

DNA Sequence Data to Advance Feline Health

The data will help veterinarians diagnose diseases in cats.

By Marissa Heflin

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Researchers will use DNA samples from seven cat breeds, including the Ragdoll, to enhance pet food products. Hill's Pet Nutrition Inc. of Topeka, Kan., donated its database of more than 3 million feline single nucleotide polymorphisms, or SNPs, to the Morris Animal Foundation, a nonprofit organization dedicated to funding humane research studies to benefit companion animals and wildlife.

SNPs (pronounced "snips") represent variations in the DNA sequence of a population, which result in the unique characteristics of individuals. They can be used as markers to track down the genes responsible for genetic diseases.

The data, which is the result of Hill's investment in nutrigenomic technology to identify ingredients that will enhance functional pet food products, included DNA samples from seven cat breeds: a female African wildcat, a female domestic shorthair, a male Cornish Rex, a female European Burmese, a female Persian, a female Siamese and a male Ragdoll.

Patricia Olson, DVM, speaks at the American Veterinary Medical Association conference about how DNA sequence data can benefit cats. "It's a major head start for conducting genetic association studies that could one day help veterinarians better understand and diagnose diseases in our feline patients," said Janet Donlin, DVM, chief of the veterinary business channel at Hill's.

Earlier this year, Hill's made a \$1 million commitment to MAF and a portion of the funds will be used to establish a Coalition for Feline Genomic Research. The group will use the data to study the biochemical differences between healthy and unhealthy cats.

The donation comes at a time when veterinarians, animal health organizations and companies are collaborating to raise the awareness of feline health.

"It is a sad irony that cats are the most popular pet in our country, yet far too little research funding and veterinary care is being provided to meet cat's unique health needs," said Patricia Olson, DVM, president and chief executive officer of MAF. "Thanks to this Hill's donation to the Morris Animal Foundation, cats will be given a dramatically better opportunity for a long, healthy life."

According to MAF, cat owners seem most interested in research concerning renal, geriatric and genetic diseases as well as cancer.

Hill's and MAF will launch a Happy Healthy Cat Campaign in November. Details are still in the works.

The donation also could lead to discoveries that affect human health, as cats and humans share 250 genetic diseases.

"The domestic cat has served as a powerful model for hereditary human disease patterns and for numerous fatal infectious disease agents related to human pathogens," said Gregg Dean, DVM, Ph.D., professor of immunopathology at North Carolina State University. "The Hill's donation of feline SNP data has the potential of paving the way for future development which may make a major contribution to many areas of feline genetics and biology."