

Responses to reviewers' comments

Reviewer #1:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Accept (General priority)

Specific Comments to Authors: This article discusses the contrasting roles of stem cell-like memory T (TSCM) cells during chronic viral infections and autoimmune diseases. During chronic viral infections, such as HIV-1, the TSCM cells serve as reservoirs for latent viruses, which can be activated to make them susceptible to cytotoxic T cell responses. However, during acute viral infections, the TSCM cells have the ability to replenish the diminished effector T cell population. In autoimmune diseases, like type-1 diabetes, these cells contribute to the disease pathogenesis by persistent generation of autoreactive effector T cells. A better understanding of the key signaling pathways and mediators regulating TSCM cells could lead to novel approaches to target or manipulate these cells for immunotherapeutic applications. The content of this manuscript is interesting. We believe this manuscript is valuable for all the researchers who are interested in the contrasting roles of stem cell-like memory T (TSCM) cells during chronic viral infections and autoimmune diseases. This study focuses on current research hot spots and frontiers, which is very important for subsequent research. The article also puts forward the current problems and future research directions. Therefore, I recommend accepting and publishing this manuscript.

Response: We thank the reviewer for going through our manuscript in detail and acknowledging the contrasting roles of TSCM cells during chronic viral infections and autoimmune diseases.

Reviewer #2:

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Major revision

Specific Comments to Authors: The authors of the minireview summarized the characteristics of stem cell-like memory T cells and their role in viral infections and autoimmune diseases based on recent literature data. The facts described are basically correct, understandable, and summarize the available data on the subject. However, one important aspect needs to be further elaborated: what are the antiviral and immunotherapeutic (including CAR-based) potentials of Tscm cells?

Response: We thank the reviewer for the positive comments and suggestions. As suggested, we have now described the immunotherapeutic and antiviral roles of TSCM cells (including TSCM like CAR T cells), under section heading: Approaches to augment and target memory stem cells in various diseases.

Company editor-in-chief:

I recommend transfer to World Journal of Immunology. I have reviewed the Peer-Review Report and the full text of the manuscript, all of which have met the basic publishing requirements of the World Journal of Immunology, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors. Before final acceptance, when revising the manuscript, the author must supplement and improve the highlights of the latest cutting-edge research results, thereby further improving the content of the manuscript. To this end, authors are advised to apply a new tool, the Reference Citation Analysis (RCA). RCA is an artificial intelligence technology-based open multidisciplinary citation analysis database. In it, upon obtaining search results from the keywords entered by the author, "Impact Index Per Article" under "Ranked by" should be selected to find the latest highlight articles, which can then be used to further improve an article under preparation/peer-review/revision. Please visit our RCA database for more information

at: <https://www.referencecitationanalysis.com/>. Uniform presentation should be used for figures showing the same or similar contents; for example, "Figure 1 Pathological changes of atrophic gastritis after treatment. A: ...; B: ...; C: ...; D: ...; E: ...; F: ...; G: ...". Please provide decomposable Figures (in which all components are movable and editable), organize them into a single PowerPoint file. Please check and confirm whether the figures are original (i.e. generated de novo by the author(s) for this paper). If the picture is 'original', the author needs to add the following copyright information to the bottom right-hand side of the picture in PowerPoint (PPT): Copyright ©The Author(s) 2023.

Response: We thank the Editor-in-Chief for their recommendations on our manuscript. We have now updated the manuscript with latest findings and references on the topic. We have also included a few references using the RCA database.

The figure 1 is original was created using Biorender App and the ppt of the figure will be supplied during proof reading process.