

Experts Convene at the 2019 AKC Canine Health Foundation National Parent Club Canine Health Conference

By Sharon Albright, DVM, CCRT

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The AKC Canine Health Foundation (CHF) recently hosted the 2019 National Parent Club Canine Health Conference. The biennial conference, sponsored by Purina, provides a unique opportunity for canine health researchers, parent club members, veterinarians, and veterinary students to interact and discuss the latest findings in canine health research. This year's conference included lectures on:

Nutrition & Disease
 Infectious Disease & Cancer

Autoimmune Disease
 Genetics & Genetic Testing

The latest scientific findings supported by AKC Canine Health Foundation grants were presented at the conference.



Infectious Disease & Cancer Panel: (left to right) Dr. Jaime Modiano, Dr. Erin Dickerson, Dr. Steven Dow, Dr. Jason Stull, and Dr. Ed Breitschwerdt.

Did you know?

- A clinical trial is underway at Colorado State University to evaluate the effectiveness of CBD oil in treating drug-resistant canine epilepsy. The trial has reached almost two-thirds of their enrollment goal and is ongoing.
- Researchers are exploring a newly discovered autoantibody that may be expressed in dogs within 30 days of Addison's Disease diagnosis. The molecule may provide a target for treatment.
- New epidemiologic data on Leptospirosis, a deadly bacterial infection, shows that young dogs, small dogs (<14 lb), and dogs living in an urban environment are at risk of disease.
- A study found that 74% of US dogs with hemangiosarcoma had *Bartonella* DNA in their tumor and non-tumor tissue samples. This intra-cellular bacterium can stimulate the production of growth factors and is being studied to determine its potential influence on the development of cancer in dogs.

continued...

Fall 2019

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CALENDAR OF EVENTS

WHERE TO FIND US

October 19-20

2019 Master National, Cheraw, SC

October 22-25

Golden Retriever Club of America
 National Specialty, Los Angeles, CA

December 10-15

AKC National Championship, Orlando, FL

December 12

Canines & Cocktails, Orlando, FL

UPCOMING WEBINARS

Register at akcchf.org/vetvine.

October 17

Canine Degenerative Myelopathy: From Gene Mutation Discovery to Clinical Trials
 Presented by: Joan R. Coates, DVM, MS, DACVIM (Neurology)

November 20

Addressing the Spay/Neuter Conundrum in Dogs: Some Breed-Specific and Body Size-Specific Guidelines

Presented by: Benjamin Hart, DVM, PhD, DACVB

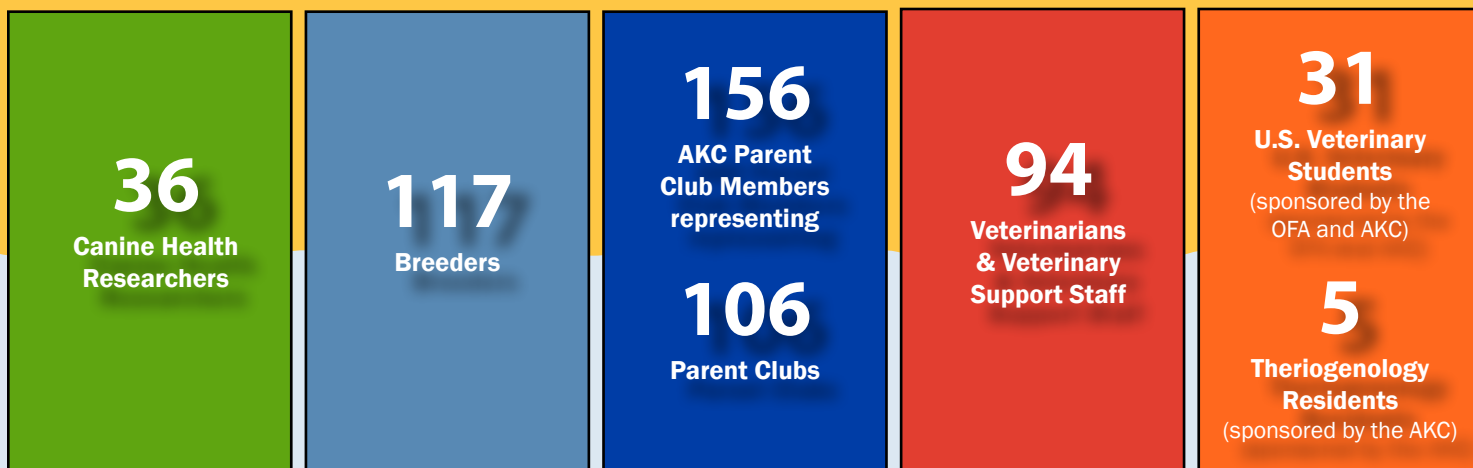
Sign up to receive CHF's latest canine health research information at
akcchf.org/registration.

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continued

- A multi-institutional clinical trial is underway to evaluate the use of propranolol, in combination with surgery and chemotherapy, to treat canine hemangiosarcoma. Propranolol has been shown to sensitize hemangiosarcoma cells to chemotherapy and may provide a more effective way to kill tumor cells.
- A review of canine hemangiosarcoma research confirms that there is no correlation shown between genetic mutations and dog breed or tumor location. This confirms that hemangiosarcoma is an indiscriminate cancer of concern for all dogs.

2019 AKC Canine Health Foundation National Parent Club Canine Health Conference Registrants



- The International Partnership for Dogs Harmonization of Genetic Testing for Dogs project database (www.dogwellnet.com) currently contains information on 69 genetic test providers and more than 300 tests and diseases in over 500 different dog breeds and breed types. It is a valuable resource for veterinarians, breeders, and owners hoping to make sense of the recent surge in canine genetic testing options.

Learn more about the conference speakers and sponsors at akcchf.org/npcchc. Thanks to the support of CHF's generous donors and the dedication of expert scientists and dog enthusiasts, we are making progress in our mission to advance the health of all dogs! 🐾

How You Can Help



End of Year Giving

As you plan your year-end giving, please consider the many ways you can support the AKC Canine Health Foundation's mission to advance the health of all dogs and their owners.

🐾 **Purchase a brick** — Looking for a unique gift or to make a tribute? Order a personalized engraved brick on the Walk of Champions or Path of Honor at the Purina Event Center and the proceeds will benefit canine health research. akcchf.org/brick

🐾 **Membership** — Individuals, dog clubs and veterinary clinics will enjoy CHF's quarterly newsletter and a pin, plaque or banner to display their dedication to advancing canine health. akcchf.org/membership

🐾 **AmazonSmile** — Go to smile.amazon.com, select American Kennel Club Canine Health Foundation, Inc. as your charitable organization, and Amazon will donate 0.5% of eligible purchases to CHF.

For even more ways to give, visit akcchf.org/how-to-help.

Learn about Rabies and other important diseases from CHF's infectious disease fact sheets at akcchf.org/tophealthconcerns.



Gut Microbiota Research Aims to Boost Canine GI Health

By Barbara Fawver — Manager of Pet Influential Communications, Purina

Restoring health to the gut microbiota can be a game changer in treating many canine diseases. An imbalanced gut microbiome, known as dysbiosis, can detrimentally impact a wide range of conditions, including inflammatory bowel disease, cancer, asthma, diabetes, obesity, and stress disorders.

Two research veterinarians presented talks related to the intestinal microbiota at the AKC Canine Health Foundation National Parent Club Canine Health Conference August 9 to 11 in St. Louis. Purina, the lead sponsor of the conference, invited the speakers to take part in the opening session on nutrition and diseases.

“We welcomed the opportunity to include veterinary researchers who have been involved in clinical trials and cutting-edge research of health conditions in which Purina is investigating nutritional solutions,” says Purina Director of Veterinary Communications Jason Gagne, DVM, DACVN, a board-certified veterinary nutritionist.

“The gut microbiota is made up of bacteria, fungi, protozoa, and viruses—all which can cause acute and chronic gastrointestinal (GI) diseases when dysbiosis occurs,” says Jan S. Suchodolski, DrMedVet, PhD, DACVM, AGAF, Associate Professor and Associate Director of the Gastrointestinal Laboratory at Texas A&M University.

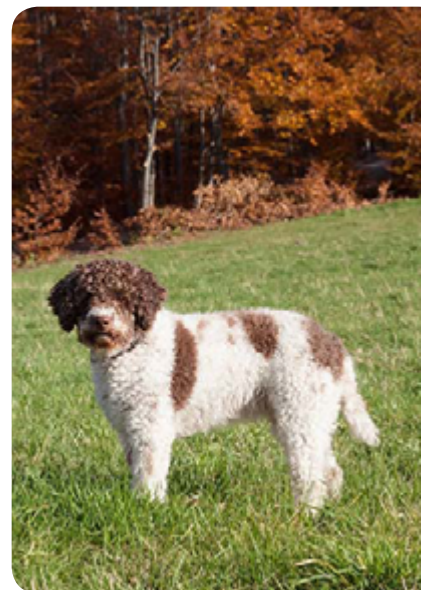
“The GI system is one of the most metabolic organs of the body, and it’s important to look at the role of the gut microbiota in disease, as this could guide treatment decisions.”

Among the tools Dr. Suchodolski uses to evaluate a dog’s GI health is the Canine Microbiota Dysbiosis Index. A rapid PCR-based assay that quantifies the abundance of eight bacterial groups from a fecal sample, the test helps to characterize a dog’s dysbiosis and how it affects function and treatment decisions. “When the index is high, it could be due to a dog having a GI condition such as chronic enteropathy, exocrine pancreatic insufficiency or even an antibiotic-induced dysbiosis,” Dr. Suchodolski says. “In cases of severe GI disease, we have had success using fecal microbiota transplantation, with rapid improvement of diarrhea in a subset of dogs.”

Meanwhile, Michael R. Lappin, DVM, PhD, DACVIM, the Kenneth W. Smith Professor in Small Animal Clinical Veterinary Medicine at Colorado State University, shared insights about his studies of the role of probiotics in helping to manage acute or chronic diarrhea due to infectious diseases or inflammatory bowel disease and antibiotic-associated vomiting or diarrhea.

“Probiotics are live organisms that when given in adequate amounts confer a beneficial health effect on the host,” Dr. Lappin explains. “Probiotics help re-stabilize the microbiome. Some probiotics inhibit pathogenic bacteria in the microbiota, and some induce immune-modulating effects that help manage IBD, atopy or infectious diseases.”

Preliminary results of probiotic use in veterinary medicine indicates their beneficial effects warrant further investigations and clinical trials. Along with advances such as the Canine Microbiota Dysbiosis Index and fecal microbiota transplantations, owners of dogs with GI diseases may soon have better options for a quicker recovery. 🐾



Veterinary Students and Residents Attend the Conference

Educating future veterinarians and veterinary reproductive specialists is an important part of the AKC Canine Health Foundation’s mission. Encouraging and interacting with these clinicians and students ensures that well-trained and qualified practitioners are available to support the genetic, reproductive, and general health needs of dogs. Thanks to the Orthopedic Foundation for Animals (OFA) and the American Kennel Club (AKC), 31 U.S. veterinary students and five current or former residents from the AKC/AKCCHF/TF Small Animal Theriogenology Residency Program attended the 2019 National Parent Club Canine Health Conference. Their interactions with established scientists and dog enthusiasts set the stage for life-long collaboration to improve the health of all dogs.

Learn more about the Theriogenology Residency Program akcchf.org/therio.



U.S. veterinary students attending the conference.



AKC/AKCCHF/TF
Theriogenology Residents with
Mari-Beth O’Neill, AKC Vice
President of Sport Services,
and Dr. Diane Brown,
CHF Chief Executive Officer.

MISSION: The mission of the American Kennel Club Canine Health Foundation, Inc. is to advance the health of all dogs and their owners by funding scientific research and supporting the dissemination of health information to prevent, treat and cure canine disease.



Asa Mays, DVM Excellence in Canine Health Research Award

Named for Dr. Asa Mays, a member of the AKC Canine Health Foundation's first Board of Directors in 1995, the Asa Mays, DVM Excellence in Canine Health Research Award is a biennial honor presented to an investigator who demonstrates meritorious achievements in furthering the mission of identifying, characterizing, and treating canine disease and ailments.

This year's recipient is Anita Oberbauer, PhD, Professor of Animal Science and Associate Dean in the College of Agricultural and Environmental Sciences at the University of California, Davis. Dr. Oberbauer's research program emphasizes cellular components regulating skeletal growth and body composition, and the genetic basis for health disorders in dogs and cattle. She is one of the AKC Canine Health Foundation's (CHF) top funded researchers and has received more than \$500,000 in grant funding over 20 years. Her work has resulted in more than 100 peer-reviewed publications.

Dr. Oberbauer studies complex disease processes, but knows that each small discovery builds upon another, and may eventually produce a tool that people can use to improve the lives of dogs. "Advancing canine health requires a team effort," states Dr. Oberbauer. "I am grateful to work with CHF and all of the generous dog owners and breeders who are committed to making that happen."

In addition to her research and teaching responsibilities, Dr. Oberbauer enjoys breeding, training, and showing her own Belgian Tervurens. 🐾



Dr. Anita Oberbauer (left) receives the award from Dr. Mary O. Smith, CHF Board member and Scientific Review Committee Chair.

Recent CHF Grant and Publication Highlights

Grant 02659: Breed Specific Reference Ranges for Canine Thyroid Testing

Principal Investigator: Brian Petroff, DVM, PhD; Michigan State University

Investigators are generating breed-specific thyroid testing reference ranges for three additional dog breeds to refine thyroid testing interpretation in purebred dogs.

Grant 02534: Clinical Trial for Evaluation of Propranolol and Doxorubicin in the Treatment of Canine Hemangiosarcoma

Principal Investigator: Erin B. Dickerson, PhD; University of Minnesota

Co-investigators: David R. Brown, PhD; University of Minnesota, Michael O. Childress, DVM, MS; Purdue University, Jennifer Mahoney, DVM and Pascale Salah; University of Pennsylvania

Investigators are conducting a multi-institutional clinical trial to establish whether propranolol in combination with standard care will improve outcomes for dogs with hemangiosarcoma.

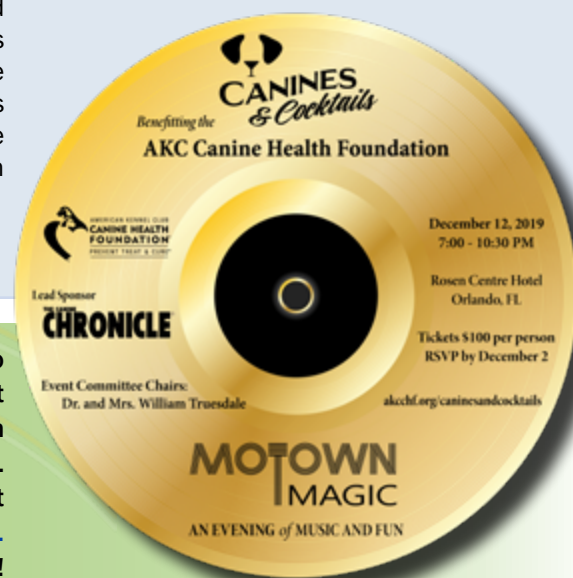
Publication: Personalized Medicine

Mealey, K.L., Martinez, S.E., Villarino, N.F. et al. (2019) Personalized Medicine: Going to the Dogs? *Hum Genet*, 138: 467.

<https://doi.org/10.1007/s00439-019-02020-w>

A recently published review article in *Human Genetics* summarizes the presence and impact of known genetic variations affecting drug metabolism in dogs and includes results from CHF-funded research. The authors also discussed precision medicine in canine cancer treatment and offered considerations for canine pharmacogenetics testing. The goal of personalized medicine is to maximize treatment response through development of therapies that are targeted to the genetic make-up of each specific patient.

See our full research grants portfolio at akcchf.org/research.



Join the fun at Canine & Cocktails, CHF's annual gala to celebrate achievements in canine health research. The event will be held Thursday, December 12, 2019 in conjunction with the AKC National Championship in Orlando, FL.

For more information and to purchase tickets, visit

akcchf.org/caninesandcocktails.

We hope to see you there!