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## ESPS PEER-REVIEW REPORT

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

**ESPS manuscript NO:** 14739

**Title:** Epigenetic regulation of stemness maintenance in the neurogenic niches

**Reviewer's code:** 00609371

**Reviewer's country:** United States

**Science editor:** Xiu-Xia Song

**Date sent for review:** 2014-10-22 10:09

**Date reviewed:** 2014-11-26 17:37

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	PubMed Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> The same title	<input type="checkbox"/> High priority for publication
<input checked="" type="checkbox"/> Grade C: Good	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> Duplicate publication	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade D: Rejected	<input checked="" type="checkbox"/> Plagiarism	<input checked="" type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		<input checked="" type="checkbox"/> No	<input type="checkbox"/> Major revision
		BPG Search:	
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input checked="" type="checkbox"/> No	

### COMMENTS TO AUTHORS

This review article tried to update the knowledge about the epigenetic regulation of stem cells in the neurogenic niches, and it covers several epigenetic mechanisms, such as DNA methylation & demethylation, histone modifications (methylation & de-methylation, acetylation & de-acetylation), and genomic imprinting. The authors also discussed the epigenetic changes during neural stem cells reprogramming and their implications for the stemness maintenance. The major concerns are: 1) This topic has been extensively studied and reviewed and I am not convinced that this review is absolutely necessary or timely. 2) This review summarized the important findings from the epigenetic field related to the mechanisms of stemness maintenance of neural stem cells in the neurogenic niches. However, the layout and the underlying structure of this review seem to be defective in such a way that I can't see the internal logic that combines different parts together, nor the clear conclusions and the future implications of this article.



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## ESPS PEER-REVIEW REPORT

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

**ESPS manuscript NO:** 14739

**Title:** Epigenetic regulation of stemness maintenance in the neurogenic niches

**Reviewer's code:** 02446253

**Reviewer's country:** Italy

**Science editor:** Xiu-Xia Song

**Date sent for review:** 2014-10-22 10:09

**Date reviewed:** 2014-11-25 21:59

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	PubMed Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> The same title	<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"/> Duplicate publication	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade D: Rejected	<input type="checkbox"/> Plagiarism	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		<input type="checkbox"/> No	<input type="checkbox"/> Major revision
		BPG Search:	
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input type="checkbox"/> No	

### COMMENTS TO AUTHORS

Overall, this is a well-written and highly relevant review. I have just a few minor comments, as follows: 1. Intro (p. 3, lines 2-5): There is apparently an odd temporal continuity issue in the statement 'The existence...was first described...(Li and Xie, 2005). Since then...(Altman, 1962)'. The authors may want to check. 2. Where Figures are referred to, in the text, they should indicate the relative sub-figure (e.g. Figure 1a, 1b, 2c, ecc), rather than be repeated as Figure 1 or Figure 2. Such general indication is more appropriate for the introductory chapters. 3. A final 'Conclusions' or 'Future Perspectives' chapter would be appropriate. 4. There is something missing in the legend for Fig. 1. There are some misspellings in Fig. 2 (Accesible chromatin)



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## ESPS PEER-REVIEW REPORT

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

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**Title:** Epigenetic regulation of stemness maintenance in the neurogenic niches

**Reviewer's code:** 02397930

**Reviewer's country:** Afghanistan

**Science editor:** Xiu-Xia Song

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CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	PubMed Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> The same title	<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"/> Duplicate publication	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade D: Rejected	<input type="checkbox"/> Plagiarism	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		<input type="checkbox"/> No	<input type="checkbox"/> Major revision
		BPG Search:	
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input type="checkbox"/> No	

### COMMENTS TO AUTHORS

This manuscript from Montalbán-Loro et al. is an excellent review on epigenetic regulation in neural stem cells. This is a young but growing topic. Such review is thus perfectly relevant and timely. The manuscript is very well written, and the illustrations are of high quality. I have minor comments for improvements: 1. In their Introduction on neural stem cells, the authors cite the manuscript of Encinas et al., 2011 regarding the depletion of the pool of NSCs. I would suggest to mention also an alternative model from Bonaguidi et al., 2011 Cell. It may be worth also citing the "unifying" review from Bonaguidi et al., 2012 Current Opinion in Neurobiology. 2. In the legend of Figure 1, (e) is missing and (d) should be (f). 3. I believe there is an inversion in the arrows in Figure 2. The arrow with DM and HAT should go from top (inaccessible chromatin) to bottom (accessible chromatin) and vice versa for the one with HDAC and DNMT. 4. There is a misspelling in Figure 2: HDCA should be replaced with HDAC.