathways. You can imagine that just this one effect could play a role in cancer, diabetes, heart disease, reproductive and developmental disorders--all the diseases that have a strong hormonal component."

At this point, Hamilton thinks arsenic disrupts the innate immune system and the endocrine system through different mechanisms. "Arsenic may ultimately be doing a similar thing inside the cell to make these effects happen, but the targets are likely different," he says. The proteins that mediate hormone response are different than the proteins that mediate the immune response. "We don't yet know how arsenic disrupts either system at the molecular level. But once we know how it affects one system, we will have a pretty good idea of how it affects the other systems as well."

Presently, Hamilton's lab is focused on understanding the unusual "biphasic" effect that arsenic has on the endocrine system. At very low doses, arsenic stimulates or enhances hormone responses, while at slightly higher doses (still within the range found in drinking water), it suppresses these same hormone responses.

"Why we see that dramatic shift (from hormone enhancement to suppression) over such a narrow dose range is quite fascinating and totally unknown," Hamilton says. "Our principal focus is to figure out this switch. We think that will help us understand why arsenic does what it does in the body."

Hamilton, who joined the MBL in 2008, was formerly a faculty member in the Department of Pharmacology and Toxicology at Dartmouth Medical School. He was also founding director of the Center for Environmental Health Sciences at Dartmouth, an associate director at Dartmouth's Norris Cotton Cancer Center and directed the university's NIH Superfund basic research program for 11 years. He continues to collaborate as a member of Dartmouth's Toxic Metals Research Program. Courtney Kozul, who conducted the present study, is a graduate student in Hamilton's research group who is completing her doctorate at Dartmouth Medical School in the Program in Experimental and Molecular Medicine.

This research was funded by the Dartmouth Toxic Metals Research Program Project by a grant from NIH-NIEHS and its Superfund Basic Research Program (grant P42 ES007373). - Source: [Marine Biological Laboratory Press Release](#)

Why do People with Down Syndrome Have Less Cancer?

Most cancers are rare in people with Down syndrome, whose overall cancer mortality is below 10 percent of that in the general population. Since they have an extra copy of chromosome 21, it's been proposed that people with Down syndrome may be getting an extra dose of one or more cancer-protective genes. The late cancer researcher Judah Folkman, M.D, founder of the Vascular Biology Program at Children's Hospital Boston, popularized the notion that they might be benefiting from a gene that blocks angiogenesis, the development of blood vessels essential for cancer's growth, since their incidence of other angiogenesis-related diseases like macular degeneration is also lower. A study from Children's confirms this idea in mice and human cells and identifies specific new therapeutic targets for treating cancer.

Publishing online May 20 in the journal Nature, cancer researcher

Sandra Ryeom, Ph.D., and colleagues from Children's Vascular Biology Program show that a single extra copy of *Dscr1* (one of the 231 genes on chromosome 21 affected by trisomy, with three copies rather than two) is sufficient to significantly suppress angiogenesis and tumor growth in mice, as well as angiogenesis in human cells. The team also found its protein, DSCR1, to be elevated in tissues from people with Down syndrome and in a mouse model of the disease.

Finally, Ryeom and colleagues showed that these extra genes suppress VEGF signaling via a specific signaling pathway inside endothelial cells -- the calcineurin pathway. Until now, Ryeom says, little has been known about the internal pathways VEGF activates once it binds to cellular receptors; most existing anti-VEGF drugs work by simply binding to VEGF (like Avastin) or blocking its ability to bind to its cellular receptors.

"We're now moving further downstream by going inside the cell," Ryeom says. "When we targeted calcineurin, we suppressed the ability of endothelial cells to grow and form vessels. While it's likely not the only pathway that's involved, if you take it out, VEGF is only half as effective."

Ryeom and her group next validated the mouse findings in human cells. In collaboration with George Daley, M.D., Ph.D., and colleagues in the Stem Cell program at Children's, she worked with induced pluripotent stem cells (iPS cells) created from skin cells from a patient with Down syndrome -- one of 10 disease-specific lines recently developed in Daley's lab.

Knowing that iPS cells tend to induce tumors known as teratomas when inserted into mice, Ryeom guessed that teratomas grown from iPS cells with an extra chromosome 21 would have far fewer blood vessels than teratomas from iPS cells with the normal number of chromosomes. She was right: blood vessels budded in the Down teratomas, but never fully formed.

"The studies in the iPS cells helped validate and confirm that the suppression of angiogenesis that we saw in mouse models also holds true in humans," says Ryeom. "It suggests that

these two genes might point to a viable cancer therapy."

Ryeom's group has identified which part of the DSCR1 protein blocks calcineurin and is testing to see whether that fragment can be delivered specifically to endothelial cells, to prevent them from forming new blood vessels, without affecting calcineurin pathways in other cells and causing side effects. "Immuno-suppressive drugs also target calcineurin in T-cells," Ryeom notes. "We think that DSCR1 blocks calcineurin specifically in endothelial cells, without affecting T-cells, but we need to check."

Folkman's interest in why patients with Down syndrome have such a reduced risk for cancer focused on endostatin, an anti-angiogenic compound made by the body. Discovered in the Folkman lab, endostatin is a fragment of collagen 18 -- whose gene is also on chromosome 21. People with Down syndrome reportedly have almost doubled levels of endostatin because of the extra copy of the gene.

"I think there may be four or five genes on chromosome 21 that are necessary for angiogenesis suppression," says Ryeom. "In huge databases of cancer patients with solid tumors, there are very few with Down syndrome. This suggests that protection from chromosome 21 genes is pretty complete." - Source: Eureka Alerts

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