

PEER-REVIEW REPORT

Name of journal: *World Journal of Diabetes*

Manuscript NO: 77929

Title: New therapeutic approaches for type 1 diabetes: Disease-modifying therapies

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05240119

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: Hungary

Manuscript submission date: 2022-05-28

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-05-30 09:07

Reviewer performed review: 2022-06-04 02:50

Review time: 4 Days and 17 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous

statementsConflicts-of-Interest: [☐] Yes [☒] No**SPECIFIC COMMENTS TO AUTHORS**

This article introduces the pathogenesis, various treatment methods and clinical attempts of type 1 diabetes. However, most of the treatments mentioned in the article belong to the preclinical phase, with early detection and early treatment, while ignoring the treatment in the middle and late stages. As well as the treatment and improvement of diabetic complications. Adding this point will make the content of the article more complete.

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Title: New therapeutic approaches for type 1 diabetes: Disease-modifying therapies

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05566451

Position: Editorial Board

Academic degree: PhD

Professional title: Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: Hungary

Manuscript submission date: 2022-05-28

Reviewer chosen by: Dong-Mei Wang

Reviewer accepted review: 2022-07-04 14:25

Reviewer performed review: 2022-07-11 13:06

Review time: 6 Days and 22 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous



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statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

The author should better quote references from the last 5 years in order to reflect the latest developments in type 1 diabetes.

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Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05573818

Position: Peer Reviewer

Academic degree: MD, PhD

Professional title: Chief Doctor, Surgeon

Reviewer's Country/Territory: China

Author's Country/Territory: Hungary

Manuscript submission date: 2022-05-28

Reviewer chosen by: Dong-Mei Wang

Reviewer accepted review: 2022-07-05 04:28

Reviewer performed review: 2022-07-13 05:03

Review time: 8 Days

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
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statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

T1DM was featured with insulin deficiency resulting from autoimmune-induced β cell destruction. Disease-modifying therapies, such as immuno- and regenerative therapies are promising methods to delay clinical onset of T1DM. This mini-review is interesting and I recommend to be published.

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Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05463920

Position: Editorial Board

Academic degree: MD

Professional title: Professor, Reader (Associate Professor)

Reviewer's Country/Territory: China

Author's Country/Territory: Hungary

Manuscript submission date: 2022-05-28

Reviewer chosen by: Dong-Mei Wang

Reviewer accepted review: 2022-07-05 08:44

Reviewer performed review: 2022-07-14 00:32

Review time: 8 Days and 15 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
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Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous

statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

The authors elucidated in detail the immunopathogenesis of T1DM and the staging classification system; Through a variety of targeted agents and treatment methods, this paper expounds the methods and choices of disease-modifying therapies; The characteristics of mesenchymal stem cells (MSCs) and its immunomodulatory function and clinical application in T1DM are introduced in detail. The topics are better, and the language is developed and clear. If the authors can modify some improper expressions or use in the paper, I believe the quality of the manuscript will increase a lot. I suggest the following modifications: 1) No matter how many efforts are made, the treatment and care of type 1 diabetes will definitely make great progress and improvement in the future. Therefore, the title of the article should be revised to actively yearn for, rather than be skeptical. 2) The content of the Conclusion is just too scattered. It should be focused on summarizing the main content elaborated in the theme part, giving conclusions or putting forward their own opinions, such as what are the authors in favor of? Against what? What are the suggestions and prospects for the future? The following content should do not appear in the conclusion, but in the corresponding part of the text. The burden of living with the chronic disease is considerable for the patient, the family and the society. In July 2021, the U.S. Food and Drug Administration considered the use of teplizumab in high-risk individuals but deemed further studies necessary before granting approval. 3) Keyword “mesenchymal stem cell” appears much more frequently than “mesenchymal stem cell transplantation”, so “mesenchymal stem cell transplantation” should be replaced by “mesenchymal stem cell”. 4) Figure 2 comes from Ref. 12, which should be deleted (the text has been clearly stated) or modified, and at least the reference should be noted. 5) In Immunopathogenesis of

T1DM section: in “Furthermore, Th1 cells enhance antigen presenting, costimulatory and effector functions of macrophages and DCs (e.g., reactive oxygen species)”, What does the term in parentheses mean to express or explain? It's not clear. Please clarify. 6) The term “T1DM associated antibodies” should be expressed more accurately. It should be changed to “T1DM associated islet autoantibodies”, and the autoantibodies that can be detected at present should be listed as far as possible. 7) At least one Ref. should be added after these sentences. Page 7, line 6: Lately, stage-specific therapies have been in the focus of clinical trials for modifying disease progression [add references]. Page 11, line 10: Over the past decade, mesenchymal stem cell (MSC) transplantation has received increased attention in clinical trials as a promising therapy within regenerative medicine for type 1 diabetes mellitus [add references]. 8) The term “disease-modifying therapies” should be consistent with the title and should not be written as “disease modifying therapies”. Check the whole manuscript and revise it to be consistent. 9) Page 14, paragraph 3: Cai et al. investigated.....The author should not just extract the results and conclusions of others, but use 1-2 sentences to comment on the content.