

## Reviewer Report

**Title: An integrated chromosome-scale genome assembly of the Masai Giraffe (*Giraffa camelopardalis tippelskirchi*)**

**Version: Original Submission**    **Date: 4/3/2019**

**Reviewer name: Morris Agaba**

### Reviewer Comments to Author:

The manuscript describes assembly of a genome of an important mammal, the giraffe, whose extraordinary physical features have interested evolutionary biologists for more than centuries. The assembly presented here fills the gaps that were previously unaddressed by Agaba et al and contribute significantly new resource to the analysis and understanding of mammalian evolution and specifically to giraffe biology.

The authors use a set of complementary sequencing approaches to generate huge amounts of sequence data, and combined these with appropriate sequence assembly tools to arrive at a reference genome of the giraffe that is comparable to those of cattle and goats (ARS1), furthermore chromosome evolution is ascertained with direct observation with FISH analysis.

The paper is reasonably well written and organised, however, there are two sections that can be improved;

1. The section on genome evolution only highlights phylogenetic relationships of selected ruminants and can be perhaps bolstered by moving the results of synthetic comparison between cattle and giraffe to this section.
2. The manuscript appears to end abruptly, and so I suggest that authors should consider adding a section with conclusion. Some of the elements for such a section are already in the manuscript page 7 line 28 - 36.

### Level of Interest

Please indicate how interesting you found the manuscript: Choose an item.

### Quality of Written English

Please indicate the quality of language in the manuscript: Choose an item.

### Declaration of Competing Interests

Please complete a declaration of competing interests, considering the following questions:

- Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

- Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?
- Do you hold or are you currently applying for any patents relating to the content of the manuscript?
- Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?
- Do you have any other financial competing interests?
- Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (<http://creativecommons.org/licenses/by/4.0/>). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal

To further support our reviewers, we have joined with Publons, where you can gain additional credit to further highlight your hard work (see: <https://publons.com/journal/530/gigascience>). On publication of this paper, your review will be automatically added to Publons, you can then choose whether or not to claim your Publons credit. I understand this statement.

Yes Choose an item.