**TYPE OR PASTE THE TITLE OF YOUR ARTICLE HERE: The title should accurately, clearly, and concisely reflect the emphasis and content of the paper. The title must be brief and grammatically correct**

**ABSTRACT**

*Instructions – please delete before submission. All submissions must have an abstract. Type or paste your abstract here. This should be no more than 250 words. The abstract should briefly state the problem or purpose of the research, indicate the theoretical or experimental plan used, summarize the principal findings, and point out the major conclusions.*

**DATA SUMMARY**

*Instructions – please delete before submission. Microbial Genomics is a mandatory open data journal. All authors are required to provide access to* ***supporting data*** *prior to submission. Each external data record should be cited in text (e.g. “Data resulting from Method X can be found in xxxxx.txt [Data Citation 1]”), and should also be listed in the data bibliography at the end of the document.*

*Please note data submitted to external repositories must be referred to as 'Supporting data' in your article.*

*Please describe here all* ***supporting external data*** *including the DOI(s) and/or Accession Number(s), and the associated URL to access this (examples have been provided):*

1. Strain data protocol has been deposited in Figshare; DOI: xx.xxxx/xxx (url – <http://figshare.com/articles/xxxx/xxx> )
2. Genome xyz has been deposited in GenBank; accession number: xxxxxx.x (url - <http://www.ncbi.nlm.nih.gov/nucgss/xxxxxx.x>)

**I/We confirm all supporting data, code and protocols have been provided within the article or through supplementary data files.** [ ]

**IMPACT STATEMENT**

*Instructions – Please delete before submission. This lay summary of your article should be no more than 200 words, and should cover the following: a) provide a perspective of how this article adds to the literature in the field; b) breadth of interest/utility; and c) significance of output (incremental or step), in terms of relevance and being thought provoking. The Impact Statement will be published with your article if accepted.*

**INTRODUCTION**

*Instructions – Please delete before submission. This should state the objectives of the work, but should not contain a detailed summary of the results. Authors should not assume that all readers will know why an area is worth studying; they should briefly make this clear. Previous relevant work should be sufficiently cited but this should not constitute a full review.*

**THEORY AND IMPLEMENTATION**

**CONCLUSION**

**AUTHOR STATEMENTS**

*Instructions – please delete before submission. Please complete the following sections (refer to Information for authors for more information on the requirements for these sections).*

*Funding information*

*Acknowledgements*

*Ethical statement*

*Conflicts of interest*

**ABBREVIATIONS**

Instructions – please delete before submission. Please include any non-standard abbreviations.

**REFERENCES**

*Instructions – please delete before submission. The reference list should be presented in Vancouver style. Please review the Instructions for Authors for further information including referencing websites.*

**DATA BIBLIOGRAPHY**

*Instructions – please delete before submission. The data bibliography should be presented in the following format: author, depository, DOI or Accession Number (YYYY). Please see the instructions for Authors for further information. Examples have been provided below:*

1. Schmitz, R. J., Schultz, M. D. & Ecker, J. R. Gene Expression Omnibus GSE43857 (2013).
2. Smith, J. & Brown, D. FigShare http://dx.doi.org/10.6084/m9.figshare.NNNNN (2014).

**FIGURES AND TABLES**

*Instructions – please delete before submission. Method papers should have a maximum of 4 figures and tables. If you need to include more than this number, please include an explanation in your cover letter. Please list all figures and tables in order of appearance. Figures should not be used to present results that can be described by a brief statement in the text. File Size: 300dpi resolution for image files and 600dpi for line figures; Labelling criteria e.g. Figures must be referred to in the text as Fig. 1(a) not Fig. 1A or Figure 1(A) or as (Fig. 1a) not (Figure 1A). Multipart figures should be labelled (a), (b), etc., not (A), (B), etc.*

*Figures should not be used to present results that can be described by a brief statement in the text. The points outlined for tables regarding comprehensibility, relative values and reproducibility also apply to figures and their legends. The inclusion of large amounts of tabular data in figures is discouraged and authors may be asked to move such data to the text or a separate table. Authors should be aware that after publication, tabulated data within figures are not accessible via online text searching.*

*Tables should be broadly comprehensible without reference to the text, but it is not necessary to repeat detailed descriptions of methods, etc. The symbols \* † ‡ § || ¶ # should be used for footnotes, rather than superscript letters or numbers. When results are expressed as percentages, the absolute value(s) corresponding to 100% must be stated. Statements of reproducibility should be included (see above). Tables should not be used to present results that can be described by a brief statement in the text.*

*Our requirements for files intended for publication are different from those for files that will be converted to PDF by the Editorial Manager system as part of an initial submission, as set out in the Files for Publication section of these instructions.*

*Please see the Instruction for Authors page for further details.*