



Welcome

Dr. Michael Kent
Associate Director, CCAH



Please join me in welcoming Dr. Michael Kent

Dear Friends:

It is my great pleasure and privilege to announce our new Associate Director, Dr. Michael Kent. Although I have not yet decided on an exact time to retire fully from my research and fundraising duties for the School of Veterinary Medicine, the time has come to begin the transition in leadership of the CCAH. I do so with the knowledge that the school has been able to find someone with Dr. Kent's great passion for the CCAH and its mission to improve the health of all small companion animals.

Dr. Kent was at my side as a resident when the CCAH building was designed and constructed and provided invaluable help in creating the radiation therapy unit. His love of the CCAH facility and staff is second only to my own.

Dr. Kent has also been a regular recipient of support from the CCAH, and his research involving the biology of cancer and cancer radiation therapy has received world-wide recognition. He has also been a key participant in the school's Veterinary Cancer Center and its role in the School of Medicine's NIH-designated Comprehensive Cancer Center program.

More than anything, Dr. Kent loves people and their pets. He has been one of our most successful advocates with clients and a leading faculty fundraiser. To make things even better, we both share strong

personal ties with the Koret School of Veterinary Medicine in Israel, a sister institution to ours.

Whatever my future may hold, one thing is certain—the CCAH will continue to be the leader in studies pertaining to the health of your pets.

Sincerely,

Niels C. Pedersen, DVM, PhD
Director, CCAH

— continued on page 2

Also in this issue:

UC Davis Duo Capture Top Awards	2
Tackling Obesity in our Pets: the Role of Nutrition Research	3
CAMF Spotlight	6
An Enduring Commitment to Animals . . .	7

Associate Director Michael Kent



“I am honored to join the Center for Companion Animal Health as Associate Director and to work even more closely with this great organization.”

I graduated from our UC Davis School of Veterinary Medicine in 1997, went on to do my internship at the University of Pennsylvania, and spent a year in private practice in Pennsylvania before moving back to California in 1999 to do residencies in both medical oncology and radiation oncology.

My relationship with the CCAH goes back over a decade. The first research grant I received as a resident was from the center, looking at thyroid tumors in dogs. I also had the pleasure of helping in the design of the radiation oncology facility in our building. As a faculty member, I not only received funding for my studies from the CCAH, but mentored several residents who also received their first grants from the center. Having served as co-director of the Comparative Cancer Center, I worked directly with the families of my patients who have become loyal supporters of the school and the CCAH. I feel that each of these experiences have helped prepare me for my new role.

One of the most important functions of the CCAH is to fund research to help dogs, cats, birds and other companion animals. During my first few weeks as Associate Director I met with our scientific advisory board—consisting of clinicians, basic science researchers and clinician scientists—to review all submitted grant applications. We selected the best ones that were most likely to help companion animals and were able to fund them. I really enjoyed being a part of the process this year and am excited about the work that we will be funding, thanks in large part to your support. I look forward to reporting to you the findings and how they impact animals in coming issues of the *CCAH Update*.

In 2013, it will be 20 years since I first moved to Davis from Los Angeles to start veterinary school, which included being taught by Dr. Pedersen. Over the years I have appreciated his mentorship and advice and will continue to do so in my new role.

Sincerely,

A handwritten signature in blue ink that reads "Michael Kent".

Michael Kent, DVM
Associate Director, CCAH

UC Davis duo capture top awards in nation for contributions to canine and feline health



Dr. Niels Pedersen and Dr. Edward Feldman received honors for their outstanding achievements in research helping companion animals.

The American Veterinary Medical Association honored two UC Davis faculty members for their outstanding veterinary achievements at its recent annual convention.

Dr. Niels Pedersen received the American Veterinary Medical Foundation (AVMF)/Winn Feline Foundation Award, recognizing long-term contributions in advancing our understanding of feline diseases. In addition to his leadership role at the CCAH and other achievements, Dr. Pedersen is a world authority on infectious diseases in cats and immunologic diseases in cats and dogs. He has 220 research publications and authored textbooks on feline husbandry and feline infectious diseases.

Dr. Edward Feldman received the AVMF/American Kennel Club Career Achievement Award in Canine Research. He has established UC Davis as a center for treatment and study of dogs and cats with hormonal disorders, while providing compassionate care for pets and their owners. He has more than 160 research publications and has co-authored a textbook on canine and feline endocrinology, as well as co-editing *The Textbook of Veterinary Internal Medicine*.

Tackling obesity in our pets: the role of nutrition research

By Jennifer Larsen, DVM, PhD

Diplomate, American College of Veterinary Nutrition
Nutrition Support Service
UC Davis William R. Pritchard Veterinary Medical Teaching Hospital

Obesity and related diseases have long been a problem in the human population, and these have become significant concerns for companion animals as well. Over one-third of American dogs and cats are overweight or obese. Ongoing research is exploring risk factors, consequences, and management strategies for preventing and reversing obesity in dogs and cats. This knowledge can provide the tools necessary for veterinarians and owners to work together to help ensure optimum health and longevity for pets.

What causes obesity?

The energy in food is measured in calories. Both people and pets need this energy to engage in daily activities. On a very simple level, excess body fat is stored when more calories are eaten than are used for energy.

However, other factors can influence both the calories eaten and the calories used. The amount of calories eaten depends



Drs. Jonathan Stockman and Jennifer Larsen, of the Nutrition Support Service, formulate a specific diet for a client's animal.



Keeping puppies lean as they grow can help promote a longer lifespan.

not only on the volume that the pet eats, but also the density of the food (the amount of calories in a serving size), how good it tastes and the digestibility of the food (how efficiently the pet can digest and absorb the energy in the food).

Likewise, the amount of calories used can vary depending on the individual pet's genetic makeup, the climate they live in, their activity level, the presence of certain diseases, their lifestage (growing puppies and kittens have higher energy needs than adult dogs and cats, for example) and for many other reasons.

When the amount of body fat exceeds a certain point, the pet is considered overweight or even obese. Since the ideal body weight of dogs and cats varies depending on breed and overall size, veterinarians use a more comprehensive method of evaluation, called a body condition score (BCS).

Rather than using weight, BCS assesses the amount of body fat at specific locations on the pet's body and assigns a score relative to an ideal animal. The amount of fat is assessed visually and with touch. Using a 9-point scale, where 1 is extremely thin, 4 to 5 is ideal for dogs and 5 is ideal for cats, and 9 is extremely obese, the difference between each point represents 10-15% under or over ideal. Pets evaluated to be

– continued on page 4



Tackling obesity in our pets (continued)



Fiber in pet foods

Diseases such as obesity and diabetes in dogs and cats are often managed with changes in dietary fiber. Pet food manufacturers must report fiber as “Crude Fiber” or CF on the product label. In contrast, human food labels report “Total Dietary Fiber” or TDF.

Dr. Amy Farcas, a former resident in Nutrition, led a study funded by the CCAH that demonstrated that CF reported for adult dog foods does not accurately reflect the total fiber concentration. As such, veterinarians cannot rely on CF when evaluating the suitability of food for a dog or cat with fiber-responsive conditions. These results will help encourage the reporting of TDF for pet foods in order to assist veterinarians and pet owners in comparing and choosing diets to manage diseases.

The findings led to the development of a follow-up study recently funded by the CCAH that will determine the fiber concentrations in foods used to manage diabetes and obesity in dogs and cats. The aim is to describe differences in fiber type and amount among various diets fed to pets with these conditions, so that more precise recommendations can be developed with the goal of improved health for dogs and cats.

For more information, visit: vetmed.ucdavis.edu/ccah/research/nutrition_obesity

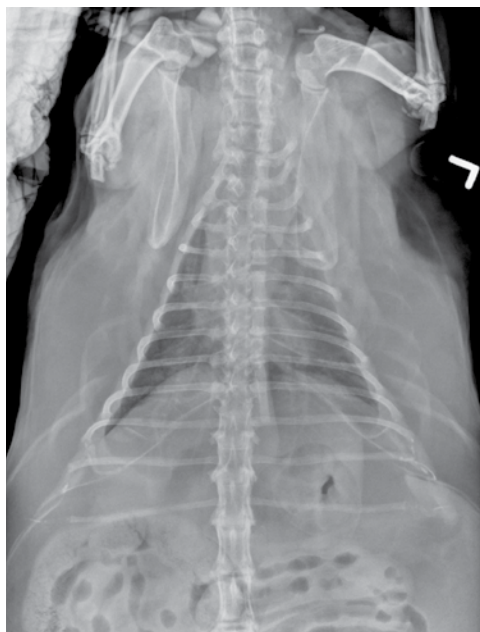
at least 20-25% over ideal (BCS 7 or greater) are considered obese, while those with lower BCS but that are still above ideal are considered overweight.

Why is being overweight or obese harmful?

Harmful effects of excess body fat in dogs and cats include worsening of arthritis, difficulty breathing, promoting a pre-diabetic state, and shortened lifespan. Obesity is also important in



Many pets have low activity levels. Increasing exercise can help prevent obesity and can improve the success rate of weight loss programs.



Excess body fat over and around a cat’s chest can cause difficulty breathing.

some cases of urinary tract disease (it can increase risk of infection) and skin disease (irritation and infections in skin folds).

Prevention is the key!

Ideally, young dogs and cats should be fed to maintain an ideal body weight throughout the growth period and into

adulthood. It is much easier, and better for their health, to prevent obesity rather than having to address it once it becomes a problem.

Several studies conducted by UC Davis School of Veterinary Medicine researchers and funded by the CCAH have shown that cats increase their food intake after neutering (especially if fed a high fat diet), and that a high-moisture diet reduces the amount of calories eaten by cats. Neutering and the feeding of diets that are high in fat (high calorie density) are important risk factors for obesity in both cats and dogs.

Measuring food and controlling the amount your pet eats are critical for keeping them lean and healthy. Feeding canned diets may make it easier to control the amount that is fed, and the use of fiber may help with promoting a feeling of fullness and is often used in the management of obesity (see sidebar).



Evaluating home-prepared diet recipes for dogs

Home-prepared diets for pets are increasingly popular and can be a good option for many dogs and cats. However, the quality of the recipes is variable, and studies have shown that many home-prepared diets are not nutritionally balanced, which may lead to detrimental effects when fed for extended periods of time. The veterinary nutritionists at the UC Davis School of Veterinary Medicine have treated many companion animal patients with problems related to unbalanced home-prepared diets.

Dr. Jonathan Stockman, a second-year resident in Nutrition who attended veterinary school at the Koret School of Veterinary Medicine at Hebrew University of Jerusalem, is currently conducting a study of 200 recipes for home-prepared diets for adult dogs. The research is funded by the CCAH and is the first large-scale study to evaluate the nutritional adequacy of available recipes. Computer software will be used to assess all of the recipes, while a subset of them will then be prepared and submitted for laboratory analysis of nutrient concentrations. The results of these evaluations will allow comparisons with canine requirements for essential nutrients and an assessment of the adequacy of these recipes.

For more information, visit: vetmed.ucdavis.edu/ccah/research/nutrition_obesity



Visual examination is one part of the assessment of a pet's body condition. Lack of a defined waist on a top view supports a diagnosis of obesity.

Addressing obesity

Reversing obesity in dogs and cats and achieving an ideal body weight can prevent or improve many health problems. It is important to note that even modest losses of excess body fat can benefit a variety of conditions, which means that pets often feel better during the weight loss process even prior to ideal body condition being accomplished.

Weight loss programs are long-term projects, and specialized diets are used to ensure that nutrient deficiencies do not occur when the amount of food is reduced over a prolonged period. The amount of calories fed at the start of the weight loss program is determined by using the pet's diet history and/or equations to determine energy requirements. The pet should be weighed frequently, with adjustments in the diet plan as needed to maintain an appropriate rate of weight loss. Most evidence suggests that exercise improves the success rate of weight loss programs. Increased activity will result in more efficient weight loss and, once achieved, help ensure maintenance of a lean body condition. The Nutrition Support Service can help with designing a customized weight loss plan for your dog or cat. For more information, visit: nutrition.vetmed.ucdavis.edu.

Summary

Nutrition is very important for maintaining health and for managing disease in companion animals. Obesity is a common example of how nutrition and body condition can influence the well-being and quality of life of dogs and cats. The CCAH supports many research projects that not only examine the role of nutrition in conditions such as obesity, but also improve our understanding of other aspects of feeding pets, including evaluation of different diet types (see sidebar). 🐾

Arbor Animal Hospital



The Arbor Animal Hospital, located in Irvine, California, has been providing exceptional veterinary care for companion animals in the greater Orange County area for nearly three decades. The hospital is committed to delivering high quality veterinary care by using the latest technological advances, offering in-depth education and treating patients and clients with compassion and kindness.

Their commitment to care began in 1983 when Dr. Daryl Mabley, then a recent graduate of the UC Davis School of Veterinary Medicine, established his practice in a three-room clinic. He envisioned his small practice growing into a hospital with close ties to clients and the community.

Through his dedication to patients and clients, Dr. Mabley's vision has become reality. After four expansions, his practice is now a thriving hospital with four veterinarians and a staff of receptionists, technicians and assistants. Joining him are veterinarians, Dr. Pam Peth, Dr. Andrew Phositlimpagul and Dr. Megan Whisler.

The full-service hospital offers a wide range of preventative care services, such as wellness exams, dental care and nutritional counseling. Also offered are advanced diagnostics and specialized services, including laser therapy treatment and behavioral medicine. From puppy and kitten care to senior care—services are designed to provide quality care throughout the lifetime of their patients.

“All of us at the Arbor Animal Hospital care deeply about our patients and their families. We recognize that there is a precious bond between animals and humans. So when a client loses a cherished pet, we make a donation to the Companion Animal Memorial Fund as a special way to express sympathy and to help bring comfort.”

— Dr. Daryl Mabley

The hospital has been honoring patients through the memorial program since 1999.

“We are happy to say that through all the years and all the changes, we have held fast to our original commitment—providing caring, high-quality veterinary services, doing well by doing good, and working to foster and enhance that precious bond between animals and their humans,” adds Dr. Mabley. 🐾

For more information about the **Companion Animal Memorial Fund**, please contact the Development Office at (530) 752-7024 or visit vetmed.ucdavis.edu/CAAH/donations/camf.cfm

Linear accelerator—benefitting the lives of thousands of animals



Dr. Michael Kent uses the linear accelerator to treat a patient with cancer.

In 2003 the School of Veterinary Medicine made a huge leap forward in its cancer treatment and research capabilities by purchasing a used linear accelerator to provide radiation therapy. Over the past ten years, nearly 2,500 animals of all sizes have benefitted from treatment of cancerous tumors. In addition, important research findings have expanded the understanding of cancer and led to innovative and improved treatments, such as stereotactic radiosurgery, which began as a result of a contribution by the DMARLOU Foundation in 2008 in memory of Dorothy and Martell Kaliski.

With a history of supporting animal welfare, the DMARLOU Foundation has once again stepped forward to help advance animal oncology at UC Davis. Recently, the foundation pledged \$300,000 toward the purchase of a new linear accelerator to replace our aging unit, enabling innovative treatments and fostering the development of new knowledge.

Building upon a remarkable 50-year history of fighting cancer, the School of Veterinary Medicine has had great impact on the lives of many animals and families. An upcoming special report will look back at the people and the discoveries and look forward to the school's future—sharing how you can play a part in the fight against cancer in animals and humans.

Sir Winston

A loyal Dalmatian who saved the life of his devoted owner

Dalmatians hold a special place in the heart of Marianne Oaks. The breed is known for its intelligence, affection and devotion to people. While she has owned four Dalmatians and loved each one, Ms. Oaks had a special bond with her fourth dog, Sir Winston.

She was committed to keeping Sir Winston healthy and providing the best veterinary care for him. When he was about two years old, Sir Winston developed a skin condition. Since the problem was complex and difficult to treat, his local veterinarian referred him to UC Davis experts.

“We were shown into an exam room with several residents and veterinarians. That’s when I realized what a teaching hospital was all about,” recalls Ms. Oaks. “Ten heads are better than one, and Sir Winston loved all the attention! I am grateful that they were able to diagnose his problem and come up with an effective treatment.”

Ms. Oaks continued to take Sir Winston to UC Davis over the course of his life. “Veterinarians talked with me at great length about how to best provide care and make wise health decisions for Sir Winston as he grew older,” she notes.

Appreciating the importance of innovative research, Ms. Oaks had Sir Winston participate in a study aimed at eliminating a genetic disorder causing bladder stones in Dalmatians. Leading this effort is Dr. Danika Bannasch, professor of genetics, who has been able to identify the underlying gene and develop a DNA test.

During one of their visits for the study, Ms. Oaks and Sir Winston were greeted in the CCAH lobby by about 20 dogs—all cancer patients who had undergone chemotherapy treatment. “I still think about those dogs and how fortunate we are to have a facility that is on the cutting-edge of treatment for animals and how valuable it is that we support such research for the benefit of animals and humans.”

A short time later, Sir Winston gave back to Ms. Oaks in a remarkable way that would save her life. One evening as usual, Sir Winston was resting close by as she was reading a book. But then all of a sudden, he began to behave strangely.



(ELeakis & Elder/photo)

Sir Winston 1997-2010

“Out of the blue, he got up and started sniffing under my arm,” describes Ms. Oaks. “He did it again a few days later, and that’s when I reached up and felt the lump.” The next day she went to her oncologist, who then diagnosed her with stage three breast cancer.

Only three months earlier Ms. Oaks had a mammogram, which did not reveal anything. She recalls vividly being told “had you walked in my office five years earlier, I would have sent you home to die. Now, I can consider a course of treatment for you.”

“Because of the progressive cancer research that has occurred in both human and veterinary medicine, many lives are saved. We are all in this together,” adds Ms. Oaks. “Sir Winston saved my life! Even though very old, he remained with me long enough to make sure that I was alright.”

As a heartfelt tribute to Sir Winston and other Dalmatians, Ms. Oaks decided to include a gift in her estate plans to support research benefitting the breed and other dogs.

“My planned gift to the CCAH has given me more pleasure than anything else I have ever done in my entire life. I never knew it would give me so much pleasure. It’s one of my most important gifts when I leave this world.” 🐾

To learn more about the benefits of estate planning at the CCAH, please call the Development Office at (530) 752-7024

(654W)
Center for Companion Animal Health
c/o Office of the Dean—Development
School of Veterinary Medicine
University of California
One Shields Avenue
Davis, CA 95616-8734



Interested in learning more about the CCAH?

Scan code to visit
our website

vetmed.ucdavis.edu/ccah



CCAH Update is published by the School of Veterinary Medicine at the University of California, Davis: Michael D. Lairmore, Dean, Niels C. Pedersen, Director, CCAH, Michael Kent, Associate Director, CCAH, Sharon Anglin, Celeste Borelli, Cheryl Cobbs, Barbara Linderholm, Allison McCurdy, Don Preisler, Carolyn Sawai and contributors, Dr. Jennifer Larsen and Dr. Jonathan Stockman.

The CCAH is dedicated to advancing studies in veterinary medicine—encompassing new ways to prevent, diagnose and treat diseases including cancers, genetic and immune disorders, infectious diseases, kidney and heart diseases, and nutritional disorders in companion animals.

For subscription questions, contact the Development Office at (530) 752-7024 or development@vetmed.ucdavis.edu.

Center for Companion Animal Health
Business Office: (530) 752-7295
Fax: (530) 752-7701
Small animal appointments: (530) 752-1393
vetmed.ucdavis.edu/ccah

CCAH has the perfect spot for you . . .
to honor someone special with an inscribed brick



For more information, call (530) 752-7024 or visit
vetmed.ucdavis.edu/development/give/memorial_options.cfm