Author’s response to reviews

Title: NAA10 dysfunction with normal NatA-complex activity in a girl with non-syndromic ID and a de novo NAA10 p.(V111G) variant - a case report

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Author’s response to reviews:

Dear Editor BMC Medical Genetics,

We would like to thank the Editor and the reviewers for taking the time to evaluate our manuscript and for their constructive and positive comments. We appreciate the opportunity to resubmit a revised manuscript version which has been improved according to the advice given.

Please see below for specific points:

Reviewer #1:

1. Page 9 - 2nd last line - were the cells really centrifuged for only 15 s at 17,000 g - it would seem impossible to get a centrifuge to 17,000 g and back to zero in 15 seconds?

RESPONSE: Yes, that is correct. We have now changed the wording so that it more accurately describes how this centrifugation were done; “cells were pelleted using the “short spin” function of a Heraeus Fresco 17 centrifuge for 15 seconds with 17 000 g as the maximum speed.

2. Page 11 - line 45 - "...15-55%." only one period needed.

3. Page 11 - line 52 - "...and should be capable of catalyzing..."
RESPONSE: We have now fixed the two grammatical errors pointed out in comment 2 and 3.

Reviewer #2:

1. In figures 2-4, error bars are included in the graphs, but no statistical calculations are given. While the differences between NAA-WT and NAA10-V111G are clear, the authors should provide the statistical analysis of these differences.

RESPONSE: We agree and have now included the statistical calculations in the manuscript (in the legends for Figures 2-4).

2. Further, the author's results show that only the monomeric form has compromised function, and therefore it may be useful to discuss the issues concerning the monomer more thoroughly. For example, the authors state that several studies have indicated that the monomeric form of NAA10 may function as a lysine acetyltransferase (KNAT), and as such they should also discuss the negative findings of Magin et al. 2016 (1). These investigators failed to find any KNAT activity in recombinant NAA10 enzyme in vitro. This discrepancy should be discussed considering the importance of the issue of NAA10 possibly functioning as a KNAT in the monomeric form in vivo.


RESPONSE: Yes, we agree, and have now added more discussion on this subject to the text ('Discussion and Conclusions', pages 11-12).

Sincerely,

Thomas Arnesen