

## A Game-Changing Treatment for Pets With Tummy Trouble

Too often, conventional veterinary medicine has little to offer pets with chronic digestive disorders, and in fact, some treatments can actually make the problem worse. But now you have another option - an assessment kit and supplements that can help restore good gut health to your pet.

**Analysis by Dr. Karen Shaw Becker**

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### STORY AT-A-GLANCE

- Dr. Holly Ganz is the founder of an exciting new company, AnimalBiome, which helps restore good gut health to dogs and cats using a gut bacteria assessment kit and restorative supplements
- Dr. Ganz's research, and other independent research, suggests pets eating fresh diets have healthier guts
- A growing body of research confirms that a healthy microbiome is foundational to the overall health of both humans and animals
- According to AnimalBiome survey results, most conventional veterinarians are open to the idea of microbiome restorative therapy, but know little about it
- In the future, Dr. Ganz plans to develop customized treatments for each pet, as well as both therapeutic and maintenance protocols

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Today I'm talking with Dr. Holly Ganz. Dr. Ganz is a microbial ecologist, which means she studies interactions between microorganisms and animals. She received her Ph.D. at the University of California, Davis, and founded her company, AnimalBiome, two years ago after spending nearly two decades in academia studying interactions between microbes and animals.

*"Through my research, I learned that many cats and dogs who suffer from chronic health conditions have poor gut health that can be detected by looking at the composition of gut bacteria," explains Dr. Ganz. "I started the company to use the latest science on gut microbiome to discover new ways to improve the health of cats and dogs."*

AnimalBiome offers a gut bacteria assessment kit, which provides information on the diversity of a pet's microbiome and how it compares to the microbiome of healthy cats and dogs in the company's database. They also offer restorative supplements to help reintroduce beneficial microbes that have been lost.

## **Pets With Digestive Conditions Deserve Better Care Than They Often Receive**

The reason I'm so excited to interview Dr. Ganz is because I'm committed to trying to help veterinarians and pet parents recognize how important the microbiome is to the health of companion animals throughout their lives. When I went to veterinary school, we weren't taught about the risks associated with damaging the microbiome and how easily it can happen, especially through the overuse of antibiotics. I asked Dr. Ganz how she decided to focus specifically on the microbiomes of dogs and cats.

*"This is a great question," she replied, "because I used to work on insects, soil, zebras and all kinds of different systems. I guess as I got older I really — I've always loved dogs and cats. I've always had them. I decided I wanted to apply my research to improve the health of our companion animals.*

*I took a research position at the UC Davis veterinary school, where I started looking at dog oral health and the role of microbes. Then I became curious about what a normal, healthy gut in dogs and cats looks like. To figure that out, we ran a Kickstarter campaign called Kittybiome in which we asked people to send us their cat's poop and pay us to sequence it and provide them with the results.*

*Our goal was to try to establish what 'normal' is when it comes to cats' gut bacteria. What amazed me was that nearly 20 percent of the people who supported that research project had a cat with a chronic digestive condition. They were really unhappy with what was being offered to them by their veterinarians — typically steroids and antibiotics and prescription diets. They asked us to try to come up with better solutions to help them. So that's what got us started."*

## **Independent Research Is Proving That Pets Eating Fresh Diets Have Healthier Guts**

I asked Dr. Ganz how she was able to determine an animal with an unhealthy gut from one with a healthy gut.

*"Sometimes it turned out to be very obvious," she answered. "We've found in many cats and dogs with chronic digestive problems that they have really depleted compositions of gut bacteria. We're using sequencing to look at that. Through my work with the Kittybiome project, we began interacting with people who were very passionate about raw feeding — the fact that cats are obligate carnivores and many commercially available diets aren't biologically appropriate for them.*

*We could actually see the benefit of raw diets as we analyzed the composition of gut bacteria. We could see the difference in microbiomes between the sick cats and the cats eating raw diets."*

I've actually talked to two other researchers, both in Italy, who were able to confirm what Dr. Ganz has found, which is that animals eating fresh food have a more diverse microbiome. It's really exciting that multiple independent researchers are arriving at the same conclusions worldwide.

Since I'm so passionate about feeding fresh, the research results we're starting to see will help me convince reluctant pet parents to give fresh diets a try. I can tell them we're finally able to see the microbial advantage of nourishing an animal the way nature intended. I think it's really awesome!

## AnimalBiome's Oral-Fecal Transplant Capsule Is for Home Use

Next I asked Dr. Ganz to explain how AnimalBiome's restorative supplements work to reseed the guts of sick pets. Do they have both a recovery product and a maintenance product?

*"Ultimately, that's our aim," she explains. "We want to create both maintenance and recovery products. But because most of the beneficial microorganisms haven't been cultivated yet — we're working to secure research funds to do it ourselves — we started with a basic offering of an oral-fecal transplant capsule."*

*The capsule is kept at room temperature and can be given at home. This allows us to accomplish a couple of things. [No. 1], it's more convenient and less invasive than having a fecal transplant done in an office via enema. Also, the material in our capsule is screened.*

*Because it remains stable for a long period, we can [ensure] every batch is tested before it goes out the door. The last thing a sick animal needs is to be exposed to pathogens. It's a very labor-intensive approach, but it's literally the only way to get these organisms today."*

## Majority of Conventional Veterinarians Surveyed Are Open to the Idea of Fecal Transplants

I asked Dr. Ganz to talk about getting over the hurdle of offering poop capsules. Not many people, including veterinarians, are familiar with or necessarily accepting of the idea of fecal transplants, also known as microbiome restorative therapy.

*"We've been doing a lot of surveys, both with holistic and conventional veterinarians," she explains. "I think something like 5 percent of conventional veterinarians think it's a disgusting idea. But surprisingly, 95 percent of them are very open to it. A lot of conventional vets aren't familiar with the therapy, whereas most holistic veterinarians know about it, but they're not actually using it in practice yet."*

*Of course, there are also some holistic veterinarians who've performed thousands of these procedures. The fact is, in veterinary medicine fecal transplants have been performed on livestock for hundreds of years, particularly for sheep and other ruminants, because they can't digest cellulose without these microorganisms. So there's a long history.*

*In humans, fecal transplants have been practiced for thousands of years in Chinese medicine, and over the last 70 or so years in Western medicine. It's become a standard practice to treat *Clostridium difficile* or *C. diff* infections. Doctors are finding a greater than 90 percent success rate resolving this life-threatening infection that is a growing problem in the U.S. today."*

## Why the Microbiome Is Foundational to Health

Dr. Ganz and I certainly understand how vitally important a healthy microbiome is to pets' overall well-being, immune function, cognitive function, behavior — so many different aspects of health. I asked her how she approaches teaching others about this topic.

*"I usually start by explaining what the microbiome is," said Dr. Ganz, "because a lot of us don't tend to think of ourselves as a multi-species organism, which we are. Our pets carry around thousands of organisms that play a critical role in digestion, the nutrition their GI tracts are able to extract from food, and their immune systems.*

*There's a lot of immune function happening in the gut. And there's growing research about the nervous system and how it interacts with the central nervous system through the gut-brain axis. There are many studies showing that anxiety can be related to imbalances in the gut microbiome. Scientists have proved they can make mice anxious and even obese by transferring microbiomes in the laboratory.*

*Microbiomes containing an overrepresentation of certain bacterial groups are more thrifty and able to extract more nutrients and more calories from food. Increasingly, we're realizing that many facets of modern medicine and also the food we eat and provide for our pets can be harmful to the microbiome in unintended ways. At the same time, we're also realizing how foundational the microbiome is to our health and the health of our pets."*

I actually get my microbiome "sequenced" or assessed every six months to monitor my own health. It's interesting, because if I haven't been exercising regularly or I'm not eating well, it shows up very quickly in my microbiome test. And the same is true when I do all the right things — it shows up in my microbiome.

I asked Dr. Ganz if she recommends that pet parents do baseline testing on their dog or cat, and also if she recommends before-and-after treatment assessments.

*"We think we have a great tool for managing wellness and helping to prevent the development of chronic conditions," she answered. "As it stands today, most people who come to us are looking for help with an existing chronic condition their pet is dealing with. We're hoping that as people learn more about what these assessments and supplements can do, they'll realize they have a tool to help their pet avoid poor gut health in the first place, which is the best approach.*

*And this is true for people as well as pets. You can actually see the effects of diet and lifestyle on the microbiome. There's a lot of research that shows drinking alcohol harms the microbiome, and for some of us, that can be hard to adjust to. The amount of vegetables we eat, and the number of different kinds of vegetables also affects the microbiome.*

*We're definitely finding that raw fed animals see a benefit. Exercise is also really important, and there's a lot of research going on regarding that. We need to get out and exercise with our pets. We can see an effect there on the microbiome. We're starting to get insights from this data that we're able to share with people, that I think can help them improve the composition of microbes in the gut — theirs and their pet's."*

## **On the Horizon: Donor Matching and Treatments Customized to Each Pet**

In my opinion, a pet being treated with fecal transplants for a GI issue — for example, vomiting, diarrhea or intermittent soft stools, inflammatory bowel disease (IBD), gastritis, **colitis** and so forth — should be tested before and after treatment. We need to see how the treatment is working.

Some of my patients need repeated rounds of microbiome restorative therapy to heal. I asked Dr. Ganz what she recommends in terms of testing and duration of treatment.

*"We really do prefer doing before-and-after testing so we can see how the pet is responding to treatment," she explained. "Also, pet owners can spend a lot of money on diets and supplements, but without testing, we don't know if it's money well spent."*

*"Also, we might shift to a different donor depending on the results we're seeing. We can look at which bacteria are missing from your pet, and choose a donor based on that. We're still in the early stages of that kind of donor matching, but we're collecting the data. It's where we're hoping to go — to design and tailor therapies in the future."*

The idea of customizing therapy for each patient is very exciting, because it's really the direction in which medicine needs to go. There's no such thing as a one-size-fits-all therapy that helps every patient.

*"The main message I'd like to share here is that it takes guts to be healthy," says Dr. Ganz. "We need to take care of our guts and our pets' guts, because it's foundational to our health."*

I absolutely love the work Dr. Ganz is doing. Microbiome restorative therapy is nontoxic, it resonates with the body and it can have a profoundly positive effect on health — not just GI health, but also organ function, immune system function and even behavior. If you'd like to learn more about Dr. Ganz's work and how microbiome restorative therapy works, you can visit her at [\*\*AnimalBiome\*\*](#).

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