

PEER-REVIEW REPORT

Name of journal: *World Journal of Transplantation*

Manuscript NO: 84626

Title: Islet transplantation - immunological challenges and current perspectives

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03475330

Position: Peer Reviewer

Academic degree: MD, PhD

Professional title: Professor, Surgeon

Reviewer's Country/Territory: Japan

Author's Country/Territory: Bulgaria

Manuscript submission date: 2023-03-22

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-03-29 01:44

Reviewer performed review: 2023-03-29 05:58

Review time: 4 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input checked="" type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
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 type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Remarks to the author The manuscript entitled " Islet transplantation - immunological challenges and current perspectives" has been reviewed. The work has been carefully carried out. A weakness of this paper is too long. The title of this paper refers to islet transplantation. Therefore, the description of diabetes in this manuscript should be minimized. The main purpose of the paper is not clear. Also, the content is not new. The citation of the reference paper is inaccurate. For example, the paper describing the Edmonton protocol is also incorrect. The description of islet isolation is also inaccurate.

Minor The references selected by the authors are not new.

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Manuscript NO: 84626

Title: Islet transplantation - immunological challenges and current perspectives

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 02446223

Position: Editorial Board

Academic degree: PhD

Professional title: Postdoctoral Fellow, Professor

Reviewer's Country/Territory: Italy

Author's Country/Territory: Bulgaria

Manuscript submission date: 2023-03-22

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-03-29 07:31

Reviewer performed review: 2023-04-07 08:10

Review time: 9 Days

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
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
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 type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

The Authors examined in this review the main challenges related to the therapeutic approach of pancreatic islets transplantation for the treatment of T1D. The review is interesting but, in my opinion, does not take into consideration the following aspects: -

Authors mentioned the co-transplantation of pancreatic islets with mesenchymal stem cells just at the end of the review, and just as very brief point. I think that this part is worth of a more detailed examination, as well as the encapsulation option. Moreover, the co-treatment should be cite also in the core tip. - In "introduction", the Authors cite the possibility of an autologous transplantation of pancreatic islets; this is possible just when the pancreatectomy is necessary for other causes, different from diabetes, so I do not see the need to cite it. In addition, the yield of pancreatic islet isolation from the whole pancreas makes it very difficult to obtain from a single pancreas a number of islets sufficient to regulate glycaemia. Ik the authors would like to keep this part, they should be clearly stated that this option has several limits; otherwise I suggest erasing that point. - Introduction: the Authors should explained the limits of exogenous insulin administration, to make clearer the improvement represented by pancreatic islet



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transplantation. - Type 2 diabetes could be treated with pancreatic islet transplantation, and there are several studies about it. -In “Islet transplantation procedure”, when the authors described the immunoisolation by encapsulation, they should at least mentioned some material used and its properties. - The final point of “Immunological alterations in Type 1 diabetes” is very important, and it should be further face in discussion. - The authors should specify that the risk of teratoma development concerns just some kind of stem cells. - More in general, the readability of the review would be enhanced by the add of some figures and overall of summary tables, i.e. for the different treatments. The layout of the table with clinical protocols should be checked.