

'2 dogs 2,000 miles' trek promotes dog DNA for cancer research

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A man and his two dogs on a 2,000-mile walk to raise awareness about cancer in dogs is helping a new \$5.3 million canine cancer project recently launched by the Translational Genomics Research Institute (TGen) and the Van Andel Research Institute (VARI).

Starting from his hometown of Austin, Texas, Luke Robinson and his two Great Pyrenees — Hudson and Murphy — have walked across America, after one of Robinson's other giant white fluffy dogs, Malcolm, died of osteosarcoma, or [bone cancer](#).

Robinson and his dogs plan to complete their more than 2,000-mile trek in Boston on June 19, when the TGen-VARI-led Canine Hereditary [Cancer](#) Consortium (CHCC) will join Robinson in celebrating by gathering DNA samples from as many as 2,000 dogs nationwide.

"Luke started out just trying to raise awareness, but he clearly had in his mind the desire to see this benefit dogs with cancer, and owners of dogs with cancer," said Dr. Mark Neff, director of the new TGen-VARI Program for Canine Health and Performance. "By allowing us to work with him to get samples, he's realizing the potential of his effort to actually go in the direction of science, with tangible benefits and potential new treatments for these dogs."

Samples will be collected by the CHCC for a nationwide project involving more than 30 scientific investigators at nearly a dozen institutions, which plan to use dog DNA to not only discover the causes

of cancer in dogs, but in people, too.

Without harming any dogs, researchers — including those at the National Cancer Institute — will analyze the DNA, mostly from doggy drool obtained by simply swabbing the inside of dogs' cheeks.

Robinson grew up in Austin. He operated a consulting practice for biotech companies in San Antonio and Boston, where he moved in 2003. He put the business and the rest of his life on hold to walk with Murphy and Hudson.

"We've already walked across 15 states. We're about to cross into Massachusetts, our 16th and final state. We're about 50 miles from our goal, and we'll be in Boston in a couple of weeks," said Robinson, reached by cell phone this week just outside of Providence, R.I. "It's been one heck of a journey. It's a tremendous honor to be a part of this historic (CHCC) study."

Robinson's progress can be tracked at:
www.2dogs2000miles.org/Home_Page.html.

Nearly half of all dogs 10 years and older die from cancer. Dogs in the study will be treated as patients. The research is endorsed by the American Kennel Club Canine Health Foundation and by the Morris Animal Foundation. Samples will be gathered with the consent of owners and veterinarians.

How your dog can join the study

The goal of the CHCC is to collect 2,000 DNA samples by the time Robinson and his dogs arrive June 19 at the "Puppy Up!" Festival at Boston Common. To find out more about the CHCC, go to:
www.tgen.org/research/index.cfm?pageid=1382. To participate in the

study, especially those dogs already clinically diagnosed with cancer, go to: www.tgen.org/research/canine-hcc-frm.cfm.

In addition to cancer, TGen and VARI eventually will study neurological and behavioral disorders as well as hearing loss and other debilitating conditions in dogs that could relate to people.

Samples from thousands of dogs from all breeds, and mixed breeds, eventually will be needed, said Dr. Neff. "Every sample matters. Every sample informs about the process of cancer. Every sample informs about how we might diagnose and treat cancer. The more the better."

The \$5.3 million cancer research project is supported by a recently approved 2-year, \$4.3 million federal stimulus grant to TGen and its partners, and by \$1 million in private grants from businesses involved in pet care — \$500,000 from PetSmart, and \$500,000 from Hill's Pet Nutrition.

Dr. Jeffrey Trent, President and Research Director for TGen and VARI and also the CHCC's Principal Investigator, said that it is difficult to study rare cancers in people, because there is insufficient data. But by studying similar types of cancers more prevalent in dogs, researchers should be better able to help those human patients who currently have little hope.

The study is focused on sarcomas, those cancers that originate in the connective tissues such as bone, cartilage and fat.

Although rare in humans, these tumors are relatively common in certain breeds of dogs, such as Golden Retrievers, German Shepherds and Clumber Spaniels. After as many as 150 years of breeding, there are few genetic variations in these dogs, making it easier to identify the few genetic differences that can affect cancer susceptibility and response to

anti-cancer drugs.

The overall project is both diverse and complex, including studies of:

- Hemangiosarcoma in Clumber Spaniels by Dr. Nick Duesbury at VARI.
- Lymphoma in several breeds of dogs by Dr. Nicola Mason at the University of Pennsylvania.
- Malignant histiocytic sarcoma in Bernese mountain [dogs](#) by Dr. Vilma Yusbasiyan-Gurkan at Michigan State University.
- Melanoma in Schnauzers by Dr. Trent at TGen.
- Osteosarcoma in Rottweillers and Greyhounds by Dr. Paul Meltzer and Dr. Chand Khanna at the National Cancer Institute, the nation's premier cancer research center, whose involvement Trent called key to the success of the program.

Provided by The Translational Genomics Research Institute

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