



## PROJECT DESCRIPTION OF MONOGUTHEALTH

The **MonoGutHealth** project will provide an interdisciplinary, intersectoral and international training experience for you as an early stage researcher (ESR). Together with 10 other ESRs, you will be involved in projects exploring novel strategies employing nutritional and/or bioactive ingredients that positively influence perinatal development in monogastrics through optimal microbial colonisation of the gut. Ultimately, the **MonoGutHealth** project aims to promote optimal growth of pigs and chickens and at the same time make them more resilient to environmental and health challenges, reduce the number of medicinal interventions and improve animal welfare.

### **PHD ON NUTRITIONAL AND MANAGEMENT STRATEGIES TO IMPROVE THE HEALTH, GROWTH AND EFFICIENCY OF PIGLETS BORN INTO LARGE LITTERS (PREFERRED START DATE: 1/3/2021; DURATION: 3 YEARS)**

The objective of this PhD project is to develop nutritional and management strategies that improve the health, growth and efficiency of piglets born into large litters and reared in the absence of antimicrobials and pharmacological levels of zinc oxide and copper. Areas to be assessed will include: (1) Determining the importance of sow and colostrum microbiota in developing the piglet intestinal microbiome, and evaluating their influence on piglet health, growth and feed efficiency; (2) Identifying the influence of vaginal, faecal and colostrum/milk microbiome populations on the composition of piglets' gut microbiota during lactation and subsequent stages; (3) Early identification of piglets and litters at risk of increased mortality due to reduced immunity uptake from the sow and/or inappropriate gut microbiome colonisation and; (4) Evaluating probiotic administration to the sow and/or progeny as a replacement for antimicrobials and pharmacological levels of zinc oxide and copper in pig diets.

You will be based at the Teagasc Pig Production Department at Moorepark, Fermoy in Ireland where you will be supervised by Dr. Paul Cormican and Dr. Peadar Lawlor. You will be co-supervised by Dr. Gillian Gardiner (Waterford Institute of Technology, Ireland) and Dr. Ramon Muns (AFBI, Northern Ireland).

As well as the many training schools available to you as an ESR in the MonoGutHealth project, you will receive specific training in milk replacer and feed formulation for piglets at Kiernan Milling, Ireland and sow milk analysis at FBN Germany. You will also undertake a secondment at AFBI, Northern Ireland where you will perform one of your animal experiments.

### **THE FOLLOWING ELIGIBILITY RULES APPLY FOR PARTICIPATION IN A MARIE SKŁODOWSKA CURIE INNOVATIVE TRAINING NETWORK (MSCA-ITN) - MONOGUTHEALTH**

There are strict eligibility requirements for the ESR PhD positions in MSCA-ITN. Please ensure that you qualify before applying, as ineligible candidates cannot be considered.

Applicants should not have resided or performed their main activity (work, studies, etc.) in the country of the host institution for more than 12 months in the 3 year-period immediately prior to the start date of the PhD research.

Applicants for the ESR PhD positions should be within the first 4 years (full-time equivalent) of their research careers and not yet have been awarded a doctorate. This 4 year period is measured from the date of obtaining the degree which would formally entitle them to embark on a doctorate programme.

### **BENEFITS**

By participating in the **MonoGutHealth** consortium, you will obtain in-depth training in scientific (*monogastric nutrition, gut physiology and microbiome and immunology*) and soft (*training on communication and outreach activities and entrepreneurship*) skills through participation in targeted courses. You also will get the opportunity to collaborate with other ESR in the **MonoGutHealth** network of 7 European countries and you will be exposed to industry (for at least 3 months) and build a lasting network for your future career in academia and/or industry. You will be carefully supervised by 3 experienced members of leading academic and industrial representatives. **MonoGutHealth** will give you much more than a 'classical' PhD dissertation. You will obtain many additional skills to help you in your future career to traverse traditional discipline boundaries, identify and implement the most appropriate tools to comprehensively overcome pressing future challenges in academia and/or industry. Information for MSC-ITN fellows can be found at [https://ec.europa.eu/research/mariecurieactions/resources/document-libraries/information-note-fellows-innovative-training-networks-itn\\_en](https://ec.europa.eu/research/mariecurieactions/resources/document-libraries/information-note-fellows-innovative-training-networks-itn_en)

### **SELECTION PROCESS**

You can apply for this ESR position no later than 8<sup>th</sup> January 2021 by sending the following information to [peadar.lawlor@teagasc.ie](mailto:peadar.lawlor@teagasc.ie)

- your complete CV
- motivation letter\*
- copies of University Bachelors/Masters certificates or equivalent
- contact details of two referees, who can provide a letter of recommendation
- A General Data Protection Regulation (GDPR) statement\*\*

\* Points to be included in the motivation letter (maximum 600 words)

- Describe what about the advertised position particularly interests you, why you want to apply for it and why you should be considered for the ESR position.
- Indicate why you want to pursue a PhD project and not take a job in industry.
- Explain why you think it is important to improve animal welfare and efficiency in livestock production.
- Describe your experience in working with experimental animals, if any, and why animal experiments need to be performed.

\*\* You consent that your personal data will be processed by the MonoGutHealth project consortium for considering your application for the ESR position.

For more information please contact Dr. Peadar Lawlor by mail (peadar.lawlor@teagasc.ie) and reference MonoGutHealth in the title.

#### *QUALIFICATIONS EXPERIENCE & COMPETENCIES*

Applicants must have a relevant Master's degree in Agricultural Science, Animal Science or Veterinary Science, with relevant animal and laboratory experience.

Applicants whose first language is not English must submit evidence of competency in English; please see [WIT's English Language Requirements](#) for details.