

Gene for Bladder Stones in Dalmatians Found

Researchers hope the development will help Dalmatian breeders eliminate the trait.

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Researchers at the University of California, Davis, School of Veterinary Medicine identified a gene mutation that causes high levels of uric acid and bladder stones in Dalmatians.

An elevated level of uric acid is a trait found in all Dalmatians; other dog breeds do not usually produce uric acid, according to the university. These high levels can cause bladder stones, which often have to be removed surgically.

With this finding, dog breeders may be able to eliminate this trait.

"This defect, which in dogs is peculiar to the entire Dalmatian breed, has been reported for nearly a century and was probably unintentionally introduced as breeders worked to select more distinctive spotting patterns," said Danika Bannasch, DVM, Ph.D., lead author on the study.

"It is now possible that this trait can be removed from the breed by crossing Dalmatians with the normal offspring of the original Dalmatian-pointer breeding that occurred in the early 1970s," she said.

The Veterinary Genetics Laboratory at the school will begin offering DNA testing for the mutation in dogs by Dec. 1.

The discovery will also help scientists better understand the related problem in humans. Elevated levels of uric acid in humans can result in kidney stones, hypertension, and gout, an inflammation of the joints.

The study, which was published Nov. 7 in the scientific journal "Public Library of Science," was supported, in part, by a fellowship from the Morris Animal Foundation and the National Institute of Diabetes and Digestive and Kidney Diseases within the National Institutes of Health.