Reviewer’s report

Title: HLA class I (-A, -B, -C) and class II (-DR, -DQ) polymorphism in the Mauritanian population

Version: 0 Date: 20 Sep 2017

Reviewer: Alexander Schmidt

Reviewer’s report:

Recapitulation of textbook knowledge in the introduction should be shortened or omitted.

Page 4, 12-14: HLA class I is not an antigen. The same holds for HLA class II. Both are groups of antigens.

Page 4, 38-47: The vast majority of HLA typing does not happen in the contexts given here, but in the context of hematopoietic stem cell transplantation.

The use of the terms "alleles" and "allele groups" is not consistent and partly wrong. DRB1*13, for example, is no allele.

Page 7, 21-42: Why are non-significant differences between different ethnic groups described in detail? There are no differences between ethnic groups shown in this work.

Pages 7/8, 58-7: Given the extremely small samples sizes, it is not justified to speak of "apparently specific alleles" (by the way, what is meant are allele groups).

Page 8, 12-29: Were haplotype frequency calculations done by ethnic? Or in the pooled sample? What would be the benefit of calculations based on the pooled sample? The EM algorithm used by the Arlequin software requires the underlying population to be in HWE which should not be the case for the pooled sample.

Somewhere in the paper a critical discussion of the validity of haplotype frequency estimations based on such small samples is required, as it is well-known that HF estimations based on small samples are prone to sampling and systematic error (frequencies of common haplotypes are overestimated).

Page 10, 1-9: When regarding the results as representative for HLA allele group frequencies of the Mauretanian population, the considerable error due to small sample sizes needs to be considered and discussed.

Page 10, 11: What does it mean that "haplotypes were found"?
Page 12, 18-20: Why does it follow from the results that the ethnic heterogeneity of the Mauretanian is supported? There were no significant differences between the various ethnic groups.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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