RAPID, COST-EFFECTIVE DIAGNOSTIC FOR DETECTING AMR

Defining the antimicrobial resistance status of pork and chicken meat enterprises for global market competitive advantage.

Addressing the Key Issues

Resistant bacteria pose a significant global health issue and there are a number of pathways that resistant bacteria can emerge including through the food chain. Countries are increasingly looking for ways to reduce the level of resistant bacteria, which means the presence of some antimicrobial resistance (AMR) may result in barriers to trade. This project seeks to provide Australian pig and chicken meat producers with a competitive advantage in the international marketplace by developing a world's best practice for objective description of the occurrence of AMR at the herd/flock level.

Key Outcomes

The work will exploit the economically viable high-throughput capacity of laboratory robots for defining industry-wide herd and flock AMR risk status. This will provide a mechanism to support and inform on-farm antimicrobial stewardship efforts and help to meet rapidly increasing consumer and market demands for products that have a low AMR risk.

A key outcome for the project is envisaged to be rapid detection, tracking and resolution of AMR related issues that is accompanied by data outputs and reporting that are meaningful and interpretable by a wide audience.

Benefit to Industry

The Australian pork and chicken meat industries are actively developing differentiated product to expand into international markets. Being able to define the AMR status of bacteria from the farm where the animals were raised will provide a distinct competitive advantage in both the domestic and international marketplace. The outcomes will also highlight the value of the high standards of antimicrobial stewardship in Australian pig and chicken industries that ultimately aim to conserve the effectiveness of existing antibiotics for both veterinary and human applications while upholding high animal welfare standards.

The Project Team

This project brings together an experienced, committed and passionate team to deliver high throughput technologies for managing AMR and infectious diseases while maintaining key alliances with producers, industry, State DPIs, veterinary laboratories, and technology providers that will drive further innovation in managing AMR and the integration of new technology into laboratories around Australia.

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