INVITATION FOR PUBLIC-PRIVATE-PARTNERSHIP

'FONTANELLE'

FOR STUDYING INTESTINAL HEALTH IN EARLY LIFE

BACKGROUND & CURRENT NEED

- The first 1,000 days of life is considered a window of opportunity to shape lifelong health.
- During infancy, functional gastrointestinal disorders and related symptoms are frequent and have been suggested to be linked to the immaturity of the gut physiology and functionality.
- The gut, including the microbiota, has a major influence on both the development and function of the immune system.
- Receiving optimal nutrition during the first 1,000 days of life positively impacts the development of the GI tract.
- Current R&D models often focus on individual 'local' gut physiological functionalities, thereby neglecting the dependency and interaction between the 3 key pillars of gut health: gut physiology, microbiome and the gut associated lymphoid tissue (GALT) immune function.
- There is a clear added value for a pragmatic and science-based holistic approach to build models for early nutrition development that support the improvement of GI-health in early life.

SOLUTION

Our aim is to support and improve GI health in early life by implementing and integrating *in vitro/ex vivo/in silico* research models that mimic the infant conditions to facilitate the development of early life nutrition and/or ingredients. This will be achieved by:

- Determining or predicting the safety and efficacy of ingredients on early life GI health with a strong focus on the three key pillars: (i) Gut physiological functions, (ii) Microbiome/microbial products, (iii) Gut associated lymphoid tissue (GALT) immune function.
- Support the development of new study designs (including biomarkers, dosing, choice system etc.) for ingredient selection, health benefit substantiation and elucidate modes of action (MoA).

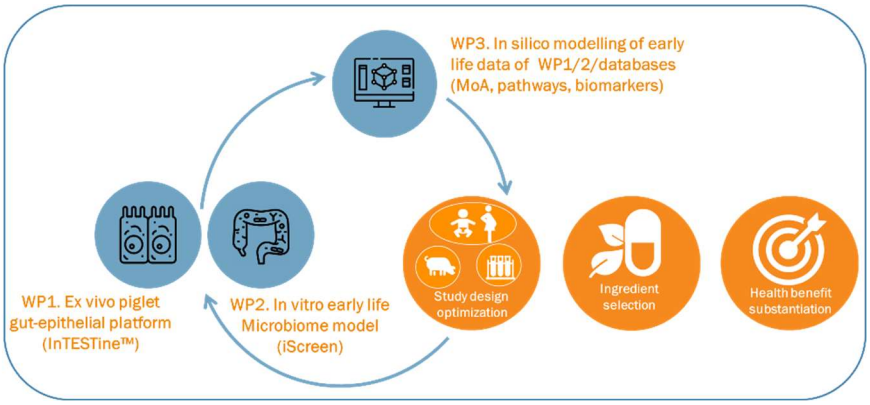

Fig 1. Overview of the preliminary work packages of the PPP Fontanelle

EXPECTED OUTCOMES Dec 2023

- A generic testing pipeline to monitor, study and improve GI health in early life
- A proposed testing strategy to assess effects of early life nutrition on gut health
- Scientific publication

MORE INFO?
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