GLOBAL NEWS

RESEARCHERS DISCOVER GENETIC CAUSE OF MEGAESOPHAGUS IN DOGS

PLOS Genetics, March 10th 2022

Researchers have discovered the underlying genetic variation that leads to congenital idiopathic megaesophagus (CIM), a frequently deadly gastrointestinal disorder that commonly affects German shepherd dogs. Megaesophagus is an inherited disorder that causes puppies to develop an enlarged esophagus that fails to pass food into the stomach. Often, these puppies cough up their meals and don't gain weight effectively, leading to euthanasia. In the new study a genome-wide scan was performed to identify genes associated with the disorder. The screen pointed to a genetic variant in the gene that codes for melanin-concentrating hormone receptor 2 (MCHR2), a protein that plays a role in appetite, weight and the movement of food through the gastrointestinal tract. The researchers also discovered that male German shepherds have the disorder almost twice as often as females. They suspect that the higher levels of estrogen in female dogs may help protect them from developing a severe form of the disease.

LARGEST-EVER STUDY IDENTIFIES DOGS MOST AT RISK OF DEVELOPING CUSHING'S SYNDROME

Vet Times, March 22nd 2022

The largest-ever study into the prevalence and risk factors of Cushing's syndrome in dogs has identified seven breeds as being at greater risk from the disease. Published in the latest issue of the Journal of Small Animal Practice (JSAP), the study identified the border terrier, Staffordshire bull terrier, bichon frise, miniature schnauzer, Lhasa apso, Yorkshire terrier and Jack Russell terrier as being at increased risk when compared to cross-breed dogs. A total of 1,527 Cushing's syndrome cases were identified in the study, from a population of 905,544 dogs in 2016, and the estimated one-year period prevalence for the syndrome in dogs was 0.17%. There were four breeds identified as having a decreased risk: the golden retriever, Labrador retriever, border collie and cocker spaniel. In addition, dogs with a bodyweight higher than their breed-sex mean had 1.44 times the odds of Cushing's syndrome than those within their breed mean, suggesting either overweight dogs or larger examples of the breed are at increased risk of the condition.

CORRECTING NIGHT BLINDNESS IN DOGS

Science Daily, March 22nd 2022

Researchers have developed a gene therapy that restores dim-light vision in dogs with a congenital form of night blindness, offering hope for treating a similar condition in people. In the journal Proceedings of the National Academy of Sciences, they've reported a major advance: a gene therapy that returns night vision to dogs born with CSNB. The success of this approach, which targets a group of cells deep in the retina called ON bipolar cells, charts a significant step toward a goal of developing a treatment for both dogs and people with this condition, as well as other vision problems that involve ON bipolar cell function. Dogs with CSNB that received a single injection of the gene therapy began to express the healthy LRIT3 protein in their retinas and were able to ably navigate a maze in dim light. The treatment also appears lasting, with a sustained therapeutic effect lasting a year or longer. "The results of this pilot study are very promising," says Keiko Miyadera, lead author on the study. "In people and dogs with congenital stationary night blindness, the severity of disease is consistent and unchanged throughout their lives. And we were able to treat these dogs as adults, between 1 and 3 years of age.

WHAT IS AHCC?

AHCC (Active Hexose Correlated Compound) is a remarkable mushroom product. AHCC has anti-inflammatory, immune system enhancing, immunomodulatory, and antioxidant properties. Because AHCC is a biological response modifier, it is able to turn up the dial on your natural immune response.

Here are the facts on AHCC that you need to know:

- AHCC is a standardized extract of cultured Lentinula edodes
- AHCC is a functional food that is rich in alpha-glucans
- AHCC was developed in 1987
- AHCC is used in hospitals, universities, and other institutions around the world
- AHCC modulates body's innate immunity and supports healthy immune function
- AHCC is shown to modulate the immune system by maintaining optimal natural killer (NK) cell activity, enhancing cytokine production, promoting T-cell and macrophage activity, and increasing the number and activity of dendritic cells.
- AHCC has been studied extensively for over 20 years.

In integrative oncology, research indicates that AHCC may lead to longer post-operative survival, help support patients through chemotherapy, reduce the negative effects of chemotherapy and radiotherapy, and lead to an improvement in quality of life.

More on the science behind AHCC:

- In one gram of AHCC there is an abundance of saccharides
- The saccharides found in AHCC are polysaccharides, including oligosaccharides, starches, and other combinations of sugar molecules
- AHCC is unique because unlike other mushroom-sourced ingredients, AHCC includes both the polysaccharides beta-glucans and alpha-glucans
- Some varieties of polysaccharides are known to have immunomodulatory effects

AHCC is a focus of research at prestigious institutions through-out the world. AHCC has been the subject of over 100 published papers, including 30 human clinical studies.

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