**Authorship Guidelines**

All authors must have made a substantial, direct, and intellectual contributions to the work. Factors taken into consideration in determining authorship and author order include:

Conception/design of the project or experiments

Development of (unpublished) methods

Provision of critical and/or unpublished reagents, samples or analytical tools

Performance of experiments, including troubleshooting/optimization

Data acquisition, analysis and interpretation, including creation of figures and legends

Writing and critically editing the manuscript, not just materials and methods

Significant revision of or intellectual input to the content of the project or manuscript

Accountability for all or significant aspects of the work

Contributions of complete, publishable figures are more highly valued than contributions of parts of figures. However, for large, multi-paneled figures, contributions of a coherent portion of a figure and legend may be valued as or more highly than contributions of complete, simpler figures.

Authorship constitution and order may change prior to manuscript submission or re-submission. Events that alter authorship order or the addition of a new author(s) include additional work performed by an existing author or by a new author. Contributions of figures later in the process of manuscript preparation may be weighted more heavily than earlier contributions because a) it is considerably harder to finish than to start a manuscript and b) if acquired data is considered crucial for publication.

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Contributions that do not qualify for authorship but should be acknowledged in the paper:

1. Providing funding, technical advice, or published reagents, samples, or patient data
2. Providing students or technical personnel who perform studies
3. Providing technical skills, such inoculation of mice or counting of CFUs
4. Providing statistical advice.
5. Routine collection of data or coordination of data collection.
6. Writing or editorial assistance
7. General supervision of the research group or members

Examples:

**1)** Scientist A designs the experiments and tells Technician B exactly how to do them. The experiments work, a new discovery is made, and a manuscript results. Scientist A is an author and Technician B is recognized in the acknowledgements.

**2)**Scientist A designs the experiments and tells Technician B exactly how to do them. Technician B carries them out but they do not work. Technician B suggests changes to the protocol and does additional experiments that work. A new discovery is made and a manuscript results. Scientist A and Technician B are now both authors.