

Reviewer Report

Title: A gene catalogue of the Sprague-Dawley rat gut metagenome

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Reviewer name: Tue Sparholt Jørgensen

Reviewer Comments to Author:

The data described in this manuscript presents many levels of genetic information from rat feces. It will likely be used as a reference by researchers working in gut function and characterization, and is therefore a valuable contribution to the scientific community. Generally, I find that the manuscript needs English language editing and careful proofreading to weed out small irregularities (e.g. number inconsistencies? on p1.112) and to make each section more concise (for example, but not only, the section on germ free animals which is not directly related to the present dataset). The experimental and bioinformatical procedure, including sample handling, DNA extraction, assembly, gene prediction, taxonomic assignment, and gene functional annotation is sound, and the descriptions are sufficient. Specific comments: Background, 140: I believe religious considerations are covered by ethics considerations and do not need to be mentioned. DNA extraction, 126: the sentence "The standard protocol as described in ref, including DNA fragmentation and selection, end repair and a-tailing, and circularization" is not clear. Data preprocess, 156: "quality value less than 3..." which quality measure? Phred-like? Figure 5; include description of what the modules and pathways consist of somewhere in the text Comparison of human, mouse, rat gene catalogue, 19: "...%of the reads were allowed for mapping to ...". Not understandable. A discussion of the use of fecal samples to evaluate the gut microbiota should be included somewhere. A detailed description of the work carried out by each of the 28 authors should also be included, particularly as this is a very high number of authors for a Data Note of limited size and complexity.

Level of Interest

Please indicate how interesting you found the manuscript: An article whose findings are important to those with closely related research interests

Quality of Written English

Please indicate the quality of language in the manuscript: Not suitable for publication unless extensively edited

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