

Reviewer Report

Title: A high-quality genome assembly for the endangered golden snub-nosed monkey (*Rhinopithecus roxellana*)

Version: Revision 1 **Date: 5/29/2019**

Reviewer name: Jeffrey Rogers

Reviewer Comments to Author:

This is a revised manuscript. This version of the paper is significantly improved from the first version. Most of my comments and concerns have been satisfactorily addressed. But I do have some minor issues with this revision. I believe the authors can easily correct these remaining problems.

- 1) The sentence in lines 85-87 ("Genomic analyses have helped...") seems unnecessary and out of place. I suggest deleting this sentence.
- 2) Line 141. An N50 value is not the same as an average. The authors should indicate whether this value of 16.69 kb is an average or an N50. The latter is the preferred way to report this statistic.
- 3) Line 149: Same comment as #2
- 4) Line 301: I would suggest adding the word "non-reference" so that it reads "We found that the homozygous non-reference SNPs comprise 0.0004%...."
- 5) Line 309: I think you need "also" inserted - "completeness was also measured..."
- 6) Line 317: There is at least one word missing or out of place here. Please edit.
- 7) Lines 336 - 342. I do not understand how the authors identify copy number variation when they did not study and do not report DNA sequences from multiple individuals. There is only one reference sequence reported in this paper. Did the authors look at copy number differences between haplotypes of that one diploid monkey? This section is very confusing to me. Either the source of the samples used for CNV analysis must be presented, or this could be deleted. Some editing is required.
- 8) Lines 389 - 391. What animal was used to obtain the heart and skin tissue for RNA sequencing? Were these tissues obtained from the same animal used for DNA sequencing and reference assembly? Please state source of tissue for RNA sequencing.
- 9) I think Figure 2 would be better in the Supplement than main text. If the authors think this is important, presenting it in the supplement is fine. But I do not see that this contributes significantly to the major findings of the paper. If the authors feel strongly that it must remain in the main text, that is acceptable and I would not make an issue out of that. But I do not see the major significance beyond providing validation. No biological insight is provided by this figure.

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