

Taxonomic Challenges and Opportunities in Microbiome Research

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Special Issue Introduction:

The field of microbiome research has witnessed remarkable advancements in recent years, fueled by cutting-edge sequencing technologies and bioinformatics tools.

An essential step in this process involves naming the sequences obtained (either metabarcoding data or whole metagenomes). These names are key labels that establish connections between sequences and the biodiversity within samples. They enable the identification of already described taxa or the potential discovery of novel entities at some taxonomic level. Moreover, these names play a pivotal role in linking sequence-based information to the existing literature on already-known taxa.

However, two main challenges can hinder this naming process: i. the traditional separation of prokaryotic, eukaryotic and viral taxonomies can fragment information pertaining to updated names, and ii. the technical barriers related to the update of nomenclature in sequence databases persist due to taxonomic revaluations. Thus, misusing names in microbiome research can pose a significant obstacle to fully extracting pertinent information from microbiome data due to information fragmentation and potential inaccuracies arising from outdated nomenclature.

This Special Issue aims to facilitate a safe transition to the digital era for all microbiologists while emphasizing the enduring importance of taxonomy. In this evolving landscape, taxonomy plays a critical role in ensuring the continuity of information across time and literature.

This Special Issue focuses on methodological, biological and applied aspects related to the significance of taxonomy in microbiome analyses. We encourage discussions on the following topics, among others:

1. Genome-based taxonomy;
2. Practice and procedures;
3. Analyses of virome, mycobiome and bacteriome in all settings, spanning from human to environment.

Submission Deadline: 31 Mar 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.



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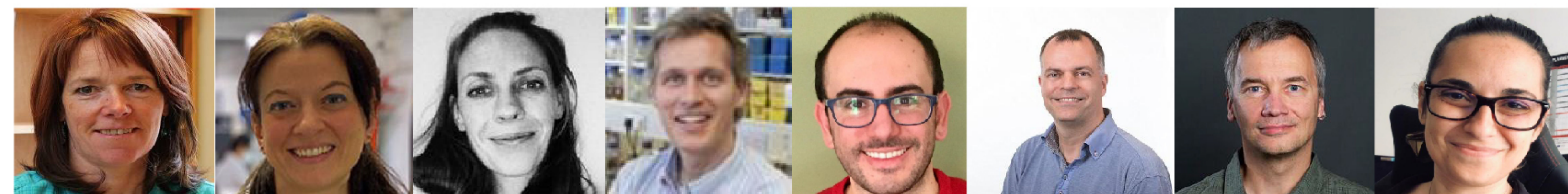
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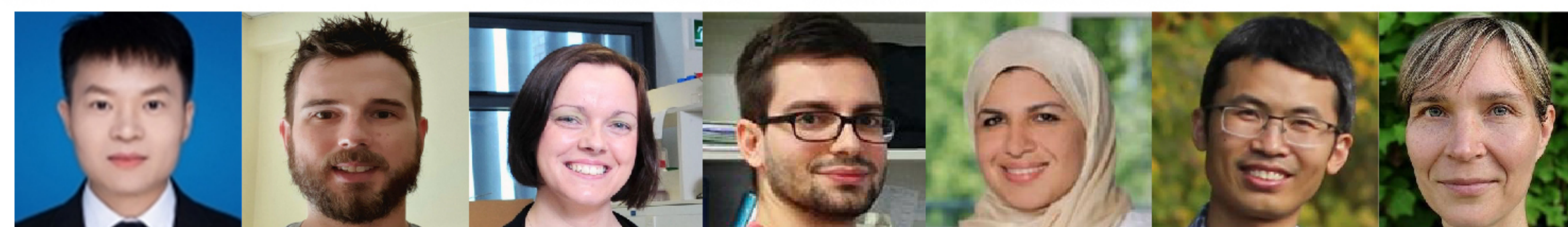
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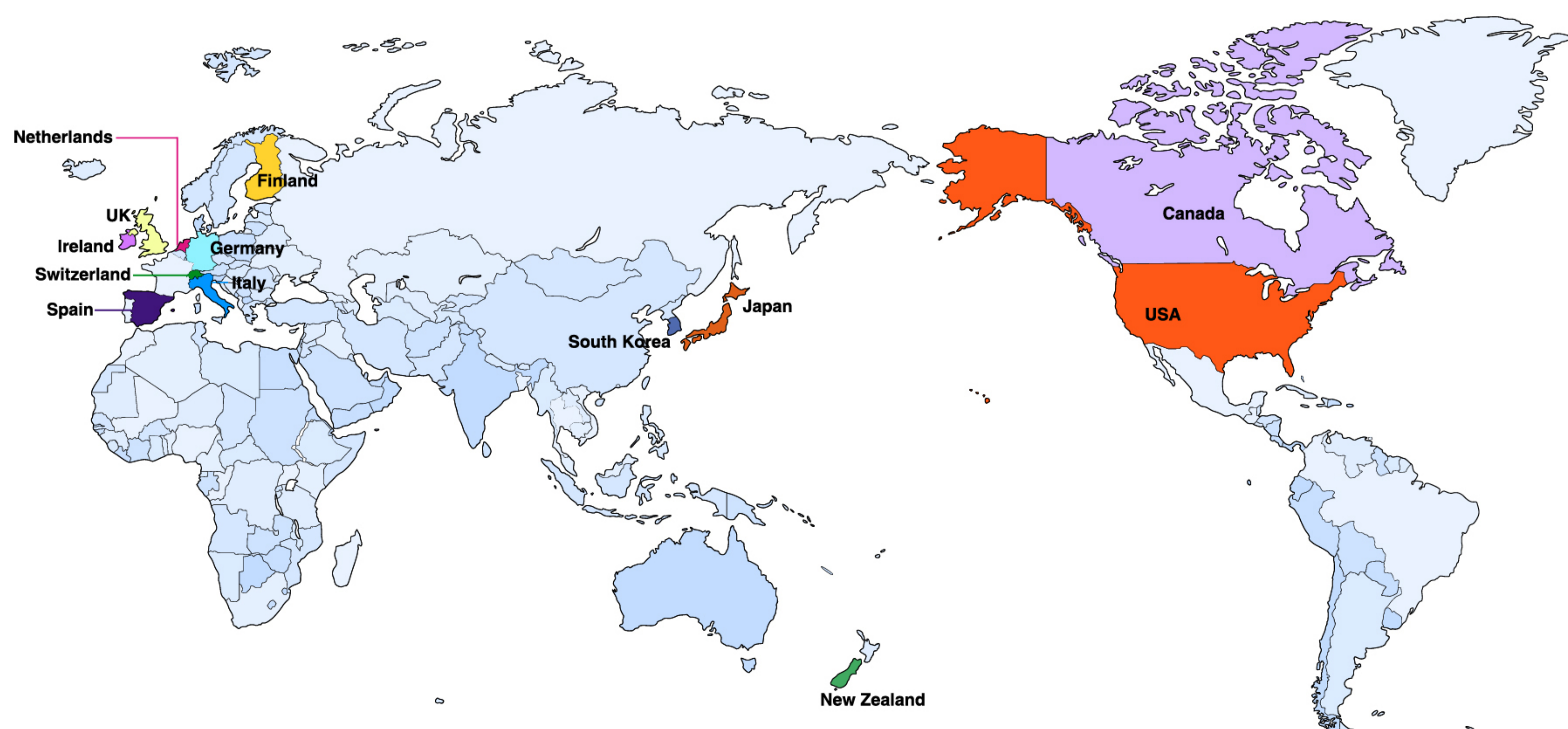
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