



## news&amp;notes

November/December 2023



## Study Finds That Dog Foods with Pulses and Grains are Just as Digestible as Grain-Free

BY: SAMANTHA BARTLETT, DVM

A new study published in the Journal of Animal Science, studied the digestibility of grain free foods using pulses for dogs. Previously it was postulated that diets heavy in pulse ingredients are not well digested and could possibly be the link to diet associated cardiomyopathy in dogs.

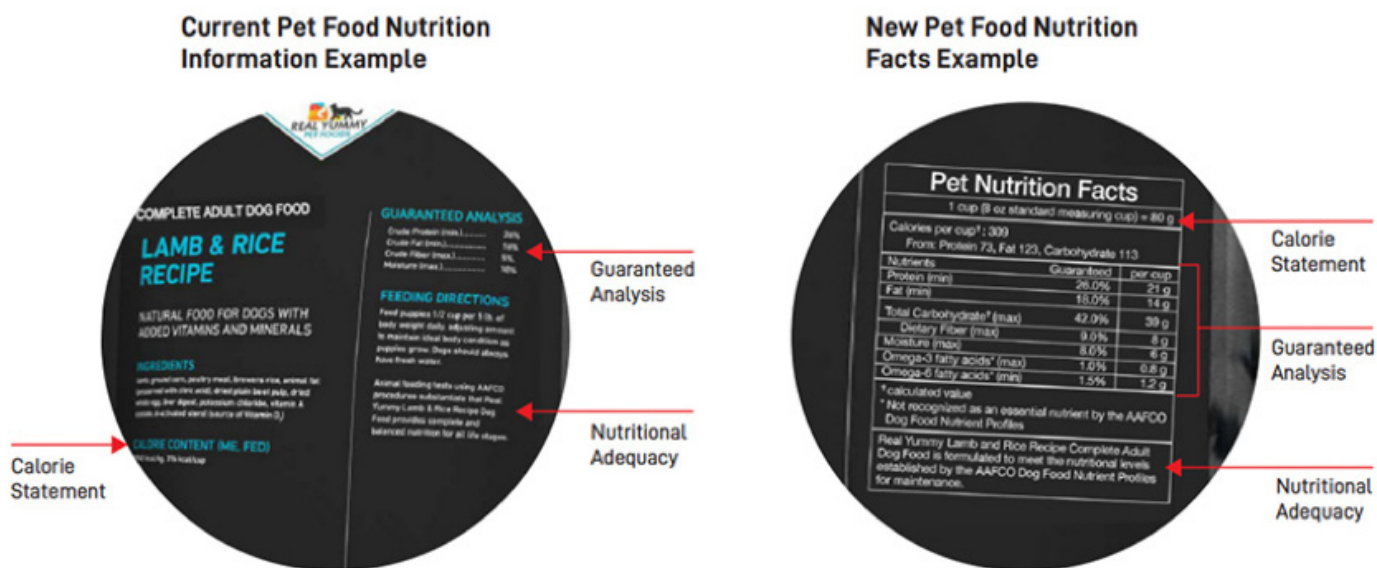
BSM Partners in collaboration with the University of Illinois conducted the study over 180-day period. The study included four different diet groups: two grain free with pulse ingredients with a low protein and high protein option and two diets with grains and no pulse ingredients with a low and high protein option. The diets were formulated to meet AAFCO standards for adult dogs and contained comparable ingredients to common dog foods on the market. The dogs in the study were beagles and mixed-breed hounds.

Researchers evaluated the fecal quality, metabolites and microbiome in the dogs over the course of the study. Fecal samples were collected on days 0, 30, 90 and 180. High pulse inclusion with low animal protein created shifts in the fecal microbiota and metabolites with increased concentrations of short-chain fatty acids compared to grain inclusive diets. All diets appeared highly digestible regardless of protein or carbohydrate source and all of the study participants remained healthy throughout the study. The researchers did find differences between beagles and mixed-breed hounds in fermentative end products and fecal microbiota.

The full study can be found at <https://academic.oup.com/jas/article/doi/10.1093/jas/skad268/7239847?login=false>.

# AAFCO Updates Food Labels to Help Consumers Make Informed Decisions About Pet Food

BY: SAMANTHA BARTLETT, DVM



The Association of American Feed Control Officials (AAFCO) is the organization that creates standards and labels for pet foods. As part of its new Pet Food Label Modernization (PFLM) project, the agency has approved changes to the way pet foods are labeled for the first time in 40 years. The new guidelines are designed to provide nutrition information in a consistent format and more closely align pet food labels with current human food labels. The goal of these changes is to provide more transparency about pet foods and make it easier for consumers to make purchasing decisions.

The highlights of the new changes encompass four key areas:

- Nutrition Facts that closely resemble human food labeling,
- Intended use statement to allow customers to more easily identify the purpose of the pet food.
- Ingredient Statement clarifies the use of consistent terminology and allows common names for vitamins.
- The fourth area is an optional handling and storage instruction with updated wording with icons for greater consistency.

AAFCO is encouraging timely adoptions by state rule makers to ensure consistency and recommending a transition period of up to six years for manufacturers. The PFLM project began eight years ago. The new standards were based on public input and collaboration with pet food professionals across Canada and the United States. AAFCO will release the official publication with the changes in 2024 and plans to release additional information to consumers as these changes begin implementation.

## Researchers Investigating Targeted Treatments for Bladder Cancer in Animals and People

BY: SAMANTHA BARTLETT, DVM

The Wellcome Sanger Institute and University of Guelph collaborated to isolate important gene mutations for human bladder cancer by studying tumors in cats and dogs. The researchers sequenced the cancer tumors of dogs and cats and compared them with sequences from human bladder cancer to analyze the variations between species. By finding common bladder cancer mutations across different species, the researchers seek to isolate the important gene mutations for targeted therapy for humans. Previous sequencing of bladder tumors in humans showed almost 60 genes involved in the development of cancer. From these 60 genes in human cancer, three were found in cat bladder cancer and two in dogs. The most frequently mutated gene in cats was the same as the most frequently mutated gene in human bladder cancer. While BRAF was the most frequently mutated gene in dog bladder cancers, it constitutes only about 3 percent of human cases. These findings will help develop new targeted treatments for bladder cancer in humans and perhaps shed some light on treatment of bladder cancer in cats and dogs.

*The research was published in Genome Biology.*

## Vaccines Target Insect Saliva to Prevent Vector-Borne Disease

BY: SAMANTHA BARTLETT, DVM

Vector borne diseases affect animals and people worldwide and the risk grows greater with the increase in population growth and migration and global temperatures on the planet. Diseases carried by mosquitoes include malaria, zika, and dengue, west Nile and chikungunya, yellow fever and Japanese encephalitis among others.

Researchers at Yale University are developing a vaccine against mosquito and tick-borne diseases by reducing the risk of transmission from the vectors. An mRNA vaccine was created to target the deer ticks that carry Lyme disease. The vaccine uses the tick's saliva to create an irritating environment for the tick reducing the feeding time of the tick, thus reducing transmission of disease. Researchers are hoping to extend this approach to other tick-borne diseases such as babesia, anaplasma and others.

Since mosquitoes feed much faster than ticks, the challenge will be to create a vaccine that alters the inflammatory response induced by the mosquito's saliva. This response causes vascular permeability making it much easier for transmission of disease. Once the target components are worked out, researchers hope to find a



commonality between multiple species of mosquitoes so that one vaccine may target several different diseases. Typically, mosquitoes inject saliva into the skin when taking a blood meal, injecting a mixture of proteins that promote virus dissemination and promote a T-helper 2 (Th2) response rather than a Th1 response, which is much better at restricting viral growth. By inoculating an individual against the saliva of the mosquito, a Th1 response will be much more likely to occur reducing the ability of the virus to infect the host. Efficacy and safety studies are lacking as the creation of mosquito saliva-based vaccines is still in its infancy.



## Proposals for New Veterinary Colleges in the U. S. Number in the Double Digits

BY: SAMANTHA BARTLETT, DVM

The AVMA has received proposals for almost a dozen new veterinary colleges in the United States. Currently there are only 33 accredited veterinary colleges in the nation. The 2022-2023 school year saw a record number of veterinary students exceeding 4000 for the first time. To create a new veterinary college, each institution must go through an accreditation process from the AVMA Council on Education (COE). The COE first does a consultative site visit to create an unofficial report on the proposed college's plan. The institution will then correct any deficiencies found during the COE's initial visit and document those changes to the COE. The COE then does an official comprehensive site visit and allows the college to apply for a letter of reasonable assurance. This letter is not an accreditation but does allow the college to begin enrolling students under the presumption that the college will achieve accreditation status if the college follows its plan submitted to the COE.

The proposed new veterinary colleges include:

- Ana G. Mendez University in Puerto Rico waiting on letter of reasonable assurance form the AVMA. The university currently has a veterinary technician program which has been accredited for associate and bachelor's degrees since 2018.
- Arkansas State University hopes to open a new veterinary medicine program in 2025 or 2026. The university has not scheduled a consultative site visit as yet.
- Chamberlain University is run by Adtalem Global Education, which also owns Ross University School of Veterinary Medicine. The proposed veterinary college would be in Stockbridge, Georgia.
- Clemson University proposed to open a College of Veterinary Medicine making it the University's first professional school and the first veterinary program in the state of South Carolina.
- Lincoln Memorial University in Tennessee is proposing a second veterinary college on a campus in Orange Park, Florida.
- Lyon College is proposing a veterinary college in a new branch campus in Little Rock, Arkansas.
- Rowan University is seeking to establish a new veterinary college in Harrison Township, New Jersey.
- Utah State University proposes a new College of Veterinary Medicine with a distributive model for clinical training.
- University of Maryland Eastern Shore is proposing a veterinary program in Princess Anne, Maryland.
- Rocky Vista College is proposing a new veterinary program but is still in the idea stage at this time.
- Muray State University has approved a feasibility study for developing a new veterinary school in Kentucky.



## NOVEMBER CE EVENT

**Speakers:** Dr. Catherine Peace

**Topic:** Hypercalcemia: Differentials, Diagnostics, and Beyond

**Date:** Thursday, November 16th

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

**CE:** 1 Hour

**Location:** Lydia's

**Fee:** No fee to attend this event, but RSVP is required by

**Nov. 13th.** Current membership dues cover all CE..

**Sponsor:** Idexx

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Westwood Animal Hospital is seeking a full-time associate veterinarian to join our AAHA-accredited hospital. The applicant must share our love, respect and compassion for dogs and cats, be able to accomplish assigned duties while keeping pet restraint to a minimum, and have strong but easy-going client and staff interaction skills. Contact Dr. Wayne Hunthausen at 913-362-2512 or [wayneh42@aol.com](mailto:wayneh42@aol.com).