

NATURAL OR ANTI-INFLAMMATORY ALTERNATIVES COULD REPLACE  
ANTIBIOTICS IN FEED ADDITIVES

*Scientists Search for Replacements for  
Controversial Antibiotics in Feed Additives*

**Savoy, IL, March 23, 2008** – With news reports of antibiotic-resistant bacteria growing, the public has grown suspicious of antibiotic additives in animal feed. Government regulations are putting pressure on the animal science industry to develop alternatives to antibiotic additives in animals we eat.

The Federation of Animal Science Societies notes that recent studies are starting to look for replacements, said Jerry Baker, FASS executive director.

“Even though antibiotics in feed are generally supplied in sub-therapeutic levels, the public is concerned,” Dr. Baker said. “And animal scientists are working to address this concern.”

One recent scientific analysis proposes that an anti-inflammatory replacement might mimic the benefits of today’s antibiotic additives.

“The nonantibiotic anti-inflammatory mechanism of [antibiotics] is the first theory that, in a coherent way, explains the observations,” writes Dr. Theo Niewold, senior scientist for the Animal Sciences Group of Wageningen University in The Netherlands.

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Dr. Niewold points out that many studies have tried to find replacements that replicate what an antibiotic does, but perhaps the answer lies in how antibiotics control inflammation in the digestive system. Dr. Niewold concludes that the very small amount of antibiotics added to feed as well as the fundamental properties of the antibiotic cannot lead scientists to the conclusion that the antibiotic's effect on microflora in the digestive system will promote growth.

Another recent study found that baby chicks who were fed a plant extract called sanguinarine plus organic acids did show improvement overall.

"These results suggest that [sanguinarine] and the blend of organic acids used in this study were possibly beneficial additives for feeding programs designed without the addition of growth promoters," reports the study, headed by Dr. Sergio Luiz Vieira from the Universidade Federal do Rio Grande do Sul in Brazil.

The poultry study added, "The search for alternatives to growth promoters does not necessarily mean a search for substances with the same mode of action as antimicrobials. Sanguinarine... has several interesting characteristics as feed additives for broilers."

By focusing on replacements that imitate the way AGP manages inflammation in the intestines, Dr. Niewold says, scientists can come up with a more consistent – and less controversial – alternative.

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Niewold, T. A. 2007. The Nonantibiotic Anti-Inflammatory Effect of Antimicrobial Growth Promoters, the Real Mode of Action? A Hypothesis. Poultry Science. 86: 605-609.

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### **About the Federation of Animal Science Societies**

The Federation of Animal Science Societies (FASS) brings together 11 leading animal science organizations, including founding societies American Dairy Science Association (ADSA), the American Society of Animal Science (ASAS), and the Poultry Science Association (PSA). Providing services to more than 10,000 professionals from animal agriculture, FASS strengthens the common interests and collective good of Member Societies through a unified voice that supports animal agriculture, animal products, and food systems globally via effective, efficient, and economical administrative and programmatic services.