Arizona Branch AALAS Newsletter

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Arizona Branch of the American Association for Laboratory Animal Science

Have You Checked Out the AALAS Learning Library?

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President's Message

Summer is upon us and I hope all of you have fun vacations planned to get you out of the heat!! The AzAALAS Board has been busy. We approved funding to join the AALAS Learning Library (ALL). Now all of our branch members can take advantage of this great educational tool. The ALL contains courses designed to help you study for AALAS certification, meet CEU needs, and improve your overall knowledge in technical areas. If you would like more information or want to join the Library, please contact our TBR, Cindy Madura.

Before the year ends, we have a few additional events planned. One of these is our summer video conference in August. Chrystal Redding has been working hard on finding a great speaker for the program. I hope all of you will join us. It is a great opportunity to meet technicians from other research institutions in your area. Please check your emails in the near future for announcements. We are looking for ideas for a fall get - together, realizing that funds may be limited for many our members, we are looking for suggestions. If you have any ideas please let me know.

It's also time to begin thinking about our annual Louise Brooks memorial charity raffle named after a long time employee of UA University Animal Care. The money raised from this project goes to three very worthwhile charities: The Pediatric Wing of Flagstaff Medical Center (Flagstaff), Special Olympics (Phoenix), and the Child Life Activity Center (Tucson). For the fund raiser to be successful we need great prizes to give away. So I encourage all of you to talk with owners and managers of businesses you frequent to make a donation to the charity. Vendors are also encouraged to make a gift to the event. Donations can gift baskets, t-shirts, or gift cards. If you would like additional information please contact Grace Aranda.

You should all begin thinking about nominating someone or running for a position on the board. If you have never run before, you should talk to a current or past Board member. We are always in need of fresh ideas and welcome new blood.

Nominations for Technician and Member of the Year will be sought beginning in September. It would be nice to have at least one Technician from every research institution in Arizona nominated for recognition. Winners of these awards can receive travel and registration to the next District 8 meeting, to be held in beautiful Irvine, California in 2012.

Feel free to contact me if you have any additional suggestions and/or concerns. - Tim Martin, (602) 406-4003.

Important Dates

Summer Video Conference- August - Flagstaff, AZ

Fall Fun Event - October - BBQ Potluck at Tim's house in Mesa

Holiday Installation Event - 12/3 - Flagstaff, AZ

Member Profiles

Kahrin Romer, Study Tech III, Covance Laboratories, Chandler

Kahrin previously worked for the Caribbean Veterinary Center in the Bahamas and UNC in Greensboro, South Carolina. She started with Covance Laboratories in October , 2007 after applying on Monster.Com. She has worked with large animals, such as primates, canines, mini pigs and small animals including mice and rats. She is currently certified as an Assistant Laboratory Technician and is a national AALAS member as well as an Arizona branch member. Kahrin is interested in Toxicology in the Animal Science field.

Kahrin wanted to be a veterinarian when growing up and says her father influenced her the most. She is married and has a daughter plus 2 dogs and 10 fish at home. She enjoys softball, track and field, swimming and basketball. The "One thing no one would guess about me" is that she writes poetry.

When asked, "How would you influence others to follow in your footsteps?" She said, "By my actions. People will follow someone whose positive actions match their words. It 's important to not only be a leader, but to also be able to follow others."

We would like to thank Jane Criswell who filled in for us as a profile writer after Bob's retirement. Karina's profile below is the first work of Sandra Schenone our new profile writer. Thanks guys!

Karina Drew, Veterinary Lab Technician, Banner Sun Health Research Institute

Karina was born in San Jose, CA and moved to Arizona in 2008 to pursue other employment and educational opportunities. She graduated Kaplan college in 2010 with an AOS in Veterinary Technology and started with the Arizona Heart Institute in April and Sun Health in November of that same year. She has also interned at St. Joseph's Hospital in Phoenix. While she mostly works with rabbits and rodents, her internship included Non-Human Primates, performing both husbandry and vet tech tasks, as well as swine work at AHI.

Karina wanted to be a marine biologist; then her interest leaned towards journalism and oceanography. It was an instructor at Kaplan College that encouraged her to enter the field of lab animal medicine. She is most passionate about public awareness of the importance of lab animal research, learning new skills and professional certification. She has been influenced by many people in the different institutions she has worked at here in Arizona, especially Pamela Bortz from St. Joseph's.

Karina is engaged and making plans for next June. She has an American Bulldog "Jack" and a Pitbull Terrier "Stella." She enjoys indoor skydiving, travel and painting. She would like to encourage other vet techs to consider the field of laboratory animal medicine.

Past Meeting Minutes

Minutes of the February 17 Board Meeting

The meeting was held via conference call. President Tim Martin called the meeting to order at 12:10pm.

The minutes of the board meeting on 11/18/10 were distributed and reviewed. Tim asked for corrections or changes to the minutes. The minutes were accepted as written.

Secretary Jane Criswell reported that there were currently 49 members. It was noted that Pam Bortz and Melissa Birkett are both national AALAS members. Tim said that ASU should be renewing their members soon.

The financial report was distributed. To date the savings has $874.82, checking $ 6,806.99 and money market $ 4.063.13 for a total of $11,744.94. Costs for Tech week may still come in and also the Buyers Guide and the Holiday Installation Event

Buyers Guide was tabled until next meeting.

The Presidents message is ready for the newsletter. President Elect Chrystal Redding has supplied her tech week report. Northern Board Representative Tom Greene didn't have one. Jane reported that UAC did theirs one week late with cake. Tim didn't have one.

Tim reported there is nothing new from the District 8 council. A payment to AzAALAS has been received from Penny for the District 8 meeting last May, 2010. There will be no District 8 meeting this year due to national being held in District 8. 2012 District 8 will be held in Southern California around May 5.

Chrystal reported that the 2010 Installation event was well attended. 2011 will be held at her house in Flagstaff.

Tim opened the discussion on the AALAS Learning Library and felt this was a good idea to help the technicians receive their certifications. $3600 was received from the District 8 convention and he suggested the branch use the money to purchase 76 accounts and do so for 3 years. This will help to educate the technicians in place of the annual

symposium which has had poor attendance the past few years due to the economy. Everyone was in favor of his proposal.

Technician Branch Representative Cindy Madura discussed the branch scholarship for national AALAS membership and everyone was in favor of David Lopez receiving one as he had written a letter to the board.

Jane suggested we try to have the UAC Jackson labs seminar on Mar 11 sent to facilities in Phoenix and Flagstaff for our spring video conference. Kevin Long is the UAC contact and she said she would e-mail him concerning this. Chrystal and Tom said they would look for a conference room in Flagstaff. Jane said she would contact ASU and Covance.

The Fall Fun Event should be Flagstaff, but since we are going there for the installation in December it was suggested we all think of ideas in Phoenix or Tucson.

Upcoming meeting will be March 17 via conference call. The meeting adjourned at 12:35pm

Minutes of the March 17 Board Meeting

The meeting was held via conference call. President Tim Martin called the meeting to order at 12:05 p.m.

Secretary Jane Criswell presented the minutes of the February 17th board meeting. Minutes were approved with corrections.

Treasurer Grace Aranda distributed the financial report. Outstanding items include the cost of the printing and mailing of the Buyer's Guide; disbursement of raffle money to our regional charities; the monetary portion of the Technician and Member of the Year awards (registration and airfare) likely to be more than a normal year as the National meeting is to be held in San Diego this fall; one tech week reimbursement; and the District 8 donation of $250 for the 2012 meeting.

Tim brought up the Jackson Labs video conference. No mention of Arizona AALAS sponsoring the seminar was mentioned prior to the event and no such credit was given on the day of the event. The question of how many AZAALAS members took part in the workshops was raised and if we had received registration numbers and particulars. Jane mentioned that Mayo and Covance had connections issues with the 1st presentation that may have been why Covance seemed to be absent at the later lectures. Jane will ask for sign-up sheets to see how many members attended.

The Buyer's Guide summary was distributed and 14 companies have already signed on to sponsor this years Guide. Current prices are comparable to other branches. Board members and institutional contacts should look over the current list and see if they use companies that aren't included. Contact Grace to provide her with contact information for any companies not included so that we can make sure they are given the chance to be included.

Grace reported that the newsletter has been sent out. We put out a call for someone to take over the Member Profiles section. We are working on the June issue now and would like to include an item on the AALAS Learning Library to get members interested in taking part. The suggestion was made of announcing the opportunity for members to join ALL this year via the listserv as well.

Jane reported that President-Elect Chrystal Redding suggested that Dr Rachel Allred, Senior Project Designer at Senestech, speak on the Use of Dexterous Forepaw Function in Rats for our Summer Video Conference. She is working on a date in August for this event and will provide more information at the next board meeting.

Tim brought up suggestions for the Fall Fun Event. Due in part to the poor economy, the last fun event at the Wildlife World Zoo wasn't well attended even though it had been the highest chosen item and date in our survey last year. He suggested having a barbeque at his house in Mesa with his parents preparing the food. The board liked the idea.

Technician Branch Representative Cindy Madura reported that we have registered for 51 accounts for the AALAS Learning Library. Those making use of the ALL must be AZAALAS members to participate. Concerns of password sharing was brought up but Cindy pointed out that participants are unable to do so as each training record would not be maintained properly if sharing occurred.

Cindy mentioned that the southern region scholarships for National AALAS membership have been awarded to Laura Degling and David Lopez. She reminded us that May 1st is the deadline for letters asking for a scholarship from the other regions or the regional awards will be opened up to the state.

Cindy asked about when and where the next branch symposium would be held. The rotation of these events would put the next one in Flagstaff or Phoenix. Tim reminded the board that the purchase of the ALL for our members with the 2010 D8 Meeting in Tempe fund would likely defer a symposium until the economy picks up and such events wouldn't be a hardship for technicians.

Meeting adjourned at 12:30 p.m.

Tips for Better Team Work?

Have you ever wondered how some work groups exhibit effective team work and others remain dysfunctional for the life of the team? Effective team work is both profoundly simple and difficult at the same time. The factors that affect success in team work occur both within the team itself and in the work environment in which the team must function.

These ten tips describe the environment that must occur within the team for successful team work to take place. Successful team work is the cornerstone for creating functioning, contributing teams.

Keys to Successful Team Work

* The team understands the goals and is committed to attaining them. This clear direction and agreement on mission and purpose is essential for effective team work. This team clarity is reinforced when the organization has clear expectations for the team's work, goals, accountability, and outcomes.

* The team creates an environment in which people are comfortable taking reasonable risks in communicating, advocating positions, and taking action. Team members trust each other. Team members are not punished for disagreeing.

* Communication is open, honest, and respectful. People feel free to express their thoughts, opinions, and potential solutions to problems. People feel as if they are heard out and listened to by team members who are attempting to understand. Team members ask questions for clarity and spend their thought time listening deeply rather than forming rebuttals while their coworker is speaking.

* Team members have a strong sense of belonging to the group. They experience a deep commitment to the group's decisions and actions. This sense of belonging is enhanced and reinforced when the team spends the time to develop team norms or relationship guidelines together.

* Team members are viewed as unique people with irreplaceable experiences, points of view, knowledge, and opinions to contribute. After all, the purpose for forming a team is to take advantage of the differences. Otherwise, why would any organization approach projects, products, or goals with a team. In fact, the more that a team can bring out divergent points of view, that are thoughtfully presented and supported with facts as well as opinions, the better.

* Creativity, innovation, and different viewpoints are expected and encouraged. Comments such as, "we already tried that and it didn't work" and "what a dumb idea" are not allowed or supported.

* The team is able to constantly examine itself and continuously improve its processes, practices, and the interaction of team members. The team openly discusses team norms and what may be hindering its ability to move forward and progress in areas of effort, talent, and strategy.

* The team has agreed upon procedures for diagnosing, analyzing, and resolving team work problems and conflicts. The team does not support member personality conflicts and clashes nor do team members pick sides in a disagreement. Rather, members work towards mutual resolution.

* Participative leadership is practiced in leading meetings, assigning tasks, recording decisions and commitments, assessing progress, holding team members accountable, and providing direction for the team.

* Members of the team make high quality decisions together and have the support and commitment of the group to carry out the decisions made.

If a team can get these ten factors right, success and a rewarding sense of team work will follow. - Susan M. Heathfield, About.com Guide

The Impact of Recent Changes in the Guide on Education, Training, and Competency Assessment

The education and training of personnel working with animals in the laboratory animal science (LAS) field is an important and evolving body of knowledge. This is evident by the recent updates and changes within the 2010 version of the Guide for the Care and Use of Laboratory Animals (Guide).

The 2010 version of the Guide includes significant edits and additions addressing training and education. The new Guide outlines training levels and requirements by personnel groups, such as veterinary, animal care, research staff and the Institutional Animal Care and Use Committee (IACUC) members. These changes convey the importance and emphasis placed on personnel training and development in the new Guide. Also, the new version addresses the subject of Occupational Health and Safety with a renewed emphasis on training. It provides more specific detail regarding program requirements and also more clearly defines its role in a laboratory animal program. One example of an addition to the Guide is the statement, "Training should be tailored to the particular needs of research groups; however, all research groups should receive training in animal care and use legislation, IACUC function, ethics of animal use and the concepts of the Three R's, methods for reporting concerns about animal use,

Bronze Membership Scholarships Available in the TBR Corner
by Cindy Madura

AZAALAS is awarding bronze National AALAS memberships to technicians who are financially unable to pay for membership themselves and interested in becoming AALAS certified. Two scholarships per region will be awarded.

To apply, you must be an Arizona branch member and preparing to take your AALAS certification exam. Interested applicants should email the scholarship committee at: azaalas@ahsc.arizona.edu stating why they wish to be granted the award.

Not sure what to write? A few things you can include in your letter are: when you plan to take the exam, why you would like the scholarship and your future goals.

If you are planning on taking the exam this year it would be best to get your letter in as soon as possible. The membership expires at the end of the year.

If you are taking it next year you should get your letter in by the first week of December so that you have the benefit of a full years membership.

As always, any comments, questions contact me at 520-626-6702 or madurac@u.arizona.edu.

occupational health and safety issues pertaining to animal use, animal handling, aseptic surgical technique, anesthesia and analgesia, euthanasia, and other subjects, as required by statute."

The Wording - The above statement, like many others within the Guide, uses the term "should" regarding training and educational content to be provided to personnel. There are a total of 15 "shoulds" in the updated version of the Guide in the approximately two-page Training and Education section alone. Particularly noteworthy changes in the updated version include instances whereby the word "should" has been replaced by the word "must." One such example is demonstrated in the following sentence: "All personnel involved with the care and use of animals must be adequately educated, trained and/or qualified in basic principles of laboratory animal science." On the surface these changes might seem small but they will have a significant impact on the scientific community. The United State's Public Health Service requires institutions for which they provide funding to abide by the Guide. Additionally, the new changes will have an international impact since institutions accredited by the Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC) will be required to abide by the 2010 Guide by the fall of this year (2011).

These new edits are already prompting institutions to re-evaluate their training programs. Additionally, changing the language from "should" to "must" gives institutions leverage in implementing and requiring training. One of the challenges that institutions face is that they now know what they "must" or "should" do but they are not provided with guidance on how to effectively implement the practices or procedures. To complicate matters, terms such as "adequately" or "qualified" have not been defined and can be interpreted in many different ways. Many institutions are addressing this challenge by not only developing and implementing additional training, but also by implementing objective competency assessments into their training curriculums. AAALAC will assist institutions with interpretation of the new Guide by publishing a document later this year. This document will outline how AAALAC expects institutions to implement the new Guide in order to maintain institutional accreditation.

The Challenges - These new training regulations present several additional challenges. One, the development, implementation, and maintenance of entire training protocols are time consuming. Second, the extensive training programs require knowledgeable personnel and financial support.

Institutions depending on staff availability and funding have taken different approaches to address these issues. In the following case study, the approach taken by the University of Wisconsin-Madison, Research Animal Resources Center (RARC) will be examined. RARC employs four full time personnel dedicated to training; they have a specifically allocated space for training equipped for procedures ranging from basic methodologies to surgical techniques. The University of Wisconsin-Madison provides their trainers with financial resources, as well as institutional support of the program. The trainers are afforded the opportunity to attend conferences such as Laboratory Animal Welfare Training Exchange (LAWTE), where they have an opportunity to learn effective training techniques, develop training materials, and share their experiences in an interactive forum. This is important because while the majority of people within the LAS field are very strong in the sciences, they benefit from continued learning of educational techniques. The University of Wisconsin-Madison trainers have been developing and improving their program for several years. The trainers have developed a productive and supportive relationship with investigators, research staff, and students who come to them for assistance and are more open to implementation of new ideas or refinements introduced by the training group. Additionally, the trainers have incorporated some of their training resources to publish the Laboratory Rat and Laboratory Mouse Procedural Techniques Manuals, which are available through CRC Press.

The publication of effective training methods is extremely important because many institutions are allocating scarce resources to developing their own programs and the potential for duplicative efforts is high. In 2008, the North American Veterinary Medical Education Consortium was formed. This consortium brought together the broadest spectrum of stakeholders of veterinary medical education. One of the three main goals was to "identify what changes in veterinary medical education would be needed in the near to long-term future…"One course of action that was identified to meet this goal was that the "Association of American Veterinary Medical Colleges (AAVMC) creates and maintains an inventory of shareable courses from all North American accredited schools."One potential solution would be to take and apply this same strategy to the laboratory animal sciences field, whereby a consortium would help the LAS community address unique educational challenges. The potential exists for sharing existing educational materials developed by subject matter experts and identifying areas of education where materials are lacking/needed. This should help in balancing the cost of developing educational materials by individual institutions, while trying to meet the requirements of the Guide. This is beginning to happen on a smaller scale, where global organizations are reviewing and analyzing their training capabilities and assessing the possibility of developing a centralized office for training.

There is little doubt that new guidelines requiring training for individuals involved with the care and use of laboratory animals will create a huge demand for training material and services. Without a well developed plan, institutions could expect significant financial investment and a drain of resources. - By ALN - Szczepan Baran, VMD; Elizabeth

Johnson, VMD; Jessica Kurz, MPA; Luis Zorrilla, BS, LATG; Marcel Perret-Gentil, DVM

National Academies Press PDFs Available to Download (Including the New Guide) for Free

National Academy of Sciences, National Academy of Engineering, Institute of Medicine, and National Research Council are committed to distributing their reports to as wide an audience as possible. Since 1994, they have offered "read for free" options for almost all titles. Now, they are going one step further.

Effective June 2nd, PDFs of reports that are currently for sale on the National Academies Press (NAP) website and PDFs associated with future reports will be offered free of charge.

NAP produces more than 200 books a year on a wide range of topics in science, engineering, and health, capturing the best-informed views on important issues. The enhancement of free downloads means further access to information on government decision making and public policy, increase public education and understanding, and promote the acquisition and dissemination of knowledge.

This includes relevant titles such as: Guide for the Care and Use of Laboratory Animals: Eighth Edition http://www.nap.edu/catalog.php?record_id=12910, and Occupational Health and Safety in the Care and Use of Research Animals http://www.nap.edu/catalog.php?record_id=4988

More information is available on the NAP website.

(ALN E-News, June 15, 2011)

FBR Launches New Billboard Campaign

The biomedical research organization's thought-provoking billboard campaign asks the public to decide who they would rather see live: a rat or a little girl. The Foundation for Biomedical Research (FBR) announced it has launched a new, targeted out-of-home advertising campaign in five cities, as part of its national ResearchSaves™ campaign. New "Who would you rather see live?" billboards appear in Portland, Seattle, Los Angeles, Chicago and Baltimore. The ResearchSaves™ campaign is designed to increase public support for medical and scientific research with animal models.

"Our new billboards ask people to consider an important ethical dilemma we face as a society: Would you rather do away with animal research or have the new medical cures, treatments and therapies for which so many people desperately wait?" said Frankie Trull, president of FBR. "Without research with animal models, especially rodents, we will not have cures for the many currently incurable diseases afflicting children today including leukemia, diabetes, paralysis, autism, congenital heart disease, cystic fibrosis, Duchenne muscular dystrophy and malaria."

ResearchSaves™ is an innovative national campaign with a simple message: animal research saves human and animal lives. With its television, outdoor, online and radio advertising, the ResearchSaves™ campaign educates people about how medical research with animal models leads to new cures and treatments for diseases. Animal research is vital for the future of both human and animal health. The multi-million dollar ResearchSaves™ campaign is supported by the nation's leading academic institutions, nonprofit organizations, hospitals, patient advocacy groups and healthcare corporations, as well as thousands of individual donors. To learn more about the ResearchSaves™ campaign visit researchsaves.org.

A Step-by-Step Approach for Blind Intubation of the Rabbit

The anatomy of the oropharynx in rabbits, which includes a right angle bend at the caudal aspect, a narrow mouth opening, a large tongue, large incisors, and limited range of motion in the jaw, makes intubation difficult. Additionally, reflex laryngospasm is not uncommon when attempting to intubate rabbits. Our blind intubation technique has worked well for us, and it is easily accomplished with training. We use it routinely for our rabbit surgery and have had good results. With practice, it is not a difficult technique to learn, and it does not require an assistant.

We used New Zealand White rabbits weighing 2–3 kg. Rabbits were housed individually in cages with a 12-h light/dark cycle. Rabbits were offered restricted access to pelleted feed and ad libitum access to water. The study was approved by our institutional IACUC Committee.

Step 1 - The rabbit is weighed, and buprenorphine 0.01–0.05 mg/kg IM is given 1 h prior to anesthetic administration. We then administered xylazine 5–10 mg/kg IM. Ten minutes after xylazine administration, we dosed the rabbits with ketamine 33–35 mg/kg IM and waited for it to take effect. This dose regime induces total relaxation in the rabbits, which is crucial for this type of intubation.

Step 2 - The rabbit is brought into the prep room, weighed again, and shaved for the procedure.

Step 3 - For a 1- to 3-kg rabbit, we usually use a 2.0–3.0mm OD endotracheal tube. For a 3- to 7-kg rabbit, we use a 3.0–6.0, OD tube. The end of the endotracheal tube cuff is lubricated with 5% lidocaine ointment. The valve of the cuff is checked by inflating and deflating the cuff using a 3-cc syringe attached to the valve.

Step 4 - The anesthetized rabbit is placed in sternal recumbency on a warming blanket on the operating room table. The eyes are lubricated with ophthalmic ointment, and a pulse oximeter probe is attached to the shaven front paw. The rabbit's head is held by grasping around the base of skull with the non-dominant hand. The thumb and index finger are used to grasp the upper jaw and extend it straight up, hyperextending the oropharynx to straighten it for intubation.

Step 5 - With the neck extended vertically and the head hyperextended, the endotracheal tube is slowly inserted over the tongue and into the pharynx. The technician performing the procedure listens for air movement at the end of the tube; the tube is directed toward the breath sounds coming through the glottis. As the tube passes into the larynx and trachea, the sounds usually become louder, and condensation may be seen inside the tube; sometimes a cough is heard through the tube. If any resistance is felt, the tube is withdrawn slightly and reinserted again using gentle manipulation; pushing against the resistance can injure the rabbit. Sometimes it helps to gently turn the tube clockwise slightly, then counterclockwise during insertion. If the first attempt at insertion is unsuccessful, a respiration mask is used to assist the rabbit's breathing before reattempting insertion.

Step 6 - With the endotracheal tube inserted, the technician checks for bilateral breath sounds, pulling back the tube if necessary. A 3-cc syringe is used to inflate the cuff. The tube is secured with 0.25-in. wide adhesive tape in front of the upper incisors and around the upper jaw; it can also be tied in place with a gauze sponge. - William Dyckman, AAS, LAT, SRS, Hartford Hospital, Hartford, CT

(Tech Talk, V 14, N 6)

The Credo of an Empowering Manager

Your goal is to create a work environment in which people are empowered, productive, contributing, and happy. Don't hobble them by limiting their tools or information. Trust them to do the right thing, then get out of their way and watch them succeed.

This advice offers the ten most important principles for managing people in a way that reinforces employee empowerment, accomplishment, and contribution.

1. **Demonstrate That You Value People** - Your regard for people shines through in all of your actions and words. Your facial expression, your body language, and your words express what you are thinking about the people who report to you. Your goal is to demonstrate your appreciation for each person's unique value. No matter how an employee is performing on his or her current task, your value for the employee as a human being should never falter and always be visible.

2. **Share Leadership Vision** - Help people feel that they are part of something bigger than themselves and their individual job. Do this by making sure they know and have access to the organization's overall mission, vision, and strategic plans.

3. **Share Goals and Direction** - Share the most important goals and direction for your group. Where possible, either make progress on goals measurable and observable, or ascertain that you have shared your picture of a positive outcome with the people responsible for accomplishing the results. If you share a picture and share meaning, you have agreed upon what constitutes a successful and acceptable deliverable. Empowered employees can then chart their course without close supervision.

4. **Trust People** - Trust the intentions of people to do the right thing, make the right decision, and make choices that, while maybe not exactly what you would decide, still work. When employees receive clear expectations from their manager, they relax and trust you. They focus their energy on accomplishing, not on wondering, worrying, and second-guessing.

5. **Provide Information for Decision Making** - Make certain that you have given people, or made sure that they have access to, all of the information they need to make thoughtful decisions.

6. **Delegate Authority and Impact Opportunities, Not Just More Work** - Don't just delegate the drudge work; delegate some of the fun stuff, too. Delegate the important meetings, the committee memberships that influence product development and decision making, and the projects that people and customers notice. The employee will grow and develop new skills. Your plate will be less full so you can concentrate on contribution.

7. **Provide Frequent Feedback** - Provide frequent feedback so that people know how they are doing. Sometimes, the purpose of feedback is reward and recognition as well as improvement coaching. People deserve your constructive feedback, too, so they can continue to develop their knowledge and skills.

8. **Solve Problems: Don't Pinpoint Problem People** - When a problem occurs, ask what is wrong with the work system that caused the people to fail, not what is wrong with the people. Worst case response to problems? Seek to identify and punish the guilty.

9. **Listen to Learn and Ask Questions to Provide Guidance** - Provide a space in which people will communicate by listening to them and asking them questions. Guide by asking questions, not by telling grown up people what to do. People generally know the right answers if they have the opportunity to produce them. When an employee brings you a problem to solve, ask, "what do you think you should do to solve this problem?" Or, ask, "what action steps do you recommend?" Employees can demonstrate what they know and grow in the process. Eventually, you will feel comfortable telling the employee that he or she need not ask you about similar situations. You trust their judgment.

10. **Help Employees Feel Rewarded and Recognized for Empowered Behavior** - When employees feel under-compensated, under-titled for the responsibilities they take on, under-noticed, under-praised, and under-appreciated, don't expect results from employee empowerment. The basic needs of employees must feel met for employees to give you their discretionary energy, that extra effort that people voluntarily invest in work. For successful employee empowerment, recognition plays a significant role. - Susan M.

Heathfield, About.com Guide

Husbandry of the Veiled Chameleon

Veiled chameleons (Chamaeleo calyptratus), indigenous to Yemen and Saudi Arabia, are hardy; they can withstand temperatures from 20 °C to 43.3 °C and elevations to 9,500 feet. The veiled chameleon is widely available in the pet trade due to ease of breeding, egg incubation, and hatching. These same qualities make the veiled chameleon a great choice in studies of environmental impact on sex determination during their long incubation. Emission of body vibration has led to studies on possible communication through substrate by these chameleons.

Chameleons, like many amphibians and reptiles, grow quickly during the first few years. After hatching, males are easily identified by a tarsal spur on the posterior of each rear foot. These tarsal spurs, and head crest dimorphism between males and females, make them easy models for mate and sexual selection studies.

The total body length of adult male veiled chameleons ranges from 30.5–48.3 cm, while adult females range from 20.3–30.5 cm. Both males and females have a wide variety of color patterns; however, males tend to have brighter colors.

Within a year of hatching, chameleons can increase their body mass by two orders of magnitude. Rapid growth requires a diet rich in calcium and vitamins A and D to prevent weak, brittle bones and to support muscle movement, including the ballistic tongue projection for which chameleons are best known. While fresh-caught wild insects from pesticide-free areas provide variety and high nutrition, most laboratory animal professionals lack the time for collection. Therefore, it is best to feed adult chameleons a diet of crickets sprinkled with calcium/vitamin powder 3–4 times per wk. Adults will eat most insects, small mammals, lizards, or amphibians and plants, including leaves, greens, fruits, vegetables and flower blossoms.

A well-ventilated terrarium with a water bowl provides primary housing for these arboreal chameleons. Newly hatched young may be housed together for the first year, but adults, especially males, are very territorial and should not be housed together. Veiled chameleons are intense baskers that prefer temperatures from 23.8 °C to 32.2 °C; a 50- to 100-watt bulb set on a timer should be included in each cage as an additional light source. Real and plastic plants inside the terrarium provide color and cover, and help to stabilize temperature and humidity. Do not use sand, dirt, or wood chips as terrarium substrate. These materials stick to the chameleon's tongue during feeding and can cause intestinal blockage. Cloth, newspaper, or brown paper towels provide adequate coverage and make the terrarium easy to clean. Veiled chameleons prefer 50% to 60% percent humidity, which can be maintained by daily misting or with a drip system that allows water to drip from the top of the cage into the water bowl.

While each individual has different personalities, common behaviors provide important keys to health:

- Pale color with gaping mouth indicates that the chameleon is overheated.
- Closed eyes and a refusal to eat, possibly accompanied by bright coloration (often shades of yellow) indicate that the chameleon is sick.
- Vivid coloration and sunken eyes are an indication that the chameleon is thirsty. Pinch the belly skin; if the skin remains pinched, the chameleon is dehydrated. Mist until the chameleon stops drinking.
- Swelling (edema) is generally a sign of Vitamin A or D deficiency. Weakness, shaking, and inability to project the tongue during feeding is often a calcium deficiency.

- Chrystal L Redding, MS, RLATG Northern Arizona University, Flagstaff, AZ

(Tech Talk, V 14, N 6)

Scientists Pave Way for Improved Teamwork on Collaborative Research Efforts

Team research is now a recognized field of study, and it is increasingly important to both public and private research funding agencies.

Tackling today's complex scientific questions often requires work from interdisciplinary collaborative research teams – and working in those teams can create its own problems. Now a group of researchers from around the country, including North Carolina State University, has published a commentary in the journal Science Translational Medicine outlining a new field of study that will help resolve problems facing interdisciplinary research teams.

The new area of study, called the "science of team science," or SciTS (rhymes with sights), focuses on what works and what doesn't when teams of scientists are working together to accomplish an overarching research goal. Improving teamwork in these situations is important, says Dr. Joann Keyton, a professor of communication at NC State and co-author of the paper, because research initiatives increasingly involve researchers in different disciplines, at different institutions and, often, in different countries.

The paper represents the first time that physical scientists, life scientists and social scientists have come together to address SciTS. Their goal, Keyton says, is to let the research community know that the dynamics of team research are now a recognized field of study, and that they are increasingly important to both public and private research funding agencies.

Improving teamwork in interdisciplinary collaborations is going to become more important for researchers who hope to get funding from public or private sources. "This is going to affect policy," Keyton says. "When people apply for grants, they're going to be asked to

demonstrate that they understand how teams can effectively work together. Simply assembling a team isn't going to be enough for funding agencies anymore – funding agencies want to know that the team will be adequately supported and able to function successfully.

"Team science raises new challenges," Keyton says. "Language is often a problem. For example, scientists in different disciplines may use the same term to refer to very different things. There can be a major misunderstanding between researchers on the same research team, and they won't even know it."

The increasing complexity of both scientific problems, and the teams that are assembled to tackle them, creates an opportunity for social scientists to help identify, characterize and resolve problems related to working collaboratively. "We can help investigators determine the best way, for example, to facilitate communication among team members, make consistent and informed decisions, and evaluate how well the research team is performing," Keyton says.

The paper, "A Multi-Level Systems Perspective for the Science of Team Science," is published in the Sept. 15 issue of Science Translational Medicine. The paper was co-authored by researchers from Indiana University, Northwestern University, the University of Central Florida, the National Cancer Institute, the University of California – Irvine, and Cornell University.

Keyton, a leader in the SciTS field, is also co-primary investigator of a National Science Foundation initiative that is looking at SciTS and its impact on research policy and practice.

(ALN, 9/10)

Food for Thought: A Viable Alternative to the Gavage Method

While the esophageal gavage method is a commonly accepted procedure to orally administer medication, it has several disadvantages: it requires a specialized needle, must be performed by a trained professional, risks perforation of the esophagus, and potentially induces stress. In seeking to identify an alternative delivery method in accordance with the 3 Rs, we tried administering medication using a highly palatable food.

To establish a readily consumed substance, we conducted an initial study evaluating the palatability of fruit juice, pureed meat, milk products, peanut butter, and cornstarch. Of the preliminary offerings, cream, margarine, and sweetened condensed milk (SCM) proved highly palatable. To identify the most palatable substance, we offered cream, margarine, and SCM in randomized trials to 4- to 8-wk old females from three commonly used laboratory strains of mice (BALB/C, C57BL/6, and Swiss Webster). Nine mice per strain were weighed and placed in individual cages with no bedding or water. Following an acclimation period of 15 min, a weigh boat containing 0.5 ml of cream, margarine, or SCM was placed in the cage, and the mice were observed for 30 min. Once the feeding period was terminated, any remaining food was weighed and consumption data recorded.

Using ANOVA analysis, cream was shown to be preferentially consumed ($P < 0.05$) over SCM and margarine. When we presented the mice with all three substances simultaneously, cream proved to be the unconditional favorite. However, with increased familiarity with the weigh boats and food options, the mice displayed progressive willingness to consume all three substances. Weight remained a significant confounding factor in our consumption data. On average, a mouse consumed 0.12 g/g body weight ($P = 0.0009$).

Ultimately, this experiment suggests that a feasible alternative to oral gavage exists. In conjunction with the 3 R's, our proposed method terminates the need for the gavage needle and eliminates the resulting stress. However, it is unclear if oral medications can be successfully administered in a highly palatable substance; it is also unknown whether combining a medication with food impacts the drug's metabolism or stability. Future studies are needed to evaluate taste responsiveness of an ordinarily palatable substrate combined with medication and the compatibility of the drug with the substrate of choice. Also, the addition of water may increase the consumption of offered food.

In contrast with the direct deposit mechanism of the gavage needle, this process does not guarantee absolute consumption. This study was completed in the early morning; we suspect that if medication is presented before the ordinary feed or if the mice are placed on a timed eating schedule, they would more readily consume the offered substances. It is essential that future studies scrutinize the practicality of delivering medication in such a method; however, the implications of a dosing alternative remain vast. - H. B. Moak, M. Robinson, R. J. Kastenmayer, and W. R. Elkins, DHHS/NIH/NIAID/DIR Comparative Medicine Branch, Bethesda, MD

(Tech Talk, V 14, N 6)

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