Jodie Aldred photo

USASK SEEKS ANTIBIOTIC SUBSTITUTES

Researchers at the University of Saskatchewan are looking for alternatives to antibiotics for treating diarrhea in grower-finisher pigs.

A team from the Western College of Veterinary Medicine (WCVM), led by Dr. Matheus Costa, are developing the alternatives in response to rising rates of antimicrobial resistance in pigs.

"The antimicrobial resistance pandemic is here, and one of the ways veterinarians can help address that is by using antimicrobials judiciously when treating animals," said Costa in a release from WCVM Today.

Grower and finisher pigs can develop diarrhea symptoms due to disease or stress, slowing gain, reducing feed efficiency, and harming overall pig welfare.

This increases the cost of production and threatens economic sustainability for pork producers.

"It's cheaper to grow healthy pigs than to grow sick pigs, and producers strive to do that," Costa explained.

"If pigs are sick and we have to reduce (how much pork) we produce, or we don't have enough pigs to supply a market, it means that people may not have access to pork, and pork is the most consumed protein worldwide."

The team is investigating vaccine development and looking at using host peptides, antimicrobial proteins naturally produced by the animal, as alternatives to antimicrobial pharmaceuticals.

Another approach is the research of molecular cascades as a mechanism to block how bacteria cause diarrhea.

The group of researchers hope to determine if these alternatives can keep cells from infection. Currently the university is focusing on in-vitro assessments, which, if successful, will proceed into investigations in live animals.

"Not only will it be a major scientific and medical breakthrough, but we'll also directly affect Canadians because producers will have a new tool that will hopefully replace or at least reduce the need for antibiotics," said Costa.

The current study is funded by the Government of Saskatchewan's Agriculture Development Fund and by the Government of Alberta's Results Driven Agriculture Research fund. **BP**

NEW BIOSECURITY TECHNOLOGY USES FACE RECOGNITION

Farm Health Guardian debuted Protocol, its new facial recognition technology, at Canada's Outdoor Farm Show in September.

The company presented a working demo at the Woodstock, Ont. event, which showed how the facial recognition technology can control entry points in livestock barns, including swine barns. This could help manage disease risk and protect animal health.

"With Protocol, there is never a question of who is entering your barn or if they have met your biosecurity requirements," said Rob Hannam, Farm Health Guardian CEO, in a recent release.

"We're excited to demonstrate Protocol, a biosecurity game changer when it comes to managing barn access and simplifying biosecurity."

Farm Health Guardian is a digital biosecurity software that has been based in Guelph, Ont. since 2020. The company's goal is to provide real-time disease monitoring and response technology that improves health and sustainability on livestock farms.

The Protocol technology factors in data such as previous visits, downtime between barns, and farm health status. The technology adds biosecurity context beyond traditional locks, keypads, and RFID cards.

"Producers want assurances that any person entering their barns are disease-free, especially with the recent threats of diseases like African swine fever and avian influenza that have become major concerns," said Hannam.

"We're proud to offer the most innovative controlled access system available today."

In addition to the biosecurity information that the software manages, it is adjustable for barn flow and biosecurity protocols for individual barns. It also accounts for roll-up doors and fumigation rooms to increase the safety of delivered products. **BP**