

## US Biologic, Inc. and the Agricultural Research Service Announce Breakthrough Oral Alternative to Antibiotics for Poultry MEMPHIS, TN, September 17, 2024

US Biologic, Inc. and the U.S. Department of Agriculture's Agricultural Research Service (ARS) announce today findings of a new alternative to antibiotics in the face of coccidiosis and antimicrobial resistance, which cost the poultry industry \$3.5B in annual losses worldwide and endanger the world's food supply.

In a published *Poultry Science* article, the partners reported on an orally delivered technology, called cNK-2, which is biologic in nature and is not an antibiotic, creating a possible turning point in the fight against antimicrobial resistance, which can occur any time life-saving antibiotics are used. Antimicrobial resistance can result in so-called "super bugs" that cannot be treated and can grow out of control, endangering animal and human lives.

"My career has focused on the poultry industry and providing non-antibiotic solutions. We tested the cNK-2 against an industry-standard antibiotic, and then we tried to infect the birds with coccidiosis, the most prevalent infectious challenge facing poultry producers," says USDA-ARS Research Molecular Biologist Dr. Hyun S. Lillehoj. "We found cNK-2 compared favorably to the antibiotic. That hasn't happened before."

"We must reduce our dependence on antibiotics, reduce antimicrobial resistance, and provide poultry producers with new ways to fight against diseases like coccidiosis," says US Biologic CSO Dr. Jolieke G. van Oosterwijk. "This oral solution that the USDA and US Biologic have built together maintains the weight of the bird and reduces disease transmission, all using a technology that is not an antibiotic." Dr. van Oosterwijk says the next steps include larger scale trials, refining the dosage, and entering the technology into the regulatory process, potentially with a major animal-health industry partner.

"Antimicrobial resistance is a primary health threat" says Dr. Paul Plummer, Executive Director of the National Institute of Antimicrobial Resistance Research and Education, a global leader in the fight against antimicrobial resistance. "The work of Dr. Lillehoj, Dr. van Oosterwijk, and their team members is a promising advance in improving antibiotic stewardship, and preserving the use of antibiotics for future generations."

This project was funded by US Biologic, USDA's National Institute of Food and Agriculture under the Small Business Innovation Research Program, and USDA's Agricultural Research Service.

*US Biologic, Inc. ([www.usbiologic.com](http://www.usbiologic.com)) "delivers disease prevention" by developing oral, thermostable, multi-species vaccines and biologics to fight the world's greatest animal health and public health threats. We prioritize global collaboration, health equity, transparency, practical solutions, and a strong business plan. US Biologic: Aspire. Innovate. Deliver.*

*The Agricultural Research Service (<https://www.ars.usda.gov/>) is the U.S. Department of Agriculture's chief scientific in-house research agency. Daily, ARS focuses on solutions to agricultural problems affecting America. Each dollar invested in U.S. agricultural research results in \$20 of economic impact.*

*The National Institute of Antimicrobial Resistance Research and Education (<https://www.niamrre.org>) is a member organization that drives cross-sector engagement and coordinated action to combat the global threat of Antimicrobial Resistance across humans, animals, and the environment. To achieve our mission, we have identified four distinct focus areas: research, education, collaboration, and advocacy.*

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