Author’s response to reviews

Title: Alpha Thalassemia Genotypes in Kuwait

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Author’s response to reviews:

Dear Editor,

Thank you for your last email. I have made corrections to the Declarations Section as suggested.

Regards,

Kunle Adekile

Response to Reviewers’ Comments

Thank you for the reviewers” comments, which were very useful, indeed.

Reviewer 2.

1. I'm curious about the total sample size analyzed in this study, which appears as 349 in Table 1 and Table 4 but 400 in Table 2 and in the main text. So which is correct?

We analyzed 400 samples as shown in Table 2. However, nationality was documented in only 349. A footnote has now been provided in the table to this effect.

2. The authors showed the allele frequencies separately for the samples of Kuwaiti nationality in Table 4, and this also can be applied to the genotype frequencies in Table 2.
We did not think this would make much of a difference because the Kuwaitis were ~90% of the study population and the frequencies in the other nationalities would be so small and would not be representative.

3.I also suggest the authors calculate the allele frequencies and genotype frequencies for unrelated individual samples from the unrelated Kuwaiti families (e.g., excluding the related samples from each family), although no significant changes would be expected as each family contributes "α-thalassemia trait"

This has been done

Reviewer 3

1.The manuscript title, i.e. "Spectrum of Alpha Thalassemia Alleles in Kuwait" somehow need to be checked and revised. I may be like "The Alpha Thalassemia's genotypes and allele frequency assessment from Kuwait"

We have changed the title to “Alpha Thalassemia Genotypes in Kuwait”

2.In introduction section somewhere the authors need to check and expand the HBH abbreviation in start.

This has been done in the Background, 2nd paragraph, line 9.

3.In Abstract, the sentence "Blood samples from suspected cases were sent to the Hemoglobin Research Laboratory of the Department of Pediatrics, Kuwait University" seems immature. Either the sentence should be discarded OR revised as "Blood specimen of the alpha Thalassemia suspects were examined at Hemoglobin Research Laboratory of the Department of Pediatrics, Kuwait University"

The sentence has been deleted and the paragraph rewritten as shown in the Methods section of the Abstract.

4.In method sub-section of Abstract, the authors need to mention about the resources employed for statistical analyses been conducted in current study.

We do not think this is necessary in the Abstract since we did not quote any real statistical tests. However, the software used has been fully acknowledged in the Methods section of the text.

5.The sentence "In tropical Africa it is about 25 - 30% [2]" need to revise as "It is about 25 - 30% in tropical Africa" Several other sentences starting with "In" should also revised as suggested here.

This has been done as shown in the second sentence of the first paragraph of the Background

6.There is a sentence "the commonest is the -α-3.7kb allele" should be like; "the most common is the -α-3.7kb allele".
This has been corrected as shown in line 5 of the 3rd paragraph under Background.

7. The authors need to mention the software resource employed for performing the statistical analyses like, ± SD and Student t test etc. as mentioned in the manuscript.

The software used has been fully described as shown in the last paragraph of the Methods section.

8. Linguistic correction need to be done. There is a sentence "receives samples from the hematology" should be "received samples from the hematology"

This has been corrected as shown in the first paragraph of the Methods section.

9. The sentence "the allele frequencies calculated" should be "the allele frequencies were calculated"

This has been corrected as shown in the 2nd line of the 3rd paragraph under Methods.

10. The authors mentioned that "The patients with the most severe phenotypes in the study were 2 siblings with –MED/αCα CD19α genotype. They both had poor growth parameters and baseline Hb of"