

Edinburgh Tech Startup Pioneers AI Solution for Early Detection of Heart Disease in Cats and Dogs

BY: SAMANTHA BARTLETT, DVM

MI:RNA Diagnostics, a startup from Edinburgh led by CEO Dr. Eve Hanks, BVM&S CertAVP (EM) PhD MRCVS, has developed technology for an early disease marker that can help dogs and cats with heart disease live longer. The tech firm, a spinout company for Scotland's Rural College, developed the NEMO Cardiac Health Screening test that has 85% sensitivity and 83% accuracy in spotting common heart diseases such as myxomatous mitral valve disease (MMVD) in the very earlier stages before proBNP or Troponin. .

MicroRNAs (miRNAs) are single-stranded, non-coding RNA molecules that help regulate gene expression. The test analyzes microRNAs in a blood sample as biomarkers in disease progression. Combining the test with artificial intelligence (AI) improves early identification of conditions like MMVD so that care can be instituted more quickly. The diagnostics are also being tested for the detection of hypertrophic cardiomyopathy in cats.

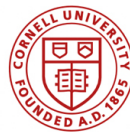
The researchers foresee the technology being beneficial to primary care practices for diagnosing early heart disease more thoroughly and determining which cases to refer and which treatments to implement for each individual patient. The technology is also being explored for application in early detection of other diseases such as epilepsy, kidney disease, cancer and intestinal disease.

For more information and to view a pre-print of the research paper, visit the company's website at mirna-diagnostics.com.

Diets Limiting Ingredients, Not Allergens, Improve Dog GI Issue

BY: SAMANTHA BARTLETT, DVM

In a study by researchers at the Cornell University College of Veterinary Medicine, published in the September 7 Journal of Veterinary Internal Medicine, found that by restricting the number of ingredients in a dog's diet, we can lessen the signs of chronic gastrointestinal diseases. Many dogs with chronic enteropathy have been assumed to be food intolerant due to an adverse immune response to dietary antigens.



College of
Veterinary Medicine

Many dogs with diarrhea, vomiting and weight loss attributed to chronic enteropathy, respond to diet change, but there is no clear indication of why they are responding. To get a better picture of what is causing disease, the researchers designed a randomized controlled study. Dogs in the study were randomly assigned a diet out of three diets similar in calories and macronutrient profiles. Two of the diets were hypoallergenic diets and one was a limited ingredient diet. The hypoallergenic diets were hydrolyzed fish. The limited ingredient diet contained nonhydrolyzed proteins and other ingredients thought to trigger immune responses such as corn, chicken and fish.

All of the dogs did better on the new diets regardless of which group they were in. The dogs essentially went in to remission on the new diets independent of the diet being hydrolyzed or not and of the dog having been fed antigens that were considered potentially allergenic. The researchers note that the participants of this study went into remission even after failing previous diet trials. Some contributors to this result could be better compliance by owners in not giving different foods for snacks and sticking to the prescribed diet due to the formal follow-ups required by the study.

In conclusion, it may be better to try a few different diets before jumping to immunosuppressing drugs and antimicrobials for dogs with chronic enteropathies. It is also important to stress compliance to owners when performing a diet trial.

The Future of Canine Stem Cell Therapy Using Urine Samples

BY: SAMANTHA BARTLETT, DVM

In human medicine, induced pluripotent stem cells (iPSCs) have been used in regenerative treatment on a growing scale. Attempts to translate that medicine into the veterinary world has been more complicated. Canine cells have been found to be less efficient at reprogramming compared to human somatic cells, which limits the types of cells available for creating iPSCs.

A research team from the Graduate School of Veterinary Science at Osaka Metropolitan University identified six genes from urine-derived cells that are 120 times more efficient at canine iPSC generation compared to conventionally used fibroblasts. The method the researchers used is non-invasive and painless and can generate iPSCs without using feeder cells as had previously been a necessity.

The team hopes to disseminate the information to the research community and help find cures to many previously incurable diseases. The research findings, published December 21, 2023 under the title of Generation of canine induced pluripotent stem cells under feeder-free conditions using Sendai virus vector encoding six canine reprogramming factors by Masaya Tsukamoto et al, can be accessed at <https://doi.org/10.1016/j.stemcr.2023.11.010>.



FDA Warns Online Pet Suppliers for Selling Unapproved Drugs

BY: SAMANTHA BARTLETT, DVM

The Food and Drug Administration (FDA) has ordered nine online pet suppliers to cease the sale of over-the-counter antimicrobials. These products are being “illegally marketed” and include antibiotics used in human medicine such as amoxicillin, penicillin, tetracycline and erythromycin. The products are mostly marketed for pet fish and birds; however, experts believe that overuse of these products has contributed to increased instances of antimicrobial resistant infections.

The nine pet suppliers being warned by the FDA are Chewy, American Aquarium Products, Aquanest Biotic, Aquarium Pharmacy, LLC, California Veterinary Supply, Kraft Drug, Midland Veterinary Services, LLC, Silver Lease, LLC and Valley Veterinary Clinic, LTD. The FDA gave the companies 15 days to submit a plan to remove the products from sale inventory under threat of legal action and inventory seizure.

The overuse of these antimicrobial drugs leads to treatment resistant infections as organisms become immune to the drugs. The World Health Organization estimates that pathogens resistant to antimicrobials caused over 1 million deaths in 2019 and were a contributor in almost 5 million other deaths. The Centers for Disease Control reported that of 2.8 million cases of antimicrobial resistant infections in the U.S. in 2019, 35,000 resulted in deaths.

The American Veterinary Medical Association (AVMA) stresses that antimicrobial use in animals and its connection to antimicrobial resistance is not clear. The AVMA states that resistance is more common in human pathogens transmitted between humans as opposed to pathogens tracked back to animals or food-borne illness. The AVMA refers to antimicrobial drugs in animals as an important resource for the veterinarian. Another contributing factor is the use of animal labeled antimicrobial drugs sold online being used by humans to self-medicate.

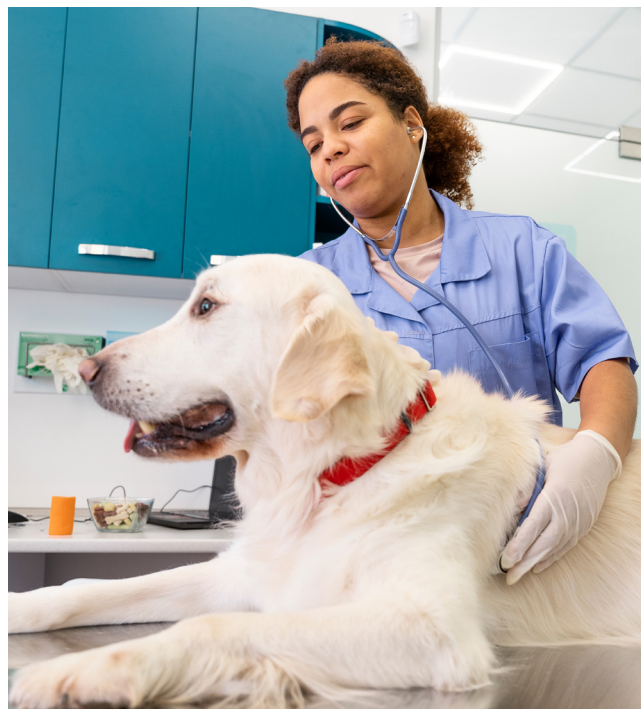
Researchers Develop New Method for Detecting Chronic GI Disease in Dogs

BY: SAMANTHA BARTLETT, DVM

Gastrointestinal issues are common in veterinary medicine. It is estimated that GI problems are the reason for more than 10% of new veterinary visits. Despite this, little is known about GI diseases and treatments. The Texas A&M University School of Veterinary Medicine & Biomedical Science Gastrointestinal Laboratory (GI Lab) is the world's leading GI disease research center.

The GI Lab conducts over 100 studies at any given time using their database of 2 million samples collected over the 26-year period the GI Lab has been operating. Recently, the GI Lab has developed a new diagnostic for assessing chronic gastrointestinal disease in dogs and also diagnosing future GI disease.

The Dysbiosis Index (DI) was validated by the GI Lab to distinguish between acute and chronic GI dysfunction and to detect non-GI disorders. The DI works by tracking the levels of bacteria in the gut over time allowing researchers to monitor how much the microbiome shifts. The DI can accurately predict the total shifts through DNA sequencing. By finding markers of chronic GI disease earlier, veterinarians can take steps to mitigate long-term changes to the gastrointestinal tract and reverse the microbiome changes.



The DI validation was reported in an article, Correlation between Targeted qPCR Assays and Untargeted DNA Shotgun Metagenomic Sequencing for Assessing the Fecal Microbiota in Dogs, in the August 2023 journal, "Animals." The index is licensed through Texas A&M and Idexx Laboratories. Both organizations offer the index to veterinarians.

SEPTEMBER CE EVENT

Speakers: Steve Riley, DMV, DVSc, Diplomate, ACVS

Topic: Navigating the Torn Cruciate

Date: March 7th, 2024

Time: Dinner/Registration: 6:30 | Presentation: 7:00

CE: 1 Hours

Location: Yaya's Euro Bistro (Overland Park)

Fee: No fee to attend this event, but RSVP is required by **March 4th**. Current membership dues cover all CE..

Sponsor: Blue Pearl Pet Hospital

Classifieds

Send your classified ads to: Wanda Geis, PO Box 12468, Shawnee Mission, KS 66282-2468, or email them to classifieds@kcvma.com. Classified ads will be run at the sole discretion of the editor and may be edited for content.

February 16, 2024

Registered vet techs...are you ready to find your perfect fit with a privately owned veterinary hospital? At Advanced Veterinary Care of Olathe, maintaining a positive, cooperative, teamwork environment is critical when it comes to our goal of being the most trusted veterinary hospital in the area. Our clients are the best and expect nothing but excellent and compassionate care from our team, and we're delighted to provide the highest level of care for our clients and their pets. That care shows in our hospital culture.

Qualified candidates will love animals and people and have outstanding customer service skills. Must be prepared to join a winning team of veterinarians, receptionists, registered technicians, and assistants who are dedicated to providing our clients with the very best level of care for their pets.

Registered Veterinary Technicians divide their time between monitoring anesthesia, assisting in surgery, dental cleanings, advanced patient care, client education, and developing veterinary assistants. They are also responsible for utilizing Fear Free techniques to care for animals in a calm, caring, and safe manner, dispensing medications, assisting doctors with treatments, answering phones, following up on appointments, and entering data into computerized medical records, among other tasks. You will be utilizing a full range of veterinary technician skills and leveraged to your maximal abilities.

This position requires current RVT licensure or the ability to transfer licensure from another state.

RVTs start at \$22/hour, based on experience, with competitive benefits. Please contact Dr. Matt Peuser at peuser@avcolathe.com or 913-782-2269.

February 16, 2024

FOR SALE LaBoit customized sprinter van fully equipped for SA practice. Equipped van alone or with established house call practice in OP KS. Exciting opportunity. Reasonable and prepared to sell. Call or text 203-395-948. Iniemandvm@yahoo.com. <https://www.neighborhoodvets.com/>

February 14, 2024

Vet Ray DX-V17U Csi DR for sale with table. Great machine. Purchased originally September 2023. Practically new. \$14000 (half price) or best offer. contact Christi @ 785-766-2657 or jsac@sunflower.com.

February 14, 2024

For sale : Idexx Lasercyte DX, Catalyst One purchased in 2018, SediVue DX purchased in 2019. Best offer. 785-766-2657 or jsac@sunflower.com.

January 23, 2024

Join Our Passionate Team at Parkway Animal Hospital!

About the Opportunity:

Seeking a skilled Associate Veterinarian to join our bustling small animal veterinary practice at Parkway Animal Hospital. This is your chance to gain invaluable experience, achieve career milestones, and grow with our supportive team! New graduates are more than welcome, and we offer exciting externship opportunities with excellent mentorship.

Our Clinic & Services:

Located in Lenexa, KS, we've been providing outstanding veterinary care for over 30 years! As a full-service small animal clinic, we provide services in routine wellness, surgical, dental, and preventative care.

Our Mission:

Personal attention, compassion, and quality healthcare – that's our commitment to every patient.

Team & Culture:

Join our experienced and kind team, fostering a positive and collaborative environment. Core values of compassion, education, and integrity guide our daily work. We seek a candidate who embodies these qualities personally and professionally.

Responsibilities:

As an Associate Veterinarian, provide patient exams, surgeries, lab work, emergency care, and more. Direct interaction with clients and patients, ensuring top-notch care aligned with our values.

Benefits for You:

- Sign-on bonus and or student loan assistance available
- 401k plan with employer match
- Stipends for health, dental, and vision insurance
- Reimbursements for liability insurance, licenses, and CE
- Enjoy a four-day work week with no weekends required
- Additional perks: PTO, vacation, sick, maternity leave, quarterly profit bonuses, professional development assistance, and employee discounts

Point of Contact:

Dr. Laurel Thomas, Veterinarian & Owner

laurel@parkwayah.com

(913) 492-5300

Website – <https://www.parkwayah.com/>

Facebook – <https://www.facebook.com/ParkwayAnimalHospitalLenexa>

January 23, 2024

Title: Shelter Veterinarian

Reports to: Chief of Veterinary Medicine

Updated: November 2023

Status: Full-time, Exempt

Approved by: President of Wayside Waifs

Schedule: 40 hours per week with shared on-call duties.

Position Summary

The shelter veterinarian is a vital part of overall shelter operations, and also our community outreach programs. Flexibility and adaptability are keys to success as you will be able to use a vast spectrum of your small companion animal knowledge. Both routine and advanced medical conditions and surgeries are part of the work we do at

Wayside Waifs. We work together to formulate treatment options for both in clinic and specialist opportunities. A shelter veterinarian is the primary source of medical needs for animals under the care of Wayside Waifs, 365 days a year, which allows for immediate and direct care. Additionally, the responsibilities of a shelter veterinarian extend outside the clinic and frequently require collaboration with many other departments to find the best outcome for the animals in Wayside's care.

The approach the shelter veterinary team takes is one of exploring realistic treatment options, seeking improvements in standards that are sustainable. Flexibility and adaptability to meet the many changing variables, and responsibility to make teamwork and supportive collaboration a priority.

Mentorship is available for all veterinarians with learning tailored to the experience of the individual.

SHELTER VETERINARIAN RESPONSIBILITIES:

- Basic and advanced medical exams with available equipment or justification for specialist, as well as diagnosing, prescribing, and treating conditions.
- Routine alteration exams for primarily dogs and cats, and less frequently for rabbits.
- Ability to triage and perform emergency examination or surgeries for shelter or animals brought in by our animal control partners.
- Thorough medical charting for exams, surgeries, and advanced procedures through the PetPoint software platform.
- Advanced surgical procedures with mentorship of the Chief of Veterinary Medicine or other veterinarians on staff, if needed.
- Herd health monitoring for disease risks more often seen in a shelter environment, which can include parvovirus, distemper, upper respiratory infections, and parasitism.
- Medical responsibilities, assistance, and leadership with community outreach programs (vaccine clinics, spay/neuter events, and trap/neuter/release activities).
- Performance of humane euthanasia for shelter animals with medical and/or behavioral challenges with an emphasis on safety and/or quality of life, and with our public Pet Memorial Center clients.
- Guidance, inclusion, and basic mentorship of rotating 4th year veterinary students in our 25+ year student externship program.
- Frequent professional and open-minded collaboration with other departments within Wayside Waifs, primarily behavior, adoptions, and admissions.
- Assistance in providing leadership, training, and education to vet clinic staff and volunteers.
- Assistance with and support of all Vet Clinic Tasks.
- Rotating participation in Lunch and Learn presentations on various clinic-related topics.
- Comply with all of Wayside Waifs policies and best practices.
- Additional tasks as necessary.

POSITION REQUIREMENTS:

- Schedule of 4 days at 9 hours during weekdays and a rotation of Saturdays with other veterinarians at 8 hours.
- Rotation of on-call schedule with other veterinarians on Sundays and when the Chief of Veterinary Medicine is not available on weekdays.
- Doctorate of Veterinary Medicine (DVM or VMD) required.
- Current, or ability to acquire a, Missouri Veterinary License with BNDD.

- Current, or ability to acquire a, DEA License.
- Experience with companion animals.
- Excellent written and verbal communications skills and good problem solving skills.
- Ability to work with people in a variety of high-stress and emotional situations while maintaining a composed and professional demeanor.
- Demonstrate the ability to work efficiently as a team member in a fast paced, high stress environment.

Physical Requirements:

- Must be able to lift 50 pounds to waist height for various tasks.
- Repetitive bending, kneeling, stopping, and similar movements required.
- Must be able to physically restrain animals weighing up to and including 125 pounds.
- Able to work with exposure to wet and/or humid condition and outside weather conditions.
- Must be able to perform a significant amount of standing during a typical day, exposure to fumes, airborne particles, and possible zoonotic diseases.
- Noise level is moderate to high.
- Exposure to animal waste.

Learn more at waysidewaifs.org/contact-us/job-openings or contact Melissa Crites at 816-986-4412 or mccrites@waysidewaifs.org.

January 12, 2024

Small animal practice for sale in Lawrence, KS. Gross last year >\$960,000. Digital DR xrays. Call Dr. Christi Jarrett 785-766-2657 or email inquiries to jsac@sunflower.com.

January 3, 2024

De Soto Veterinary Clinic is looking for a veterinarian to join our team. Locally owned single doctor small animal practice. Growing fast. Brand new beautiful facility. Great support staff and wonderful clientele. Looking for part time or full time. Schedule flexible. We do not work weekends or take after hours calls. Pay and benefits competitive and negotiable.

Please contact Dr. Matt if interested.

620-617-9170

mattfehr1@gmail.com