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Precision, Mechanism, and the Discipline of Translation: Defining the Editorial Vision of the Journal of Precision Microbiome Therapeutics

Gratiela Gradisteanu Pircalabioru [1] *

1 Department of Botany and Microbiology, Faculty of Biology, University of Bucharest, Bucharest, Romania

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***Corresponding Author:** gratiela.gradisteanu@icub.unibuc.ro

The microbiome sciences have entered an uneasy adolescence. A decade of correlative discovery has produced an extraordinary map of microbial diversity across human health and disease, yet the field's therapeutic yield has lagged conspicuously behind its descriptive output. Associations between dysbiosis and disease continue to accumulate faster than mechanistic explanations for them, and a growing gap has opened between what the literature reports and what clinicians can actually act upon. It is into this gap that the Journal of Precision Microbiome Therapeutics (JPMT) is launched — not as another repository for compositional surveys, but as a disciplined home for work that moves from microbial observation to therapeutic consequence.

A DELIBERATE SCOPE

Our positioning is intentional rather than incidental. JPMT exists to serve the full arc of microbiome-based therapeutics: discovery, mechanistic dissection, engineering, personalization, and clinical translation. Each stage in that arc carries its own evidentiary burden, and we intend to hold submissions to the

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standard appropriate to the stage they claim to occupy. A finding of microbial enrichment in a diseased cohort is a hypothesis, not a therapeutic target. A therapeutic target becomes credible only when its mechanism is demonstrated, not merely inferred from co-occurrence. And a mechanism, however elegant in a gnotobiotic model, earns clinical relevance only when it survives contact with human heterogeneity — diet, host genetics, prior antibiotic exposure, and the ecological inertia of an already-established community.

MECHANISM BEFORE DESCRIPTION

This is why our editorial philosophy privileges mechanism over description, therapeutic relevance over association, and translation over novelty for its own sake. We are not indifferent to novelty; we are simply unwilling to let novelty substitute for rigor. A paper reporting a genuinely new mechanism of microbial–host crosstalk, supported by functional validation, will always find a receptive audience here. A paper reporting yet another compositional survey that correlates an uncharacterized taxonomic signature with an inadequately powered or poorly controlled clinical outcome, absent causal, functional, or compelling translational interrogation, is unlikely to meet that threshold. Volume has never been evidence, and we do not intend to treat it as such. We therefore welcome studies that move beyond association through perturbation experiments, longitudinal designs, functional multi-omics, microbial culture and synthetic communities, organoid and advanced in vitro models, gnotobiotic systems, and appropriately validated computational approaches. Where ethically and legally permissible, we will also encourage deposition of sequencing data, analysis code, metadata standards, and computational workflows sufficient to reproduce the principal findings.

THE REPRODUCIBILITY MANDATE

Reproducibility deserves particular emphasis, because it is where the microbiome field has been most conspicuously fragile. Batch effects, cohort-specific confounders, unstandardized bioinformatic pipelines, and underpowered animal models have all contributed to a literature in which effect sizes shrink or vanish upon replication. JPMT will require authors to report methods with a granularity that permits independent verification: strain-level resolution where relevant, explicit description of humanization or colonization protocols in gnotobiotic work, and transparent handling of multiple-hypothesis correction in association studies. We would rather publish a smaller, more defensible finding than a larger, more fragile one.

FROM BENCH TO BEDSIDE, DELIBERATELY

The translational mandate embedded in our title is not rhetorical. We are particularly interested in work that engineers microbial or microbiome-derived interventions — live biotherapeutic products, engineered consortia, phage-based tools, postbiotic and metabolite-directed therapies — and that carries these interventions through the stages of preclinical validation toward defensible clinical hypotheses. Personalization is a related priority: the recognition that a therapeutic strategy validated in one microbiomic or host-genetic context may fail, or even cause harm, in another. Papers that grapple honestly with this heterogeneity, rather than averaging it away, will find a natural home in these pages.

None of this diminishes the value of case reports, focused reviews, or letters that challenge prevailing assumptions. A well-argued critical review that exposes an unexamined assumption in the field can advance the science as much as a new dataset can. What unites the work we seek, across every article type, is intellectual honesty about what has actually been demonstrated versus what has merely been suggested.

EDITORIAL STANDARDS

As Editor-in-Chief, together with an editorial board assembled for depth across medical microbiology, immunology, applied microbiology, and biotechnology, we are committed to a review process that is exacting but constructive. Every submission will be screened for originality, and every editorial decision will be governed by the guidelines of the Committee on Publication Ethics (COPE), the International Committee of Medical Journal Editors (ICMJE), and the World Association of Medical Editors (WAME) — on authorship, on conflicts of interest, and on the transparent

disclosure of any generative artificial intelligence assistance used in manuscript preparation. We regard this transparency not as a procedural formality but as an extension of the same evidentiary honesty we ask of the science itself.

These are not abstractions. They are the operational foundation on which the credibility, and ultimately the international indexation, of this journal will be built. Inclusion in the databases that the field relies upon is not pursued by declaration; it is earned through a sustained record of editorial consistency, methodological transparency, and citable scientific value. That is the standard we set for ourselves from the first issue onward, not as a distant aspiration but as a daily editorial discipline.

THE WORK AHEAD

The microbiome field does not need another venue for accumulation. It needs venues that discipline accumulation into mechanism, and mechanism into therapy. That is the work the Journal of Precision Microbiome Therapeutics undertakes with this inaugural issue, and it is the standard against which we invite the field — authors, reviewers, and readers alike — to hold us accountable.

Declarations

Conflict of Interest

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Ethical Considerations

Not applicable. This editorial does not involve human participants, animals, or primary research data.