



Mile High Branch of AALAS Newsletter

Volume 3 2022



<https://milehighbranchaalas.wildapricot.org/>

Dear MileHi members,

It is hard to believe the last newsletter we were planning our activities for the upcoming summer months, and now preparing for fall, and all fall has to offer.

I hope everyone has received the registration information, and has had a chance to register for the upcoming MHB meeting scheduled for October 11. Registration is now open, and we are looking forward to seeing all of you at our annual event. We are excited to present such diverse and interesting topics for the annual meeting.

As we approach this New Year, please consider supporting your MileHi branch by becoming an involved member. Some board positions will be terminating December 31 of this year, and will need to be filled with new members. A successful branch depends on willingness of volunteers to come forward, and help with decisions, planning and contributing to our annual meetings.

Please consider nominating a deserving team member or self, for one of several open positions. Participation and involvement from all organizations creates a strong cohesive board, providing new ideas and vision. We are hoping we can involve some new members to the board.

The following positions that will be open to *all* MHB members as of January 1, 2023.

President elect - 3 year term

Secretary elect - 2 year term

Treasurer elect – 2 year term

Board positions - 2 year term

Please visit the MileHi website for detailed information and SOP's for all board position descriptions.

<https://milehighbranchaalas.wildapricot.org/>

Hope you take the opportunity to consider being part of your MileHi branch and supporting our National organization, AALAS.

See everyone at the meeting

Take care of yourselves,

Ruth





45th Mile High Branch AALAS Meeting

October 11, 2022

8:00 AM – 4:30 PM

Preliminary Agenda

8:00 – 8:45 Registration, breakfast

8:45-9:00 Welcome, board recognition, and meeting logistics

9:00 – 10:00 Top 10 mysteries of Zebrafish care, *Christine Archer, RVT RLAT VTS-LAM*

10:00-10:45 Cells are cells? The importance of identifying and quantifying cells in research applications...especially when they are implanted in animals. *Steve Smith, IDEXX*

10:45-11:00 *Break*

11:00-12:00 National Black-footed Ferret Conservation Center, *Della Garelle, DVM and Kimberly Fraser, Outreach Specialist National Black-footed Ferret Conservation Center*

12:00-1:15 Lunch, posters and vendors

1:15 -2:15 Animal Reservoirs for Nontuberculous Mycobacteria - Feral Pigs in Hawai'i, *Jennifer Honda, BS MS PHD*

2:15-3:00 Optimizing tumor study performance, *Aaron McCoy*
The translational Potential of rats, *Sara Hashway*

3:00-3:15 *Break*

3:15-4:00 How I Learned to Quit Worrying and Love Cold Water, *Micah Stoltz*
Veterinary Report of a Coxofemoral Luxation in a Muntjac Deer of Unknown Cause, *Jessica Ayers*

4:00-4:30 Awards, Closing and Raffle



Mile High Branch of AALAS Newsletter

Volume 3 2022



<https://milehighbranchaalas.wildapricot.org/>

Just in case you missed it!

MHB Members – Be sure to check out the July/August edition of Laboratory Animal Science Professional (aka LAS Pro) for an article about vole husbandry written by CU Boulder’s Jessica Abazaris, ALAT! Jessica is the primary OAR animal care technician for CU Boulder’s vole colony. In the article she details some of the challenges involved in caring for the voles as well as the unique solutions that she helped implement. The article starts on page 12.

FEATURE - NOVEL SPECIES

Vole Husbandry at Colorado University Boulder

By: Jessica Abazaris, BS, and Sara Hashway, DVM, DACLAM

Microtus pennsylvanicus (meadow voles) and *Microtus ochrogaster* (prairie voles) are rodent species found throughout North America. Meadow voles are commonly found in grasslands and wooded areas in Canada and the northern part of the United States.^{3,5} Prairie voles are found in grasslands, pastures, and fields throughout the central and eastern parts of the U.S.² Both species have a herbivorous diet consisting of vegetation, roots, and seeds. Still, they will occasionally eat insects.^{2,6} Meadow vole adults are typically the larger of the two species, weighing around 45 grams,³ while prairie voles weigh between 17 – 48 grams.² Both species have similar body lengths of about 5 – 7 inches, although meadow voles may have slightly longer tails.^{2,5} Both species have a similar coloration – light brown bellies and dark brown and black speckled backs. Meadow voles have a gray undertone to their fur and occasionally have a white spot on their head, chin, or neck; prairie voles have a yellow undertone and lack white spots. Meadow voles are promiscuous, with females being more territorial than males.¹ Both sexes are more solitary during the spring-summer seasons but will tolerate communal nesting in the winter months to help with thermal regulation.⁵ In contrast, prairie voles are monogamous, remaining together for their entire life. Unlike meadow voles, both parents care for the young.

Voles are commonly found in the wild but can also be used in biomedical research. Both species are excellent models for examining complex social behaviors’ neurological and molecular basis. Prairie voles have emerged as a pre-eminent model for studying the genetic and neurobiological mechanisms governing complex social behavior in vertebrates, including pair-bonding, paternal and maternal care, mate-guarding, and offspring attachment. The polygamous and antisocial meadow voles serve as a control for these studies. Both species have been at the University of Colorado Boulder (CU Boulder) since 2015 and are used to investigate the neurological circuits involved with pair bonding.



Figure 1. Harem and small cage full set-ups used for voles.



Figure 2. Example of divider cage.

Primary Enclosure

At CU Boulder, vole husbandry is provided by the Office of Animal Resources (OAR). All of our voles are housed on irradiated aspen chip bedding in either conventional harem or small static microiso-



Figure 3. Nesting box with day old meadow pups. Large holes allow the mother to easily access pups.



Figure 4. Three styles of enrichment for (from left to right) meadow vole breeder cages, small cages, and harem cages. All cages receive a whole nestlet, veggie relish, sunflower seeds, alfalfa cubes, one PVC tube, and one igloo with the exception of small cages who do not receive a PVC tube and receive half a nestlet and meadow vole breeder cages who do not receive alfalfa cubes but receive a nesting box.

lator rodent cages. Depending on cage size and experimental need, we house our voles with densities between 1 – 4 animals per cage. This is due to their relatively high urine and fecal output combined with our weekly cage change routine, which restricts us to these lower cage densities to effectively manage ammonia and excreta buildup. All our cages use stainless steel grids, with harems using rat grids with handles for easier removal during cage changing. All cages also have a filter, and micro-isolator top (Figure 1). A unique item we use at CU Boulder is a custom-built laser-cut transparent plexiglass divider that perfectly fits into harem cages. The transparency of the divider allows for the separation of the animals while allowing them to have visual and



Figure 5. Example of a meadow vole drinking from a drip water bottle.

olfactory contact while avoiding aggressive interactions when re-establishing pairs (Figure 2).

Enrichment

Voles are preyed upon by animals ranging from birds to snakes in the wild.⁵ Since voles are prey animals, we provide cages with an opaque PVC tube and/or a transparent red mouse igloo to act as a hiding place and place of refuge from cage mate aggression. These hiding places also provide protected nesting areas for breeders. In addition to an igloo and PVC tube, we provide meadow vole breeders with a custom-made 4-inch black opaque acrylic box with no lid to discourage cannibalization of pups and to encourage breeding out of season. These lidless nesting boxes allow for our care techs to easily check for pups with minimal disturbance (Figure 3).

Nutrition

Voles are primarily herbivorous and use their open-rooted, continuously growing molars to chew on grass and shrubs. At CU Boulder, we feed all our voles irradiated rabbit chow 5326-3 from Purina Lab Diet ad libitum, as it meets their nutritional needs and helps grind their teeth down. They are also offered alfalfa cubes and Lab Diet irradiated



Mile High Branch of AALAS Newsletter Volume 3 2022



<https://milehighbranchaalas.wildapricot.org/>

TECNIPLAST

Mike DVORAK

Regional Sales Director, West & Southwest
cell 484 798 2632 | e-mail: mdvorak@tecniplastusa.com

Toll Free 877 669 2243 | Fax 484 875 0311

PO Box 1209, West Chester, PA 19380

www.tecniplastusa.com

Bio-Serv Provides
a Clear Path to Wellness



With Innovative Gelled Diet Products

When your animals need a boost, the Bio-Serv line of Gelled Diet products is there for them. We developed Nutra-Gel in 2003 to provide a highly effective way for debilitated animals to get the food and water they need. Now, we are expanding the Gelled diet line to include a PureWater source and an Electrolyte Replenisher.



 **Bio-Serv**
Advancing Science. Enriching Animals.

www.bio-serv.com • 800-996-9908

 **tick@lab**

A NEW DAY

Animal research and compliance software. Reimagined.

With a brand new User Interface tick@lab leads you into the future of animal and compliance management software

www.a-tune.com


make IT simple



(512) 243 8539
sales@a-tune.com



P +1 512 2438539
M +1 512 5895431
Skype pat.guider1
pguider@a-tune.com
www.a-tune.com

a-tune software INC.
19621 FM 1431, Suite 402
Jonestown, TX 78645
USA

Regulatory Compliant software for IACUC, IRB, IBC and Facility Management

J. Patrick Guider Jr., BA, MPA

General Manager


make IT simple



Mile High Branch of AALAS Newsletter
Volume 3 2022



<https://milehighbranchaalas.wildapricot.org/>



THE NORTH AMERICAN
3Rs COLLABORATIVE





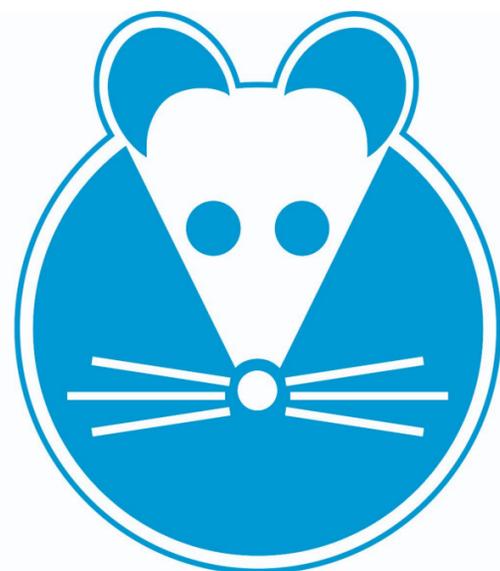
Mile High Branch of AALAS Newsletter
Volume 3 2022



<https://milehighbranchaalas.wildapricot.org/>

IDEXX

BioAnalytics



Animal Care | *Systems*



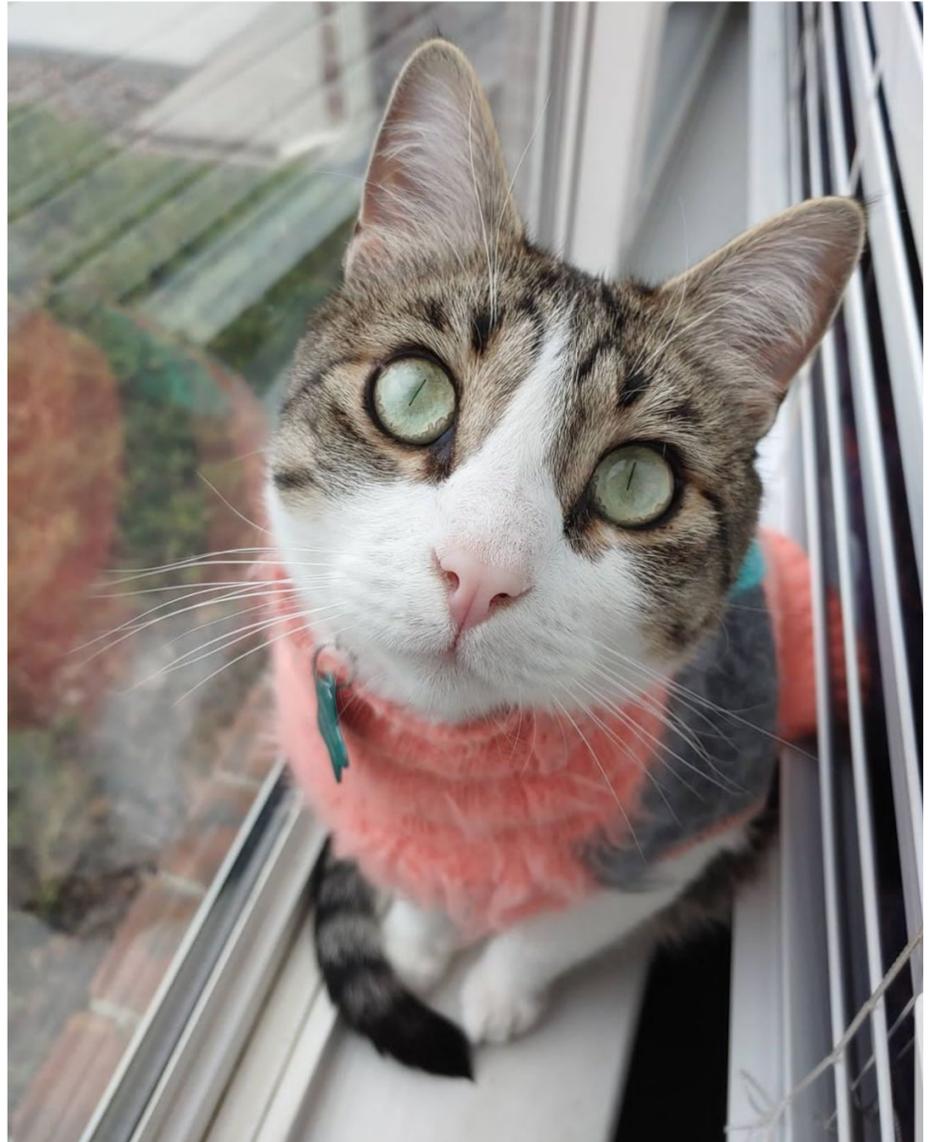
Mile High Branch of AALAS Newsletter

Volume 3 2022



<https://milehighbranchaalas.wildapricot.org/>

Featured Pet



1. Name- Oliver
2. Nicknames- Monkey Man, Olivier, Prince Pig, and Pinknose.
3. Owned by- Savannah Brewer and her husband
4. Siblings- He has two older cat siblings: Gob (pronounced 'Jobe') and Stella, and 2 Crested Gecko siblings (Nettle and Baby) and one Tarantula brother named Wolfgang.
5. Favorite Toys- He loves his laser pointer, breaking things, annoying his brother, and using his talking buttons to order us around.
6. Likes- He really enjoys eating grass, running out the front door, wearing clothes, jumping in windows, and snuggling between his two humans.
7. Dislikes- He does not like loud trucks, dogs, whistling, or the spray bottle.

Savannah Brewer works at the BRC at National Jewish Health.



Mile High Branch of AALAS Newsletter Volume 3 2022



<https://milehighbranchaalas.wildapricot.org/>



Pam Huber
Director of Client Services

Phone: +1-315-587-2295 ext. 1117
Fax: +1-315-587-2109
phuber@marshallbio.com

Marshall BioResources
5800 Lake Bluff Road
North Rose, NY 14516

www.marshallbio.com



Allentown
Improving Life – it's in our DNA.®

Mitch Moore
Technical Sales Consultant

mmoore@AllentownInc.com

M: +1 210 213 8183

ALLENTOWNINC.COM



LITHGOW LABORATORY
SERVICES

SHEPHERD | SPECIALTY PAPERS



Mile High Branch of AALAS Newsletter

Volume 3 2022



<https://milehighbranchaalas.wildapricot.org/>

Legislative News

FEDERAL

President Biden To Appoint Dr. Renee Wegrzyn as Director of the Advanced Research Projects Agency for Health (ARPA-H)

On Sept. 12, President Biden announced his intent to appoint biomedical scientist, Renee Wegrzyn, as the first director of ARPA-H. ARPA-H is a new agency under the Department of Health and Human Services to improve the U.S. government's ability to streamline biomedical and health research.

ARPA-H will:

Speed application and implementation of health breakthroughs to serve all patients

Foster breakthroughs across various levels — from the molecular to the societal

Build capabilities and platforms to revolutionize the prevention, treatment, and cures in a range of diseases

Support “use-driven” ideas focused on solving practical problems that advance equity and rapidly transform breakthroughs into tangible solutions for all patients.

Focus on multiple time-limited projects with different approaches to achieve a quantifiable goal.

Use a stage-gate process, with defined metrics, and inject accountability through meeting these metrics.

Overcome market failures through critical solutions or incentives

Use the Defense Advanced Research Projects Agency (DARPA) as a model to establish a culture of championing innovative ideas in health and medicine

Dr. Wegrzyn has previously worked at the Defense Advanced Research Projects Agency (DARPA) and Intelligence Advanced Research Projects Activity (IARPA). She is currently a vice president of business development at Ginkgo Bioworks and head of innovation at Concentric by Ginkgo, where she is focused on applying synthetic biology to outpace infectious diseases.

FDA Publishes New Guidance for Compounding Substances

On Sept. 8, the FDA held a webinar on the updated guidance for compounded substances used in both clinical treatment and research protocols. During the webinar, the FDA debunks common myths and provides the latest news, and OLAW clarified requirements relating to non-pharmaceutical grade substances in the context of the FDA's guidance. Some highlights include:

- Is dilution of substances considered compounding?
- Must a veterinarian physically oversee the compounding of research substances?
- When is it illegal to keep office stock?
- Is mixing commonly approved anesthesia drugs in the same syringe considered compounding?

FDA staff also shared checklists and resources for easy reference.



Mile High Branch of AALAS Newsletter

Volume 3 2022



<https://milehighbranchaalas.wildapricot.org/>

Legislative News

USDA Announces Updated Dashboard with Data on SARS-COV-2 Variants Detected in Animals

On Sept. 7, the USDA announced updates to its web-based dashboard with information on SARS-CoV-2 variants found in animals. The Animal and Plant Health Inspection Service (APHIS) studies and reports findings of SARS-CoV-2 variants on this platform as researchers work to better understand and combat SARS-CoV-2 and protect animal and human health.

ANIMAL RIGHTS NEWS

JDSupra Article Lays Bare PETA's FOIA Strategy in One-Sided Article

PETA has continued its campaign of targeting research universities and intramural research at the NIH by using the Freedom of Information Act (FOIA) to obtain information on animal research compliance issues. The group then files complaints with the agencies charged with enforcement and posts the correspondence on its website. Enforcement actions and PETA complaint letters are then pitched to media outlets. Although this strategy is not new, PETA has increased efforts to *“hold NIH and funded institutions’ feet to the fire when there are documented violations of either NIH guidelines for animals used in research or of the Animal Welfare Act (AWA), which a USDA division enforces.”* This comes as research institutions are already under significant administrative burden and compliance pressure stemming from a multitude of government agency requirements.

Please reach out to NABR with any questions or concerns if your institution is targeted by animal rights groups or if you need additional information regarding FOIA requests.

NABR's October Webinar: An Update on the Compliance Unit Standard Procedure (CUSP) Sharing Site

Join us and our special guests Dr. Sally Thompson-Iritani, Assistant Vice Provost, Animal Care, Outreach & 3Rs, and Dr. Aubrey Schoenleben, Co-Director, Office of Animal Welfare at the University of Washington, on October 11, 2022, for our third in a series of webinars on the development and implementation of the Compliance Unit Standard Procedure (CUSP) Sharing Site, which has come a long way since we first introduced it to the NABR membership in a November 2017 webinar. The goals of the CUSP project are to provide access to a repository where participating institutions can share standard procedures to be used in animal care and use protocols with the broader animal welfare compliance community. Having access to the database offers all those involved with the preparation and review of proposed activities involving animal research a valuable resource that can be used to improve consistency and reduce the administrative burden on investigators and members of the IACUC and IACUC support staff.

Americans for Medical Progress, The American Physiological Society, Tecniplast and The North American 3Rs Collaborative Webinar- Communicating How, When and Why Large Animals Are Essential for Research

On Oct. 13th, the above groups are holding a webinar to highlight the importance of large animal research in preclinical and translational science that ultimately leads to new treatments and cures.

Keynote speaker:

Karen Parker, Ph.D., Associate Professor and Associate Chair of the Department of Psychiatry and Behavioral Sciences at Stanford University

Additional speakers:

Sally Thompson-Iritani, DVM, Ph.D., Assistant Vice Provost for Animal Care, Outreach and the 3Rs at the University of Washington

Paula Clifford, MLA, RLATG, CVT, Executive Director of Americans for Medical Progress

Alissa Hatfield, MS, Science Policy Manager for the American Physiologic



Mile High Branch of AALAS Newsletter

Volume 3 2022



<https://milehighbranchaalas.wildapricot.org/>

Unusual animals in biomedical research



The blood thinner hirudin, first found in leech saliva, inspired synthetic forms that are still used to treat certain heart conditions.

Cholorotoxin, found in the venom of the deathstalker scorpion, has an affinity for tumor cells. This is helping scientists solve the issue of how to tell cancerous tissue from benign. Clinical trials have found that chlorotoxin-based molecules can seek out and identify gliomas, cancers of the brain. In the future, researchers hope to be able to use chlorotoxin to ferry drugs right to the site of the tumor.



Maggots were used by battlefield medics to help cleanse wounds of necrotic tissue. It was noted that soldiers with maggots in their wounds suffered less infection or inflammation than other patients. The maggots ingest necrotic tissue and release chemicals that suppress the immune system. In 2004, the FDA approved maggot therapy as a medical device. A recent review found that this significantly shortens healing time compared to conventional therapies.

Researchers are looking at ways to use silk as lubricant for arthritic joints and as scaffolding for regrowing damaged tissue. They are also looking at the potential of “silk microspheres”, which could be injected into the body and release drugs over an extended period of time.



Blister beetles make cantharidin, a skin-blistering toxin that can kill horses. This same toxin, applied to cancer cells in a dish, cuts off the cancer's supply of nutrients and oxygen.



Mile High Branch of AALAS Newsletter

Volume 3 2022



<https://milehighbranchaalas.wildapricot.org/>

Unusual animals in biomedical research

Termites may be the future of antibiotic discovery. The reason termites are so hard to kill is because they build nests of their feces, which are inhabited by friendly bacteria that produce natural antibiotics. Researchers are looking at whether these antibiotics can fight infections in humans.



Parasitic worms can dampen the host's immune system. They appear to be an effective treatment for inflammatory bowel disease and multiple sclerosis, according to early results from clinical trials. In animal models, parasitic worms have shown promise against type 1 diabetes and arthritis.





Mile High Branch of AALAS Newsletter Volume 3 2022



<https://milehighbranchaalas.wildapricot.org/>



Barrie Axen MS T&D
Sr. Business Development Director
Research Models and Services
M (512) 348-9454
E barrie.axen@envigo.com

Envigo
8520 Allison Pointe Blvd., Suite 400
Indianapolis, IN 46250
envigo.com



BRAD
Biomedical Research Awareness Day

bio|BUBBLE
CONTROLLED ENVIRONMENTS | CUSTOM SOLUTIONS



AVIDITY
SCIENCE



Mile High Branch of AALAS Newsletter Volume 3 2022



<https://milehighbranchaalas.wildapricot.org/>



AALAS LEARNING LIBRARY
Animal Care and Use in Research and Education



All Mile High Branch Members have free access to the learning library as part of their membership. If you would like access, please contact [Dawn Olson](#).

Want to see your pet featured in an upcoming newsletter? Please submit a picture and the following information:

Name, Nicknames, owner, siblings, favorite toys, likes dislikes

Send all of this to [Dawn Olson](#)

If you submitted your pet, but didn't see them in this issue- check out the next issue!

Check IT Out

Have you heard? Cindy Buckmaster has a podcast about lab animal research and the folks that work in the field. You can listen to GetReal! at BUZZSPROUT.COM

Check out the website of The North American 3Rs Collaborative:
<https://www.na3rsc.org/>

Love to binge watch Youtube videos? There are 2 channels that will let you learn about the lab animal field at the same time!

Lab Animal Chat and Celebrate Animal Research and Education will help you learn more about the field while providing information to talk to others about what you do.