

PROGRESS REPORT



Understanding the Relationship between Intestinal Bacteria and Inflammatory Bowel Disease (IBD)

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Morris Animal Foundation-funded researchers at the University of Melbourne, Australia, are investigating a novel way to diagnose and treat canine inflammatory bowel disease. The team is studying if specific gut bacteria can drive or exacerbate intestinal inflammation in dogs with IBD. They hope what they learn will inform continuing studies on how the gut microbiome may be manipulated for novel treatments as well as inform the development of new diagnostics.

The team has recruited 20 dogs and collected samples (blood and feces) from the time of IBD diagnosis to when the dogs obtained clinical remission. They are currently analyzing the samples, specifically looking at bacteria known to interact directly with the gut immune system and tracking changes in bacterial makeup from diagnosis. The hope is to identify new ways of assessing the GI microbiome, and possibly targeting and fixing the microbiome in individual dogs.

Of the dogs that completed the study, more than half responded to diet manipulation, even when they had long-standing disease and been given other diets before. The remaining patients required either microbiome manipulation and/or prednisolone treatment. All are doing well post-study.

IBD is difficult to treat in dogs as it can be challenging to pinpoint the cause. It can be due to something in the diet, a change in type or number of gut bacteria or something else entirely. Learning more about the function of gut bacteria and how dogs respond to those bacteria, including inflammatory response, may be a gamechanger.

Researchers hope this study will lead to new ways to assess gut health in dogs via noninvasive testing of gut bacteria in stool samples, reducing the need to directly biopsy the intestine of already sick dogs to establish a definitive IBD diagnosis. They also hope the project will improve knowledge in the veterinary community about gut health and using diet to help maintain gut health, the importance of a proper therapeutic dietary trial and how to properly assess dogs with diarrhea.

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