Dottorato di ricerca in Scienze Veterinarie [37°] CICLO - Anno di corso: [2°]

Dott. Mekonnen Yitagele Terefe Curriculum: Animal Production and Food Safety
Supervisor: Prof. Alessandra De Cesare

Identification of microbiome tailored strategies to improve safety and sustainability of poultry meat-based products

Objectives

- To characterize the microbiome dynamics associated with poultry houses of different production scores.
- To identify and test microbiome-based interventions that can support the microbiome characterized

Materials and Methods

- Observational phase: DNA from chickens cecal content were extracted and bioinformatic analysis of the sequenced data were performed.
- Literature review: conducted to provide evidence to support identified microbiome from the observational phase.

Results

- ***Psychrobacter*** **and** ***Ruminiclostridium*** **9** were the dominant genera identified in high performing poultry houses studied in the observational phase.
- **Synbiotic PoultryStar®** and the enzyme **Muramidase** were found to support the proliferation of identified microbial dynamics.

Conclusion:

- **PoultryStar®** and **Muramidase** can be used as the microbiome-based strategies for the interventions phase.

Future Proposal

- To test the identified microbiome-based nutritional strategies tailored to the positive microbiomes identified.

Period Abroad/at Company

- Planned to go to University of Hohenheim, Germany

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