Reviewer's report

Title: Nestin expression in osteosarcomas and derivation of nestin/CD133 positive osteosarcoma cell lines.

Version: 1 Date: 30 July 2008

Reviewer: Paola Dell'Albani

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In this study is analyzed, in human osteosarcomas biopsies and in four newly obtained cell lines, the expression of both nestin and CD133, which are accepted as Cancer Stem Cell markers. Authors demonstrated by immunohisto- and immunocyto-chemistry the presence of both markers in tissues and in derived cell lines. These findings fuel the possibility to identify CSCs among osteosarcoma cells, which is of relevant interest to target cells involved in tumor initiation, progression and metastasis.

Major Compulsory Revisions

1) Figure 3 and its legend are missing, Authors should add figure and legend or modify the text.

Minor Essential Revisions

1) page 4 line 7 It will be better to write neural instead of neuronal;
2) page 4 line 8 It will be better to write kDas instead of kDa;
3) page 4 line 12 It will be better to write mammalian stem cells instead of mammalian stem cell;
4) page 6 line 2 ….the histologic sections…. were reviewed by three pathologists….;
5) page 6 line 14 It will be better to write performed instead of preformed;
6) page 8 line 3 the GM-7 Glioblastoma cell line does not appear in any result or figure shown in the manuscript;
7) page 8 lines 11, 19, 23 and 24 Authors should omit the... before.. cells, since they are not specifying any type of cells;
8) page 10 lines 12, 13 and 15 Authors should omit the ..before ….individual samples... osteosarcomas ....and .....nestin
9) page 10 and 11 Authors should render better the concept of nestin presence in synovial sarcomas;
10) page 11 Osteosarcomas cell lines obtained by authors can not be addressed as pediatric osteosarcomas since one cell line is derived from a biopsy of a 21 years young male and three of them are from pediatric samples;
11) page 11 line 18 Authors should omit This... before... CD133;
12) page 12 line 1 It will be better to write CNS instead of neuronal;
13) page 12 line 15 It will be better to write present instead of presented;
14) page 15 reference 14 the journal should be in italic;
15) page 18 reference 36 the journal should be in italic

Discretionary Revisions

1) What does mean the “…no expression of nestin…corresponds with the rare occurrence of nestin-positive cells in the respective tumor samples”….? (pages 3-4 in the abstract section)

2) It looks like something is missing in the background section about osteosarcomas description-discussion. Authors should motivate their choice to study nestin and CD133 expression in osteosarcomas.

3) Even though, vimentin and desmin are proteins belonging to the intermediate filaments family, they should be discussed and related to nestin/CD133 positive osteosarcoma cells and the same should be done for S100;

4) In author’s contribution …What authors mean for : patient inclusion???. ....MH and colleagues did take the decision of what biopsies include in this study?

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 declare that I have no competing interests.