Reviewer’s report

Title: Non-Familial Cardiomyopathies in Lebanon: Exome Sequencing Results for Five Idiopathic Cases

Version: 1 Date: 09 Oct 2018

Reviewer: Hane Lee

Reviewer’s report:

Major concerns:

Overall, the paper can be shortened further.

Authors keep using "likley pathogenic" for non-clinical genes. These variants are uncertain significance in genes of uncertain significance (GUS) and should not be called 'likely pathogenic' or 'diagnosed' and is very confusing.

Use HGVS nomenclature for all variant descriptions

Abstract Conclusion: It's not convincing that exome is needed to identify novel variants. It should reflect what's in the discussion. How does clinical management change based on molecular diagnosis for cardiomyopathies in Lebanon?

page 4 line 48

"The average total number of single nucleotide variants (SNV) and Indels in all samples was around 20000 and 5500 respectively (Figure 1). Amongst these, around 8500 SNVs are non-synonymous, and 450 Indels are in the coding regions" : Is it concerning that less than 10% of indels are in the coding region?

Not sure why MR22 is in section 3.2 while it sounds like there's no clear molecular diagnosis made.

Minor concerns:

page 4 line 29

sheered > sheared

produce small fragments - please put average size of the fragments
as previously described - what was previously described? Ref paper missing?

What does ACGS stand for?

nonsense variants are not necessarily disease causing and since these are non-clinical genes, ExAC pLI score will have to be used to determine if nonsense variants are likely to be causal.

leading to a missense mutation p.P1112L, previously reported in patients with HCM or DCM: reference needed

Table 4 and table 2 are the same

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

Yes

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.

Yes

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.

Not relevant to this manuscript
Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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

1. 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?

2. 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?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. 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?

5. Do you have any other financial competing interests?

6. 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