

ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Biological Chemistry

ESPS manuscript NO: 25195

Title: Chromatin boundary elements organize genomic architecture and developmental gene regulation in Drosophila Hox clusters

Reviewer's code: 00698952

Reviewer's country: China

Science editor: Xue-Mei Gong

Date sent for review: 2016-02-27 18:41

Date reviewed: 2016-03-02 13:27

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	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"/> 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 checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		BPG Search:	<input type="checkbox"/> Major revision
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input checked="" type="checkbox"/> No	

COMMENTS TO AUTHORS

The manuscript is a succinct introductory review on the roles of chromatin boundary elements (CBEs) in gene expression regulation via their involvement in the organization process of chromatin architecture. The part played by SF1 and SF2 CBEs in the formation of chromatin loop domains in the Drosophila Hox cluster has been featured in the review to provide an example of the working of CBEs. Overall, the scientific content of the review is excellent considering the small size of the article. There are, however, some areas which need improvement, and some which raise concern. For improvement: 1) To explain briefly but clearly the genome-wide chromosomal-capture methodologies: 3C, 4C, 5C and Hi-C. The reference in the main text to Fig. 2 has not illuminated the matter. 2) Annotation of the figures requires further work. Fig. 1: What do the green and orange boxes mean? Why the chromatin tethered to the nuclear envelope has a different colour from the rest? Fig. 2: How does the figure encompass 2 protocols? Fig. 3B: What is Antp? What are 'FD' and 'F1/5'? 3) The English is excellent for the most part of the article, but surprisingly not towards the end. A colon, for example, should not be used to truncate a sentence like '... function of genomic architecture



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are: ... ' Is 'with' necessary between 'correlating' and 'them'? Is a preposition missing in 'could go a long way elucidating'? 4) There are sporadic misspellings and errors in subject-verb agreement. For concern: 1) Fig. 2 is essentially identical to Fig. 1 of the paper by Stadhouders, et al., published in Nat Protoc. 2013 Mar;8(3):509-24. Is the similarity a problem in copyright? 2) Fig. 3B is identical to Fig. 7D of the corresponding author's paper in Mol Cell Biol. 2015 Dec; 35(23):4018-29. Have the authors obtained permission from the journal? Should the fact that the figure has been previously published be mentioned in the manuscript?

ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Biological Chemistry

ESPS manuscript NO: 25195

Title: Chromatin boundary elements organize genomic architecture and developmental gene regulation in Drosophila Hox clusters

Reviewer's code: 00203715

Reviewer's country: Germany

Science editor: Xue-Mei Gong

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CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	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"/> 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 checked="" type="checkbox"/> No	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		BPG Search:	<input type="checkbox"/> Major revision
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input checked="" type="checkbox"/> No	

COMMENTS TO AUTHORS

The manuscript by Ma et al. "Genomic Architecture and Developmental Gene Regulation" reviews the reorganization of the genomic landscape during development using the Hox gene cluster in Drosophila. The authors discuss the regulation and function of chromatin boundaries in regards to interaction of enhancers with promoters, spread of chromatin modifications during development. The review is up to date, well written, and interesting.

ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Biological Chemistry

ESPS manuscript NO: 25195

Title: Chromatin boundary elements organize genomic architecture and developmental gene regulation in Drosophila Hox clusters

Reviewer's code: 02608938

Reviewer's country: United States

Science editor: Xue-Mei Gong

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Date reviewed: 2016-03-09 20:26

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> [Y] Accept
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> [Y] 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"/> [Y] 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"/> [Y] No	

COMMENTS TO AUTHORS

This is a short and well-written review describing current status of chromatin boundary elements as 3D genomic structure on gene regulation during development, mainly based on data obtained from studies in Drosophila. This review is informative and timely important. For further improvement before this manuscript can be published, I have following minor comments. 1. The concept of development should appear in the abstract since the title, topic and data are relevant. 2. What are mammalian genes relevant to these found in Drosophila described in this review? It is better to list these, at least some. 3. One additional editing seems necessary. For example, "deliver" in the abstract should be "delivering".



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ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Biological Chemistry

ESPS manuscript NO: 25195

Title: Chromatin boundary elements organize genomic architecture and developmental gene regulation in Drosophila Hox clusters

Reviewer's code: 00467115

Reviewer's country: Austria

Science editor: Xue-Mei Gong

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CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
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		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

The manuscript by Li et al. largely surveys data recently published by the authors. In the present form it is, therefore, by and large repetitive. The authors should work on the last part of their manuscript and provide not only a list of knowledge gaps, but also some critical views and testable hypotheses. The author contributions are missing. Fig. 3 lacks a title. This figure is straight taken out of reference 27, without acknowledging this fact.