

Exploring the Infant Microbiome: From Birth to Early Growth and Development

Guest Editors:



Prof. Catherine Stanton

Food Bioscience Department,
Teagasc Food Research Centre,
Cork, Ireland.



Prof. Paul Ross

APC Microbiome Ireland,
University College Cork,
Cork, Ireland.



Prof. Maria Carmen Collado

Department of Biotechnology,
Institute of Agrochemistry and Food
Technology-Spanish National
Research Council (IATA-CSIC),
Valencia, Spain.

Special Issue Introduction:

The microbiome refers to the diverse community of microorganisms, including bacteria, viruses, fungi, and other microbes, that inhabit the human body and play a crucial role in maintaining health. The nascent gut microbiota is established after birth in concert with numerous developmental parameters and its establishment and maturation is a pivotal process affecting host health. Recent research suggests the gut microbiota may correlate with numerous health issues from mental health to obesity and auto-immune response.

During infancy, the establishment and maturation of the gut microbiome are influenced by various factors, such as the mode of delivery (vaginal vs. caesarean section), feeding practices (breastfeeding vs. formula feeding), gestational age and environmental exposures.

Understanding how these factors shape the infant gut microbiome can have significant implications for infant health and disease risk later in life. Delivery mode and antibiotics exert significant and sustained effects on the gut microbiota, reducing certain microbial populations, as well as overall diversity, with such perturbations linked to negative health conditions in developing children. Moreover, the perturbed gut microbiota is known to be a resistance reservoir due to the impact of antibiotic exposure, with health risks including the evolution of antibiotic resistant strains. Furthermore, there are a number of health issues associated with premature birth who are more likely to suffer from health problems, including cerebral palsy, lower IQ, behavioural problems, and respiratory illness. In recent times, the sphere of influence attributed to the microbiota on human health has expanded significantly and the potential contribution of the microbiota to the pathology of these disorders is an important consideration. Technological and computational advances are now enabling researchers to profile the microbiota and the plethora of metabolites in the infant gut, allowing for improved understanding of how gut microbiome function and derived microbial-derived metabolites drive microbiome community structuring and host-microbial interactions.

This Special Issue of Microbiome Research Reports will address relevant and recent information on this topic. We aim to explore the fascinating world of the infant microbiome and its critical role in early growth and development to generate a comprehensive and compiled overview of the biology and interactions between the early human gut microbiota with the host.

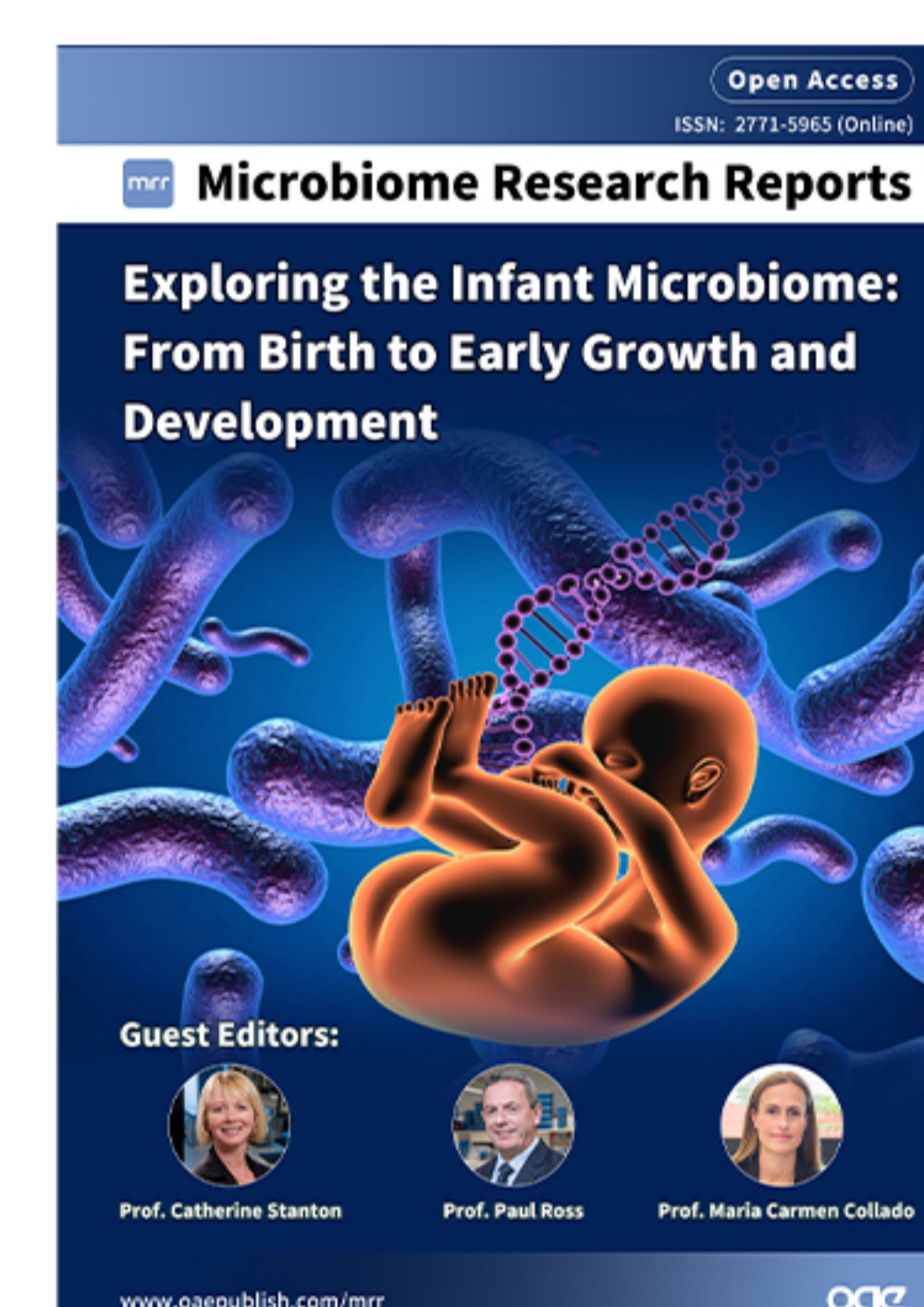
The topics that will be explored in this Special Issue include, but are not limited to:

1. The role of the maternal microbiome during pregnancy and how it influences the seeding of the infant microbiome;
2. The impact of mode of delivery on the early establishment of the infant microbiome and its potential consequences for child health;
3. The influence of breastfeeding and formula feeding on the composition and function of the infant gut microbiome;
4. How early life exposures, such as diet, antibiotics, and environmental factors, shape the developing gut microbiome in the first years of life and its long term implications for health;
5. The association between the infant microbiome and the development of the immune system, metabolic health and neurodevelopment.

Submission Deadline: 30 Jun 2024

Benefits to Authors:

- The first 10 manuscripts submitted to this special issue will be exempted from APCs (\$1, 200).
- Enjoy faster publication than regular submissions;
- Authors will be invited as Guest Speakers to our journal webinars. The webinar will be held via Zoom and it will also be broadcast live on Youtube and the Chinese WeChatOfficial Account, Video Account, Bilibili;
- A special interview will be provided to authors and will be promoted on the journal homepage and all media promotion platforms of both via the journal and publisher



Journal Introduction:

Microbiome Research Reports (MRR) is an international peer-reviewed, open access journal. The overall aim of MRR is to publish high quality researches from scientists with a common interest in microbiome/microbiota research in all its multidisciplinary aspects. The journal is founded by OAE Publishing Inc., under the guidance of our Editor-in-Chief Professor Marco Ventura (University of Parma, Italy). MRR was officially launched on July 26 2021. Looking forward to your attention and cooperation! Welcome to contact the editorial office for details, editorialoffice@mrrjournal.net.



Editorial Board team:



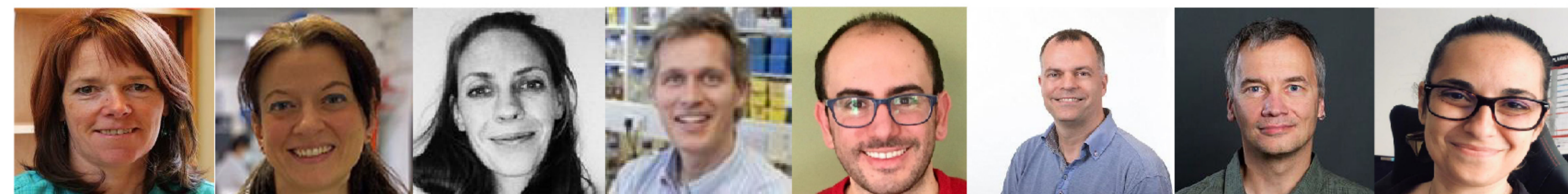
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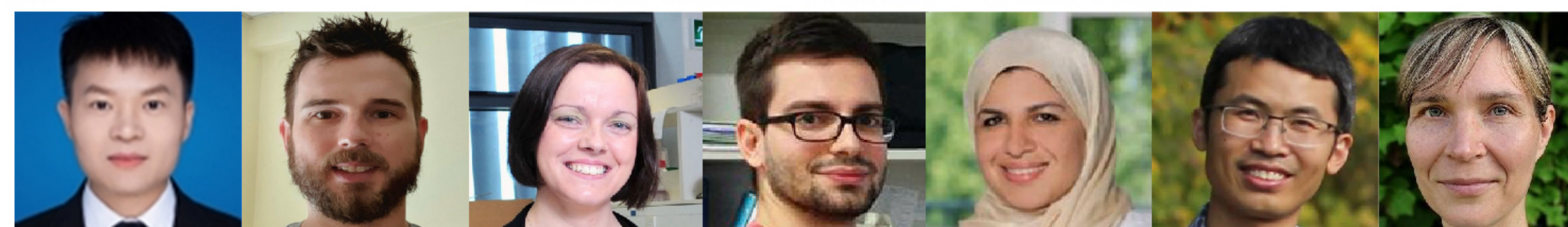
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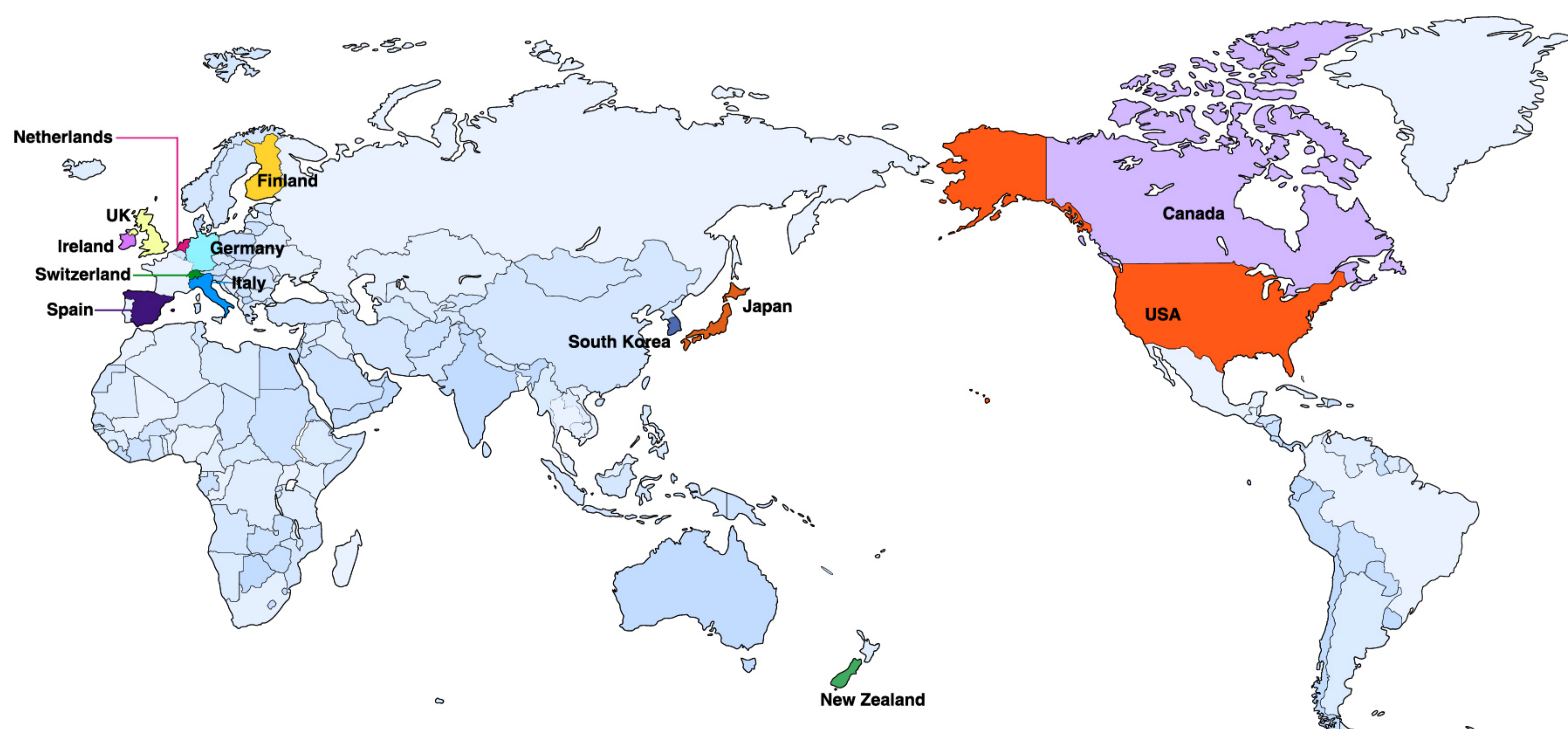
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