PEER-REVIEW REPORT

Name of journal: *World Journal of Stem Cells*

Manuscript NO: 69160

Title: SmartFlareTM is a reliable method for assessing mRNA expression in single neural stem cells

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 04213605

Position: Peer Reviewer

Academic degree: BSc

Professional title: Teaching Assistant

Reviewer's Country/Territory: Singapore

Author's Country/Territory: Italy

Manuscript submission date: 2021-06-18

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-07-02 00:52

Reviewer performed review: 2021-07-05 08:03

Review time: 3 Days and 7 Hours

Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [Y] Minor revision [ ] Major revision [ ] Rejection
Re-review	[Y] Yes [ ] No

Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous
	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

1 Title. Does the title reflect the main subject/hypothesis of the manuscript? No   2 Abstract. Does the abstract summarize and reflect the work described in the manuscript? Yes   3 Key words. Do the key words reflect the focus of the manuscript? Yes   4 Background. Does the manuscript adequately describe the background, present status and significance of the study? Yes   5 Methods. Does the manuscript describe methods (e.g., experiments, data analysis, surveys, and clinical trials, etc.) in adequate detail? Yes 6 Results. Are the research objectives achieved by the experiments used in this study? What are the contributions that the study has made for research progress in this field? Yes   7 Discussion. Does the manuscript interpret the findings adequately and appropriately, highlighting the key points concisely, clearly and logically? Are the findings and their applicability/relevance to the literature stated in a clear and definite manner? Is the discussion accurate and does it discuss the paper's scientific significance and/or relevance to clinical practice sufficiently? Yes   8 Illustrations and tables. Are the figures, diagrams and tables sufficient, good quality and appropriately illustrative of the paper contents? Do figures require labeling with arrows, asterisks etc., better legends? Yes   9 Biostatistics. Does the manuscript meet the requirements of biostatistics? Yes   10 Units. Does the manuscript meet the requirements of use of SI units? Yes   11 References. Does the manuscript cite appropriately the latest, important and authoritative references in the introduction and discussion sections? Yes Does the author self-cite, omit, incorrectly cite and/or over-cite references? No   12 Quality of manuscript organization and presentation. Is the manuscript well, concisely and coherently organized and presented? Is the style, language and grammar accurate and appropriate? Yes   13

Research methods and reporting. Authors should have prepared their manuscripts according to manuscript type and the appropriate categories, as follows: (1) CARE Checklist (2013) - Case report; (2) CONSORT 2010 Statement - Clinical Trials study, Prospective study, Randomized Controlled trial, Randomized Clinical trial; (3) PRISMA 2009 Checklist - Evidence-Based Medicine, Systematic review, Meta-Analysis; (4) STROBE Statement - Case Control study, Observational study, Retrospective Cohort study; and (5) The ARRIVE Guidelines - Basic study. Did the author prepare the manuscript according to the appropriate research methods and reporting? Yes   14 Ethics statements. For all manuscripts involving human studies and/or animal experiments, author(s) must submit the related formal ethics documents that were reviewed and approved by their local ethical review committee. Did the manuscript meet the requirements of ethics? Yes   In this manuscript, the authors investigated the the potential of SmartFlareTM to determine time-dependent mRNA expression of CD133 and OCT4 in single living cells through differentiation. The authors found that SmartFlareTM appears to be a reliable, easy-to-handle tool for the investigation of CD133 and OCT4 expression in a neural stem cell model, preserving cell biological properties in anticipation of downstream experiments.   The manuscript is overall interesting, clear and scientifically sound. I only have a minor comment on the title of this manuscript. I think the title "SmartFlareTM is a reliable method for assessing mRNA expression in single neural stem cells" may be more appropriate for this study.