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ESPS Peer-review Report

Name of Journal: World Journal of Medical Genetics

ESPS Manuscript NO: 8499

Title: Genome engineering using the CRISPR/Cas system

Reviewer code: 00291404

Science editor: Huan-Huan Zhai

Date sent for review: 2013-12-29 20:15

Date reviewed: 2014-02-15 05:47

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 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	BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> Existed	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

COMMENTS TO AUTHORS

This is an excellent review on genome engineering using the relatively new CRISPR/Cas system. The authors have done a great job in providing an overview of the system, then discussing genome editing in culture cells, and one-step generation of genome-edited animals using the new system. They have discussed the pros and cons of the system in comparison to the old ones (ZFNs and TALENs), off-target mutations by the system. Finally, they have given some thoughtful perspectives on the potential applications in basic research and translation research such as “chromosome therapy”. Minor points: 1. Page 6. Subtitle for the section: “About the CRISPR/Cas System”. Maybe it will be a better phrase after deleting the word “about”. 2. A few citations are very new and thus page numbers might not have been available when the authors were preparing the manuscript. This includes references #30, 34, 36, 39, 40, 95. Please update them.



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ESPS Peer-review Report

Name of Journal: World Journal of Medical Genetics

ESPS Manuscript NO: 8499

Title: Genome engineering using the CRISPR/Cas system

Reviewer code: 00646393

Science editor: Huan-Huan Zhai

Date sent for review: 2013-12-29 20:15

Date reviewed: 2014-02-16 22:03

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 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	BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> Existed	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

COMMENTS TO AUTHORS

This is a great review paper in which Hatada and Horii carefully summarized the advantage of the CRISPR/Cas system on genetic engineering. This paper may help the researchers in the related field to make a decision of which method will be a good choice for their work. This review also gives hints to expand the use of the CRISPR/Cas system for developing therapeutic strategy, such as targeting HIV, in the future.



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ESPS Peer-review Report

Name of Journal: World Journal of Medical Genetics

ESPS Manuscript NO: 8499

Title: Genome engineering using the CRISPR/Cas system

Reviewer code: 00340828

Science editor: Huan-Huan Zhai

Date sent for review: 2013-12-29 20:15

Date reviewed: 2014-02-17 23:48

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 checked="" 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	BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> Existed	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

COMMENTS TO AUTHORS

Current version of the review covers broad range of knowledge and recent development of CRISPR/Cas system, its technology, and applications in genetic and genomics studies. This review is important to the field of genomics and genetic engineering, and is fairly good written and up-to-date. However, there are a few items that should be revised to help readers understand better: 1. In the Introduction, there should be some background introduction on brief history of CRISPR/Cas system, for example, who first discovered the system, and what experiment(s) led to the first discovery. 2. Authors paid great attention to spelling out the abbreviations of the terms. The two figures illustrated and helped understand the concepts well. However, in each figure, the legends are missing, and certain abbreviations left with no explanation, e.g. DSB.



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ESPS Peer-review Report

Name of Journal: World Journal of Medical Genetics

ESPS Manuscript NO: 8499

Title: Genome engineering using the CRISPR/Cas system

Reviewer code: 00631887

Science editor: Huan-Huan Zhai

Date sent for review: 2013-12-29 20:15

Date reviewed: 2014-02-23 22:35

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	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 checked="" type="checkbox"/> [Y] Grade B: minor language polishing	<input type="checkbox"/> [] Existed	<input type="checkbox"/> [] High priority for publication
<input checked="" type="checkbox"/> [Y] 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	BPG Search:	<input type="checkbox"/> [] Minor revision
<input type="checkbox"/> [] Grade E (Poor)		<input type="checkbox"/> [] Existed	<input type="checkbox"/> [] Major revision
		<input type="checkbox"/> [] No records	

COMMENTS TO AUTHORS

The manuscript contains a review on the definition and recent advances in the CRISPR/CAS system for editing genomes. The review is comprehensive, and the authors discuss the issue of specificity, offtarget editing, and potential applications in gene therapy. In "About the CRISPR/CAS system" section, authors mention "sequence NGG" but it is not clear wht NGG stands for. In the 6th paragraph of "Offtarget mutations"section, the expression "as applied as standard inRNA interference (...)" is not clear, and needs to be re-phrased.