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E-mail: bpgoffice@wjgnet.com http://www.wjgnet.com

ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Experimental Medicine
ESPS manuscript NO: 25814
Title: Morphogenesis of human embryonic stem cells cell line into mature neurons under in vitro culture condition
Reviewer's code: 02446280
Reviewer's country: Russia
Science editor: Xue-Mei Gong
Date sent for review: 2016-03-24 16:02
Date reviewed: 2016-04-04 15:44

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
[ ] Grade A: Excellent	[ ] Grade A: Priority publishing	Google Search:	[ ] Accept
[ ] Grade B: Very good	[ ] Grade B: Minor language polishing	[ ] The same title	[ ] High priority for publication
[ ] Grade C: Good	[ ] Grade C: A great deal of language polishing	[ ] Duplicate publication	[Y] Rejection
[ ] Grade D: Fair	[Y] Grade D: Rejected	[ ] Plagiarism	[ ] Minor revision
[Y] Grade E: Poor		[Y] No	[ ] Major revision
		BPG Search:	
		[ ] The same title	
		[ ] Duplicate publication	
		[ ] Plagiarism	
		[Y] No	

COMMENTS TO AUTHORS

The paper "Morphogenesis of hESCs Cell Line into Mature Neurons under in vitro Culture Condition" by Shroff is devoted to the description of hESCs differentiation into neurons. It is very rapidly growing field of translational research that combine high expectations and safety concerns. hESCs maintaining in defined conditions under strict GMP regulations is a very important part of the research together with detailed step by step description of cells differentiation and characterization. Unfortunately it is not the case for this paper. Major drawbacks. 1. There is no any description of GMP qualified cultivation medium for hESC neither in the submitted paper nor in the cited literature including patents. Author has to provide detailed formulation and growth conditions. 2. There is no any data on hESC line pluripotency neither in the submitted paper nor in the cited literature including patents. Author has to provide detailed information about functional pluripotency of the cell line. 3. There is no any data on hESC differentiation protocol. Author has to provide detailed description of the neuronal differentiation protocol timeline, reagents and growth factors used and their compliance with GMP, GLP, etc. 4. Results section. Fig.1. No neurons are found. Specific cell

types have to be confirmed by immunostaining. Fig. 2 no cells are found. Fig.3 looks like fungi DAPI staining or apoptotic nuclear fragmentation. Fig 4 and 5 no cells are found. The overall quality of the data is very poor. Reject.

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ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Experimental Medicine
ESPS manuscript NO: 25814
Title: Morphogenesis of human embryonic stem cells cell line into mature neurons under in vitro culture condition
Reviewer's code: 00505755
Reviewer's country: Japan
Science editor: Xue-Mei Gong
Date sent for review: 2016-03-24 16:02
Date reviewed: 2016-05-06 15:04

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
[ ] Grade A: Excellent	[ ] Grade A: Priority publishing	Google Search:	[ ] Accept
[Y] Grade B: Very good	[Y] Grade B: Minor language polishing	[ ] The same title	[ ] High priority for publication
[ ] Grade C: Good	[ ] Grade C: A great deal of language polishing	[ ] Duplicate publication	[ ] Rejection
[ ] Grade D: Fair	[ ] Grade D: Rejected	[ ] Plagiarism	[Y] Minor revision
[ ] Grade E: Poor		[Y] No	[ ] Major revision
		BPG Search:	
		[ ] The same title	
		[ ] Duplicate publication	
		[ ] Plagiarism	
		[Y] No	

COMMENTS TO AUTHORS

General comments (1) The importance of the research and the significance of the research findings This research is important in terms of describing about the differentiation of human embryonic stem cells into three types of nervous systems such as neuron, oligodendrocytes and astrocytes. (2) The novelty and innovative nature of the research This is an innovative research describing about the differentiation of human embryonic stem cells. (3) The quality of the manuscript's presentation and readability It is well written, however, some proofreading is needed. (4) The ethics-related aspects of the research The appropriate documents may be needed. Specific comments Title: It accurately reflects the major topic and contents of the study. Abstract: It appropriately describes about the content of the manuscript, however, please specify the abbreviation for NPC firstly described. Introduction: There are some characters that are not shown appropriately. Please correct them. Materials and Methods: RNeasy Mini Kit, instead of RNAeasy, is appropriate in RNA extraction and RT-PCR section. Results: The differences of culture conditions or the culture days in differentiation for three types of the neuronal cells may be described in detail, especially for figure 1. The results of

RT-PCR are not described. Please include the result of RT-PCR in Results, or delete the RNA extraction and RT-PCR section from the Materials and Methods. Discussion: The possibility of NPCs differentiated from hESCs may be described more in detail in the 6th paragraph in Discussion. References: Please check reference citations carefully. Figure and Table: In figure 2 and 5, the differences of panels in the same day should be indicated.

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ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Experimental Medicine
ESPS manuscript NO: 25814
Title: Morphogenesis of human embryonic stem cells cell line into mature neurons under in vitro culture condition
Reviewer's code: 02446126
Reviewer's country: Czech Repoublic
Science editor: Xue-Mei Gong
Date sent for review: 2016-03-24 16:02
Date reviewed: 2016-03-25 18:09

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
[ ] Grade A: Excellent	[ ] Grade A: Priority publishing	Google Search:	[ ] Accept
[Y] Grade B: Very good	[Y] Grade B: Minor language polishing	[ ] The same title	[ ] High priority for publication
[ ] Grade C: Good	[ ] Grade C: A great deal of language polishing	[ ] Duplicate publication	[ ] Rejection
[ ] Grade D: Fair	[ ] Grade D: Rejected	[ ] Plagiarism	[Y] Minor revision
[ ] Grade E: Poor		[Y] No	[ ] Major revision
		BPG Search:	
		[ ] The same title	
		[ ] Duplicate publication	
		[ ] Plagiarism	
		[Y] No	

COMMENTS TO AUTHORS

Authors studied differentiation of hESCs cell line into mature neurons. They observed NPCs and differentiating neurons and optimized culture conditions. Multipotent NPCs differentiated into all three types of cells of nervous system, including neurons, oligodendrocytes and astrocytes. For analyses, authors used phase contrast microscopy. From the view of ethic statement of hESC cultivation, all agents and rules related to hESC maintenance are properly describe in the Methodology section. Manuscript is well written, but I missed analysis of some markers, specific for neural differentiation, like III-beta tubulin (as an example)or down-regulation of OCT4. Western blot analysis should be also applied in order to describe induced differentiation pathway properly. In addition, figure description by one sentence is not sufficient and must be improved.