

## ESPS Peer-review Report

**Name of Journal:** World Journal of Stem Cells

**ESPS Manuscript NO:** 6079

**Title:** Neural Differentiation from Pluripotent Stem Cells: the Role of Natural and Synthetic Extracellular Matrix

**Reviewer code:** 01217232

**Science editor:** Qi, Yuan

**Date sent for review:** 2013-10-01 21:21

**Date reviewed:** 2013-10-07 08:47

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input checked="" type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input checked="" type="checkbox"/> Accept
<input checked="" type="checkbox"/> Grade B (Very good)	<input 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 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 type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

## COMMENTS TO AUTHORS

The authors reviewed in details the involvement of extracellular matrixes in the neural differentiation of pluripotent stem cells and the potential application in drug screening. This reviewer generally agrees the stated view-points excluding, however, that 3-D matrix scaffold could “recapitulate” the neural stem cell niches and PSC-derived progenitors in it could “mimic” the in vivo development of neural stem cells. Stem cell niches, i.e. the in vivo microenvironment around stem cells, elicit a variety of cues to maintain the stemness of the stem cells and arouse their proliferation, differentiation and migration. Extracellular matrix is one of the critical cues that include stromal cells, growth factors and cytokines, small molecules, oxygen and ion concentrations, biomechanical signals, nerve nutrition, and other known or unknown elements.

## ESPS Peer-review Report

**Name of Journal:** World Journal of Stem Cells

**ESPS Manuscript NO:** 6079

**Title:** Neural Differentiation from Pluripotent Stem Cells: the Role of Natural and Synthetic Extracellular Matrix

**Reviewer code:** 00504335

**Science editor:** Qi, Yuan

**Date sent for review:** 2013-10-01 21:21

**Date reviewed:** 2013-10-08 20:22

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input checked="" type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input checked="" type="checkbox"/> Grade B (Very good)	<input 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 type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input checked="" type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> No records	<input type="checkbox"/> Major revision

## COMMENTS TO AUTHORS

It is well written review on stem cell differentiation to neural lineages. There are only minor suggestions: - abbreviations should be checked (for example, on p. 4 is introduced abbreviation ALS, on p. 10, line 10 from the top, is again whole description, etc.), - the authors should distinguish therapeutic effects of autologous, allogeneic and xenogeneic cells in in vivo models. Some experimental models describe the use of human (xenogeneic) cells and survival and effectiveness of these cells can be different from autologous cell therapy. The use of human embryonic stem cells (and cells derived from ESC) should be discussed with a precaution, - the authors should keep in mind that sensitivity of permanent or in vitro growing cell lines to various drugs is often different from the sensitivity of primary cell cultures. Thus should be mentioned.

## ESPS Peer-review Report

**Name of Journal:** World Journal of Stem Cells

**ESPS Manuscript NO:** 6079

**Title:** Neural Differentiation from Pluripotent Stem Cells: the Role of Natural and Synthetic Extracellular Matrix

**Reviewer code:** 00947111

**Science editor:** Qi, Yuan

**Date sent for review:** 2013-10-01 21:21

**Date reviewed:** 2013-10-09 22:47

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 checked="" type="checkbox"/> Minor revision
<input 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 is a well written and interesting review article which should be useful for readers interested in neuronal stem cell differentiation. There are some spelling errors which should be corrected: 1)p7, l.4: However, the variability of different iPSC lines derived from different tissues using different reprogramming methods may account for the difference. Don't use the word "different" so frequently in one sentence. 2)p8, line 19: oligodendrocytes please correct.