Reviewer's report

Title: Overexpression of eIF-5A2 in mice causes accelerated organismal aging by increasing chromosome instability

Version: 1 Date: 25 July 2010

Reviewer: Vundavalli Murty

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Major Compulsory Revisions:

This is a well planned study and the data is very convincing that over expression if eIF-5A2 gene in mouse model results in premature aging accompanied by mitotic errors.

No major compulsory revisions are required.

Minor Essential Revisions.
There are number of grammatical and typographical errors through out the manuscript as outlined below:

1. Page 2, lines 18-19: ---"such as errors in cell dividing during metaphase and anaphase". This sentence is confusing and should be rephrased.

2. Authors state in Page 9, Results section that "The transgene was mapped to chromosome 10 in line 11 (Fig. 1C)". In the given image in Fig. 1C, how can they identify this is chromosome 10 based on DAPI stain. I think authors as stated, should limit to integration at one site. What about other line 10, how many integration sites and the chromosome?

3. Page 11, under subtitle Exhibition of accelerated aging: "However, genotypes of transgenic mice and wild-type littermates could be distinguished from postnatal week 3 according to body size and weight". This sentence is confusing. Genotypes of transgenic mice are not distinguishable, but the phenotypes. This should be written clearly.

Discretionary Revisions:

1. The data generated by both karyotype and SKY on aneuploidy is weak. How well this can be relied as the number chromosome count by both methods can be the results of technical artifacts. In a similar note, the Figure 7, panel A representing SKY is uninformative. I strongly believe that this should be removed. Figure 7A legend, page 26: "... and C-binds (right) ..." should be C-bands. Rather it is reverse DAPI stain.

Level of interest: An article of importance in its field

Quality of written English: Acceptable
**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I have no competing interests.