

Milkobiome



How Milk and Microbiota Affect Future Intestinal Health in Pigs

Piglets are conventionally weaned and transitioned to solid feed at 21-28 days when they should be fed milk for at least 70 days post-parturition. Abrupt introduction of new feed combined with stressors such as early-life maternal separation, change in environment, mixing with other piglets result in feed refusal or reduced feed intake post-weaning. Consequentially, growth reduction, gastrointestinal tract (GIT) inflammation and dysfunction, and gut microbiota imbalance occur. The use of zinc oxide and antibiotics to stimulate feeding in these conditions will be limited across the European Union from 2022. Probiotics, prebiotics and plant extracts are not as effective against these challenges. Hence, need to develop new feeding and management strategies to reduce these stress impacts on piglets post-weaning. This fellowship aims to develop novel feeding and management strategies for optimising gut and immune development in piglets post-weaning using milk bioactive fractions supplementation. The research component of this action will characterise milk bioactive fractions from sow milks at different stages of lactation and test their effects on gut development, gut microbiota and immune development. The action will also provide opportunity for research, leadership and transferable skills development for the researcher, while seeking to disseminate and communicate the results and findings of the action.

Project Duration: 36 months (18M University of Leon + 18M Teagasc)

Collaborating Institutions: Teagasc Pig Development Department, Moorepark, Ireland
University of Leon, Spain

Project Team:

RL2025 Fellow

Dr Apeh Akwu
Omede

Teagasc Supervisor

Dr Edgar Garcia
Manzanilla
Teagasc, Ireland

Outgoing Phase Supervisor

Prof Ana Maria Carvajal Ureña
University of Leon, Spain

Third Supervisor

Dr Hector Argüello
Rodríguez
University of Leon, Spain