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Reverse vaccinology and subtractive genomics reveal new therapeutic targets against *Mycoplasma pneumoniae*: a causative agent of pneumonia

Thaís Cristina Vilela Rodrigues, Arun Kumar Jaiswal, Alissa de Sarom, Letícia de Castro Oliveira, Carlo José Freire Oliveira, Preetam Ghosh, Sandeep Tiwari, Fábio Malcher Miranda, Leandro de Jesus Benevides, Vasco Ariston de Carvalho Azevedo and Siomar de Castro Soares

Article citation details

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Review timeline

Original submission:	17 May 2019
Revised submission:	4 July 2019
Final acceptance:	4 July 2019

Note: Reports are unedited and appear as submitted by the referee. The review history appears in chronological order.

Note: This manuscript was transferred from another Royal Society journal with peer review.

Review History

RSOS-190907.R0 (Original submission)

Review form: Reviewer 1

Is the manuscript scientifically sound in its present form? Yes

Are the interpretations and conclusions justified by the results? Yes

Is the language acceptable? Yes

Is it clear how to access all supporting data? Yes

Reports © 2019 The Reviewers; Decision Letters © 2019 The Reviewers and Editors; Responses © 2019 The Reviewers, Editors and Authors. Published by the Royal Society under the terms of the Creative Commons Attribution License http://creativecommons.org/licenses/by/4.0/, which permits unrestricted use, provided the original author and source are credited **Do you have any ethical concerns with this paper?** No

Have you any concerns about statistical analyses in this paper? No

Recommendation? Accept as is

Comments to the Author(s) Authors implemented the suggestions provided by the reviewers.

Review form: Reviewer 2 (Asif Ullah Khan)

Is the manuscript scientifically sound in its present form? Yes

Are the interpretations and conclusions justified by the results? Yes

Is the language acceptable? Yes

Is it clear how to access all supporting data? Not Applicable

Do you have any ethical concerns with this paper? No

Have you any concerns about statistical analyses in this paper? No

Recommendation? Accept with minor revision (please list in comments)

Comments to the Author(s)

The authors though addressed most of my previous comments & have considerably improved the manuscript draft. However few minor comments are still not addressed.

1. For example, the order of figures citation in the main text is not corrected. The citation of figure 8 appeared first in the main text. The figure citation order needs to be checked carefully.

2. Secondly, there are so many figures. Some of the figures should be shown as supplementary figures instead as regular article figures.

3. The Supplementary tables citation should also be checked. Somewhere, the author mentioned these as "Supplementary tables", somewhere mentioned as "Supplementary Files" and somewhere the authors just mentioned, "supplementary material" like DEG supplementary material. This should be checked & uniform.

4. As per my review, I strongly felt that the authors still need to carefully read the manuscript contents and should improve the draft with respect to typographic and grammatical mistakes.

Decision letter (RSOS-190907.R0)

18-Jun-2019

Dear Miss Vilela Rodrigues

On behalf of the Editors, I am pleased to inform you that your Manuscript RSOS-190907 entitled "Reverse Vaccinology and Subtractive Genomics reveals new therapeutic targets against Mycoplasma pneumoniae, a causative agent of pneumonia" has been accepted for publication in Royal Society Open Science subject to minor revision in accordance with the referee suggestions. Please find the referees' comments at the end of this email.

The reviewers and handling editors have recommended publication, but also suggest some minor revisions to your manuscript. Note particularly the minor comments of Reviewer 2. Therefore, I invite you to respond to the comments and revise your manuscript.

• Ethics statement

If your study uses humans or animals please include details of the ethical approval received, including the name of the committee that granted approval. For human studies please also detail whether informed consent was obtained. For field studies on animals please include details of all permissions, licences and/or approvals granted to carry out the fieldwork.

• Data accessibility

It is a condition of publication that all supporting data are made available either as supplementary information or preferably in a suitable permanent repository. The data accessibility section should state where the article's supporting data can be accessed. This section should also include details, where possible of where to access other relevant research materials such as statistical tools, protocols, software etc can be accessed. If the data has been deposited in an external repository this section should list the database, accession number and link to the DOI for all data from the article that has been made publicly available. Data sets that have been deposited in an external repository and have a DOI should also be appropriately cited in the manuscript and included in the reference list.

If you wish to submit your supporting data or code to Dryad (http://datadryad.org/), or modify your current submission to dryad, please use the following link: http://datadryad.org/submit?journalID=RSOS&manu=RSOS-190907

• Competing interests

Please declare any financial or non-financial competing interests, or state that you have no competing interests.

• Authors' contributions

All submissions, other than those with a single author, must include an Authors' Contributions section which individually lists the specific contribution of each author. The list of Authors should meet all of the following criteria; 1) substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data; 2) drafting the article or revising it critically for important intellectual content; and 3) final approval of the version to be published.

All contributors who do not meet all of these criteria should be included in the acknowledgements.

We suggest the following format:

AB carried out the molecular lab work, participated in data analysis, carried out sequence alignments, participated in the design of the study and drafted the manuscript; CD carried out the statistical analyses; EF collected field data; GH conceived of the study, designed the study, coordinated the study and helped draft the manuscript. All authors gave final approval for publication.

• Acknowledgements

Please acknowledge anyone who contributed to the study but did not meet the authorship criteria.

• Funding statement

Please list the source of funding for each author.

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Because the schedule for publication is very tight, it is a condition of publication that you submit the revised version of your manuscript before 27-Jun-2019. Please note that the revision deadline will expire at 00.00am on this date. If you do not think you will be able to meet this date please let me know immediately.

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When submitting your revised manuscript, you will be able to respond to the comments made by the referees and upload a file "Response to Referees" in "Section 6 - File Upload". You can use this to document any changes you make to the original manuscript. In order to expedite the processing of the revised manuscript, please be as specific as possible in your response to the referees. We strongly recommend uploading two versions of your revised manuscript:

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4) Included the raw data to support the claims made in your paper. You can either include your data as electronic supplementary material or upload to a repository and include the relevant doi

within your manuscript. Make sure it is clear in your data accessibility statement how the data can be accessed;

5) All supplementary materials accompanying an accepted article will be treated as in their final form. Note that the Royal Society will neither edit nor typeset supplementary material and it will be hosted as provided. Please ensure that the supplementary material includes the paper details where possible (authors, article title, journal name).

Supplementary files will be published alongside the paper on the journal website and posted on the online figshare repository (https://rs.figshare.com/). The heading and legend provided for each supplementary file during the submission process will be used to create the figshare page, so please ensure these are accurate and informative so that your files can be found in searches. Files on figshare will be made available approximately one week before the accompanying article so that the supplementary material can be attributed a unique DOI.

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Once again, thank you for submitting your manuscript to Royal Society Open Science and I look forward to receiving your revision. If you have any questions at all, please do not hesitate to get in touch.

Kind regards, Alice Power Editorial Coordinator Royal Society Open Science openscience@royalsociety.org

on behalf of Dr John Dalton (Associate Editor) and Steve Brown (Subject Editor) openscience@royalsociety.org

Associate Editor Comments to Author (Dr John Dalton):

The authors still need to address the concerns of the second reviewer who point out errors on figure citations and who suggested that some figures should be presented as supplementary figures instead as regular article figures. Typographical and grammatical errors also need to be checked.

Reviewer comments to Author: Reviewer: 1

Comments to the Author(s) Authors implemented the suggestions provided by the reviewers. Reviewer: 2

Comments to the Author(s)

The authors though addressed most of my previous comments & have considerably improved the manuscript draft. However few minor comments are still not addressed.

1. For example, the order of figures citation in the main text is not corrected. The citation of figure 8 appeared first in the main text. The figure citation order needs to be checked carefully.

2. Secondly, there are so many figures. Some of the figures should be shown as supplementary figures instead as regular article figures.

3. The Supplementary tables citation should also be checked. Somewhere, the author mentioned these as "Supplementary tables", somewhere mentioned as "Supplementary Files" and somewhere the authors just mentioned, "supplementary material" like DEG supplementary material. This should be checked & uniform.

4. As per my review, I strongly felt that the authors still need to carefully read the manuscript contents and should improve the draft with respect to typographic and grammatical mistakes.

Comments to the Author from the Editorial Office:

For more information about language polishing services endorsed by the Royal Society, please follow the link below:

https://royalsociety.org/journals/authors/language-polishing/

Author's Response to Decision Letter for (RSOS-190907.R0)

See Appendix A.

Decision letter (RSOS-190907.R1)

04-Jul-2019

Dear Miss Vilela Rodrigues,

I am pleased to inform you that your manuscript entitled "Reverse Vaccinology and Subtractive Genomics reveal new therapeutic targets against Mycoplasma pneumoniae, a causative agent of pneumonia" is now accepted for publication in Royal Society Open Science.

You can expect to receive a proof of your article in the near future. Please contact the editorial office (openscience_proofs@royalsociety.org and openscience@royalsociety.org) to let us know if you are likely to be away from e-mail contact. Due to rapid publication and an extremely tight schedule, if comments are not received, your paper may experience a delay in publication.

Royal Society Open Science operates under a continuous publication model (http://bit.ly/cpFAQ). Your article will be published straight into the next open issue and this will be the final version of the paper. As such, it can be cited immediately by other researchers.

As the issue version of your paper will be the only version to be published I would advise you to check your proofs thoroughly as changes cannot be made once the paper is published.

On behalf of the Editors of Royal Society Open Science, we look forward to your continued contributions to the Journal.

Kind regards, Alice Power Editorial Coordinator Royal Society Open Science openscience@royalsociety.org

on behalf of Dr John Dalton (Associate Editor) and Steve Brown (Subject Editor) openscience@royalsociety.org

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Appendix A

Referee(s)' Comments to Author:

Editor Dr. John Dalton:

The authors still need to address the concerns of the second reviewer who point out errors on figure citations and who suggested that some figures should be presented as supplementary figures instead as regular article figures. Typographical and grammatical errors also need to be checked.

Authors' response:

We agree with the editor and modify the article, correct gramatical errors, the order of citation of figures and direct some of them to supplementary material.

Reviewer 1:

Authors implemented the suggestions provided by the reviewers.

Reviewer 2:

The authors though addressed most of my previous comments & have considerably improved the manuscript draft. However few minor comments are still not addressed. 1. For example, the order of figures citation in the main text is not corrected. The citation of figure 8 appeared first in the main text. The figure citation order needs to be checked carefully.

2. Secondly, there are so many figures. Some of the figures should be shown as supplementary figures instead regular article as figures. 3. The Supplementary tables citation should also be checked. Somewhere, the author mentioned these as "Supplementary tables", somewhere mentioned as "Supplementary Files" and somewhere the authors just mentioned, "supplementary material" like DEG supplementary material. This should be checked & uniform. 4. As per my review, I strongly felt that the authors still need to carefully read the manuscript contents and should improve the draft with respect to typographic and grammatical mistakes.

We consider the reviewer's suggestions and review all article writing. We also correct the citation order of the figures, standardize the supplementary files and assign some of the figures to the supplementary material.