

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Diabetes

**Manuscript NO:** 52578

**Title:** CD47 decline in pancreas islet cells promotes macrophage-mediated phagocytosis in Type I diabetes

**Reviewer's code:** 02810791

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Research Assistant Professor

**Reviewer's Country/Territory:** France

**Author's Country/Territory:** China

**Manuscript submission date:** 2019-11-07

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2019-11-13 14:12

**Reviewer performed review:** 2019-11-27 08:49

**Review time:** 13 Days and 18 Hours

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language	(High priority)	<input type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input type="checkbox"/> No



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## **SPECIFIC COMMENTS TO AUTHORS**

Please see attached file.

## **INITIAL REVIEW OF THE MANUSCRIPT**

### ***Google Search:***

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

### ***BPG Search:***

- ☐ The same title
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- ☐ No

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Diabetes

**Manuscript NO:** 52578

**Title:** CD47 decline in pancreas islet cells promotes macrophage-mediated phagocytosis in Type I diabetes

**Reviewer's code:** 00039368

**Position:** Editorial Board

**Academic degree:** DA, PhD

**Professional title:** Academic Research

**Reviewer's Country/Territory:** Estonia

**Author's Country/Territory:** China

**Manuscript submission date:** 2019-11-07

**Reviewer chosen by:** Jia-Ping Yan

**Reviewer accepted review:** 2019-11-28 12:25

**Reviewer performed review:** 2019-12-06 13:13

**Review time:** 8 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input checked="" type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input checked="" type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input checked="" type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input checked="" type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

## **SPECIFIC COMMENTS TO AUTHORS**

This is a very well designed, performed and written animal experimental study for investigation of the role of integrin-associated surface factor CD47 and CD47-SIRP (Signal Regulatory Protein ) interaction in macrophage recruitment to pancreas islet in a streptozotocin (STZ)-induced mouse model of human T1D. For investigation of this aim the authors used mouse model. In this study in vitro studies of macrophage phagocytosis, immunohistochemical methods, flow cytometry analysis, pancreas islet isolation and western blot analysis were used. The main and important finding of authors was that pancreas islet beta cells surface CD47 reduction plays a critical role in pancreas islet beta cells depletion in STZ-induced diabetes. The authors hypothesized that macrophage phagocyte pancreas islet beta cells by recognizing the CD47 signaling in MLD-STZ induced diabetes mice model. The noteworthy finding was that CD47 plays a critical role in immune defense in STZ T1D model by preventing pancreas beta islet inflammation. The study is set up correctly. The paper is written well. Introduction gives a good overview of the study background and the authors raised clearly the aim of the study. The aim of the study is fulfilled. The material studied is large enough and allows to draw the conclusions. The Figures of high quality give a good overview about the results. This study makes a contribution to better understanding of the role of the mechanism that initiates macrophages to infiltrate and phagocytose self-cells under inflammation stimulation in pathogenesis of T1D. This animal model study has also practical importance, because an improving of CD47 expression might provide a novel therapeutic factor aiming at attenuating and preventing macrophage regulated target cells depletion.

## **INITIAL REVIEW OF THE MANUSCRIPT**



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## RE-REVIEW REPORT OF REVISED MANUSCRIPT

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**Manuscript NO:** 52578

**Title:** CD47 decline in pancreas islet cells promotes macrophage-mediated phagocytosis in Type I diabetes

**Reviewer's code:** 00039368

**Position:** Editorial Board

**Academic degree:** DA, PhD

**Professional title:** Academic Research

**Reviewer's Country/Territory:** Estonia

**Author's Country/Territory:** China

**Manuscript submission date:** 2019-11-07

**Reviewer chosen by:** Yu-Qiao Wang

**Reviewer accepted review:** 2020-03-31 06:50

**Reviewer performed review:** 2020-04-01 08:04

**Review time:** 1 Day and 1 Hour

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input checked="" type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input checked="" type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input checked="" type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input checked="" type="checkbox"/> General
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			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

## **SPECIFIC COMMENTS TO AUTHORS**

This is a very well designed, performed and written animal experimental study for investigation of the role of integrin-associated surface factor CD47 with signal regulatory protein  $\alpha$  (SIRP $\alpha$ ) in macrophage recruitment to pancreas islet in a streptozotocin (STZ)-induced mouse model of human T1D. For investigation of this aim the authors used mouse model. In this study in vitro studies of macrophage phagocytosis, immunohistochemical methods, flow cytometry analysis, pancreas islet isolation and western blot analysis were used. The main and important finding of authors was that pancreas islet beta cells surface CD47 reduction plays a critical role in pancreas islet beta cells depletion in STZ-induced diabetes. The authors hypothesized that macrophage phagocyte pancreas islet beta cells by recognizing the CD47 signaling in MLD-STZ induced diabetes mice model. The noteworthy finding was that CD47 plays a critical role in immune defense in STZ T1D model by preventing pancreas beta islet inflammation. The study is set up correctly. The paper is written well. Introduction gives a good overview of the study background and the authors raised clearly the aim of the study. The aim of the study is fulfilled. The material studied is large enough and allows to draw the conclusions. The Figures of high quality give a good overview about the results. This study makes a contribution to better understanding of the role of the mechanism that initiates macrophages to infiltrate and phagocytose self-cells under inflammation stimulation in pathogenesis of T1D. This animal model study has also practical importance, because an improving of CD47 expression might provide a novel therapeutic factor aiming at attenuating and preventing macrophage regulated target cells depletion.

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**Reviewer's Country/Territory:** France

**Author's Country/Territory:** China

**Manuscript submission date:** 2019-11-07

**Reviewer chosen by:** Yu-Qiao Wang

**Reviewer accepted review:** 2020-03-31 09:13

**Reviewer performed review:** 2020-04-01 14:00

**Review time:** 1 Day and 4 Hours

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input checked="" type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input checked="" type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input checked="" type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No



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#### **SPECIFIC COMMENTS TO AUTHORS**

I appreciate the thorough revision provided by the authors. Please check out for a few remaining mistakes at the proof stage.

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