

ESPS Peer-review Report

Name of Journal: World Journal of Stem Cells

ESPS Manuscript NO: 10606

Title: Transplantation of stem cells from human exfoliated deciduous teeth for bone regeneration in the dog mandibular defect

Reviewer code: 00505327

Science editor: Fang-Fang Ji

Date sent for review: 2014-04-09 18:59

Date reviewed: 2014-04-16 23:40

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B (Very good)	<input checked="" type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input checked="" type="checkbox"/> Grade D (Fair)		BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input checked="" type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

COMMENTS TO AUTHORS

The manuscript Ali Behnia reports results of a study using human stem cells from exfoliated deciduous teeth stem cells to repair mandibular defects created in dogs. The author reports that the cells were able to heal defects compared to defects implanted with empty scaffolds. It is a brief study with limited number of animals and results are also limited in nature. Five figures are presented but can actually be condensed into one figure. There are many deficiencies in this study that will need to be addressed. Specific comments: 1. The authors state that cells used in this were previously characterized and were cryopreserved for 5 years prior to their use. Authors should present some data indication that cryopreservation did not change the cells; they still maintained their differentiation ability. 2. Bone defects that were created in dogs were through and through, what does this mean? 3. The authors state that the results showed that shed group showed 90.2+8.8% Vs 79+8.5%; what does this mean?. The data should be clearly presented indicating number of defects that healed when they were implanted with scaffolds seeded with cells versus the number of healed defects without cell seeding. 4. Donor cells were not tracked in vivo, how can the authors claim that donor cells contributed to repair without demonstrating their presence in the defects? Presence or evidence to indicate that donor cells made the new bone in the defects should be provided. 5. Limited data are presented, the results only show one figure (five), more analysis is needed using other methods, for example Micro CT, biomechanics to clearly show new bone formation and healing. 6. Figure legends should clearly describe the data being shown

ESPS Peer-review Report

Name of Journal: World Journal of Stem Cells

ESPS Manuscript NO: 10606

Title: Transplantation of stem cells from human exfoliated deciduous teeth for bone regeneration in the dog mandibular defect

Reviewer code: 00506101

Science editor: Fang-Fang Ji

Date sent for review: 2014-04-09 18:59

Date reviewed: 2014-05-01 21:32

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
[Y] Grade A (Excellent)	[Y] Grade A: Priority Publishing	Google Search:	[Y] Accept
[] Grade B (Very good)	[] Grade B: minor language polishing	[] Existed	[] High priority for publication
[] Grade C (Good)	[] Grade C: a great deal of	[] No records	[] Rejection
[] Grade D (Fair)	language polishing	BPG Search:	[] Minor revision
[] Grade E (Poor)	[] Grade D: rejected	[] Existed	[] Major revision
		[] No records	

COMMENTS TO AUTHORS

This is an interesting and outstanding article. Methods are appropriate. Results are clearly presented. Discussion is interesting. I think that this article can be accepted as is.

ESPS Peer-review Report

Name of Journal: World Journal of Stem Cells

ESPS Manuscript NO: 10606

Title: Transplantation of stem cells from human exfoliated deciduous teeth for bone regeneration in the dog mandibular defect

Reviewer code: 00202286

Science editor: Fang-Fang Ji

Date sent for review: 2014-04-09 18:59

Date reviewed: 2014-05-20 23:12

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input checked="" type="checkbox"/> Grade B (Very good)	<input checked="" type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	language polishing	BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input checked="" type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

COMMENTS TO AUTHORS

In this paper, the authors show that SHEDs can proliferate and contribute to bone regeneration. This is an interesting study, despite the limited number of animals and some points raised below. The animal model and the procedure seem sound and the experiments adequately performed. The authors should have used a non parametric test. What is the paired t-test they used? The data presented on Table 1 suggest that the statistical difference should be higher than that reported with the test they used. Table 1: What does the "Total" mean? Is it necessary to mention it because it is the mean of the control and SHED dogs combined. The Figure 4 is a too low magnification picture. A high magnification picture would be useful. Assessment of inflammation would have benefited from an immunohistochemical study of different cell types (i.e., lymphocytes, etc etc). There are some typos. Some of them have been directly corrected in the attached version. Page 3: is "stable" the best term compared to "animal house" or "animal facility" or "kennel"? Page 4: Is "elevator" the right term? Page 5: the term "and they did not sacrifice" is not clear. Does that mean that the animals were not sacrificed at the end of the experiments and that only biopsy specimens were taken? Page 5: there is no need to repeat the address of a company once it has been previously done (example: Sigma)

ESPS Peer-review Report
Name of Journal: World Journal of Stem Cells

ESPS Manuscript NO: 10606

Title: Transplantation of stem cells from human exfoliated deciduous teeth for bone regeneration in the dog mandibular defect

Reviewer code: 00504828

Science editor: Fang-Fang Ji

Date sent for review: 2014-04-09 18:59

Date reviewed: 2014-05-24 00:01

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B (Very good)	<input checked="" type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input checked="" type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)		BPG Search:	<input checked="" type="checkbox"/> Minor revision
<input checked="" type="checkbox"/> Grade E (Poor)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

COMMENTS TO AUTHORS

This manuscript explored application of human exfoliated deciduous teeth-derived stem cells for bone regeneration. The authors used dog mandibular defect as a model for this study. Application of human stem cells to dog is rare. It would be interesting system if its rationale is clearer. Major comments 1. What is the rationale of using a canine model system? Introduction of the manuscript starts with maxillofacial tumor surgery. 2. Why result section can be this short? Minor comments Since there seems to be many potential formatting issues, I do not point out each. I ask the authors to check these formatting carefully. 1. Where is figure legends? 2. Pictures – probably good to have scale bars, especially because some are microscopic images and others are images of surgery.