Dear ISME J Editorial team,

On behalf of all authors, please find our revised manuscript entitled "*Intestinal persistence of Bifidobacterium infantis is determined by interaction of host genetics and antibiotic exposure*" submitted for consideration to *The ISME Journal*.

We have carefully addressed the final recommendations provided by Editor-in-chief and Senior Editor. Each of the requested changes are presented in blue (e.g., **C1**), followed by our response in black (e.g., **R1**).

All authors have contributed to the manuscript and this revision and have seen and approved the final version.

Thank you for considering our manuscript for publication.

Sincerely,

A drawing of a plane

Description automatically generated

Prof. Geraint Rogers

Microbiome and Host Health, South Australian Health and Medical Research Institute

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[geraint.rogers@sahmri.com](mailto:geraint.rogers@sahmri.com) **Editor-in-chief (Jillian Petersen)**

**C1:** Based on the final recommendation of Senior Editor Richard Lamont, and on behalf of the International Society for Microbial Ecology, I am very pleased to inform you that your manuscript ISMEJ-D-24-00338R2 entitled "Intestinal persistence of Bifidobacterium infantis is determined by interaction of host genetics and antibiotic exposure" has been provisionally accepted for publication in The ISME Journal.

As the corresponding author of this manuscript, please make sure you complete the tasks below at your earliest convenience. Please note that we won't be able to officially confirm acceptance of your manuscript and proceed with the publication process until all requests have been addressed and all forms have been returned.

**R1**: Thank you very much for your positive feedback and for provisionally accepting our manuscript, ISMEJ-D-24-00338R2, entitled "Intestinal persistence of Bifidobacterium infantis is determined by interaction of host genetics and antibiotic exposure," for publication in The ISME Journal.

We are pleased with the decision and appreciate the time and effort the reviewers and editors have put into evaluating our work. We will ensure that all the necessary tasks are completed promptly to facilitate the final acceptance and publication process.

**Specific Edits:**

**C2:** "MiSeq Sequencing System" should be "MiSeq System" - please revise before uploading final files.

**R2**: Revised accordingly (Line 208).

**C3:** Files must not contain highlighting or tracked changes..

**R3:** All files have been reviewed and confirmed to be free of highlighting and tracked changes.

**C4:** References should quote all authors for papers with up to six authors; for papers with more than six authors, only the first six should be quoted followed by et al..

**R4:** We have revised the references to ensure that papers with up to six authors list all authors, while those with more than six authors list the first six followed by "et al.".

**C5:** Figure and table legends must be included at the end of article file, after the references.

**R5:** We have reviewed and confirmed that the figure and table legends are already included at the end of the article file, following the references.

**C6:** Figure files must be uploaded as individual files and then included in the merged file, ensuring that figures with multiple panels are uploaded as one file (e.g. Fig. 1A, 1B uploaded as Fig. 1).

**R6:** We have reviewed and confirmed that the figures have already been merged as individual figure panels before submission, with each multi-panel figure uploaded as a single file.

**C7:** Tables must be editable and either uploaded as separate files or included in the article file, after the references.

**R7:** We confirmed that no tables were drafted for the main article; hence, no tables will be included in the article file.

**C8:** All supplementary information, including supplementary figure and table legends, must be uploaded separately and not included in the article file.

**R8:** All supplementary information, including supplementary figure and table legends, has been uploaded in a separate file and will not be included in the article file.

**C9:** Provide a copy of your manuscript as a word document.

**R9:** A copy of word document is provided.

**C11:** Include a short running title of 40 characters or less including spaces.

**R11:** We have provided a short running title, “Fut2 impacts probiotic persistence,” under the main title of the article.