June 2, 2015

Dear Editor,

Please find enclosed the edited manuscript in Word format (file name: 17345-Review.doc).

Title: Mechanism and regulation of DNA damage tolerance

Author: Xin Bi

Name of Journal: World Journal of Biological Chemistry

ESPS Manuscript NO: 17345

The manuscript has been revised according to the suggestions of reviewers and editors:

1. Format has been updated

2. Revision has been made according to the suggestions of the reviewers

(1) Reviewer #00693245

- As the reviewer suggested, a table (Table 1) listing DDT factors was included.

- As the reviewer suggested, key factors involved in each step in DDT shown in Fig. 1 were added. The legend to Fig. 1 was also modified accordingly.

- Page 6, lines 7-9. The sentence has been revised and now reads "The existence of the salvage HR pathway was suggested by the finding that *RAD52* is a high copy suppressor of replicative stress-sensitivity of a mutant in which PCNA cannot be ubiquitinated."

- Page 6, lines 9-10. The sentence has been revised and now reads "Consistently, deletion of the "antirecombinase" Srs2 suppresses the sensitivity of cells lacking Rad6 to DNA damage".

(2) Reviewer #01172504

- Abstract line 12: "preferred" was changed to "preferable"

- p. 2, last line: "is mutagenic" was changed to "is potentially mutagenic"

- p. 3, lines 10-11: The reference "Daigaku et al. 2010" was added res ref. #15.

- p. 5, line 23: "sister-chromatid junction" was deleted (SCJ was used)

- p. 6, line 10: The sentence has been revised and now reads "Consistently, deletion of the "antirecombinase" Srs2 suppresses the sensitivity of cells lacking Rad6 to DNA damage".

- p. 9, lines 1-14: I agree with the reviewer's notion that a competition between sumoylation and ubiquitination of PCNA-K164 could be an alternative explanation of why Srs2 does not block the Rad5 pathway. I have discussed this possibility in the revised manuscript (p. 7).

- p. 9 line 2: A short description of the Shu complex was added.

- typographical errors were corrected

(Note p. 9 lines 20 and 24: RLC (standing for RFC-like complex) was used correctly.)

3. References and typesetting were corrected

Thank you.

Sincerely yours,

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