Reviewer’s report

Title: Breakpoint characterization of large deletions in EXT1 or EXT2 in 10 Multiple Osteochondromas families.

Version: 1 Date: 15 April 2011

Reviewer: Jian-Min Chen

Reviewer’s report:

Jennes and colleagues report the first characterisation of large deletions in the EXT1 and EXT2 genes at the nucleotide level, providing important insights into the underlying mutational mechanisms. In general, the work is well done. In particular, the two figures are nicely prepared. However, the manuscript may benefit some revisions as suggested below.

1. The MMRDR mechanism needs to be mentioned in the Abstract.
2. The lengthy discussion on mutational mechanisms in Introduction may be moved to Discussion.
3. Page 10, Patients: I think that all the 10 families were pre-selected (i.e., all had been previously shown to not carry point mutations or small deletions or duplications in the two genes). In addition, in the same paragraph, the meaning of “the mutation occurrence was unknown” is unclear to me.
4. Page 11, beginning of the second paragraph: I don’t understand what “the homologous sequences at the breakpoint junctions” means.
5. Page 16, the first two lines: for comparison, a figure of Alu’s and LINE-1’s average content in the human genome is required. See Férec et al. Eur J Hum Genet 2006;14:567-576 for relevant discussion.
6. In multiple places, ‘short homologous sequences” can be replaced by ‘short repeats’ or ‘microhomology’.
7. Table 1: the primer sequences can be published in a Supplementary File.
8. Table 3 can be removed.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests