

FINAL REPORT



Assessing a New Antibiotic for Ear Infections

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RESULTS: Researchers find that fosmidomycin is a promising antimicrobial for the treatment of ear infections in dogs.

THE PROBLEM: Studies show that the most commonly isolated bacterial pathogens in canine ear infections are two species of Staphylococcus, a type of bacteria found in many species, including people. Ear infections can be costly and chronic, and evidence suggests that the repeated use of antibiotics to treat these common infections are a source of antibiotic resistance that can affect both people and animals. New treatments for this problem are desperately needed.

THE PROJECT: Previous research showed that fosmidomycin, an antibiotic and antimalarial agent, is effective against Staphylococcus under laboratory conditions, and seems to be well tolerated in dogs. Using this information, the team conducted a clinical trial to assess the effectiveness and safety of fosmidomycin in client-owned dogs diagnosed with bacterial ear infections.

Fifteen dogs were enrolled in and completed the study. Fosmidomycin was evaluated against an established antibiotic (enrofloxacin) commonly used to treat ear infections in dogs. There was significant improvement noted in both groups during the trial, and the team reported that there were no adverse effects noted in either group.

PROJECT FINDINGS: The team concluded that fosmidomycin was comparable to enrofloxacin for the treatment of bacterial ear infections in dogs.

POTENTIAL IMPACT: The team hopes that this will lead to new therapies incorporating fosmidomycin.

In addition, the study provided training to a young scientist.

The team presented their findings at the 2024 World Congress of Veterinary Dermatology in July of this year.

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