

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Transplantation

**Manuscript NO:** 56804

**Title:** Role of novel biomarkers in kidney transplantation

**Reviewer's code:** 05121329

**Position:** Associate Editor

**Academic degree:** FEBS, FRCS, MD, PhD

**Professional title:** Associate Professor

**Reviewer's Country/Territory:** United Kingdom

**Author's Country/Territory:** United States

**Manuscript submission date:** 2020-05-17

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2020-05-17 15:52

**Reviewer performed review:** 2020-05-17 17:15

**Review time:** 1 Hour

<b>Scientific quality</b>	<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 Grade E: Do not publish
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<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
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer statements</b>	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**

This is a well written review on a topic that remains of interest, although finding an ideal biomarker that is of high sensitivity and specificity for a specific outcome measure of kidney transplantation remains similar to finding the "Holy Grail". I like the approach of the authors in their review dividing biomarkers into immunological and non-immunological, and then analysing biomarkers for specific conditions/outcomes, and it makes sense to review novel data from the last five years. However, I am missing two major domains in the review: A. biomarkers in preservation solution (predominantly relating to DGF), below a few examples of key references (but not systematically searched) 1. Van den Akker EK et al. Eur Surg Res. 2015 Dec;55(4):319-327.(NGAL and DGF) 2. Roest HP et al. Cell free miR-505-3p in preservation solution and DGF. Transplantation. 2019 Feb;103(2):329-335. 3. Van Balkom B et al. Proteins in preservation fluid and DGF. Clin J Am Soc Nephrol. 2017 May 8;12(5):817-824. B. biomarkers in machine preservation of kidneys (predominantly to assess graft quality): 1. Weissenbacher A et al AJT 2019 2. Van Smaalen TC et al. Transplantation 2017 3. Parikh CR et al. AJT 2016 4. Hamaoui et al. J Surg Res 2017 5. De Beule/Jochmans. J Clin Med. 2020 Mar 23;9(3). 6. Moser MAJ. Ann Transplant 2017 7. Guzzi F et al. Transplant Int 2020. I really think these areas should be covered, and will make the review excellent! Also, some other relevant review papers on the topic should be incorporated and referenced to: 1. Jamshaid F et al. Int J Clin Pract. 2018 Jul 16:e13220. 2. Van den Akker EK et al. J Transplant. 2015;2015:354826. 3. O'Callaghan J et al. Curr Opin Organ Transplant 2019 4. Knight SR et al. Transplantation 2019 Looking forward to seeing the revised MS.

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Transplantation

**Manuscript NO:** 56804

**Title:** Role of novel biomarkers in kidney transplantation

**Reviewer's code:** 03851281

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Professor

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

**Author's Country/Territory:** United States

**Manuscript submission date:** 2020-05-17

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2020-05-19 16:15

**Reviewer performed review:** 2020-05-24 15:38

**Review time:** 4 Days and 23 Hours

<b>Scientific quality</b>	<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
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Peer-reviewer statements</b>	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 present a very well organized review regarding biomarkers use in the context of key kidney transplant outcomes. I suggest a few minor reviews: - Plasma-derived fractalkine should mention in brackets (CX3CL1) so the readers can understand that it belongs to chemokine C-X-C motif group. - In page 13, line 7, I believe there is a typo: (AUC (0.866) should be (AUC = 0.866). - In page 15, line 6, please review the number of biopsies because the clinical judgment agreement of 87% and histology (80%) ( $p = 0.0042$ ) regards to 451 biopsies and not 519. - TruGraf is registered trademark and it should be cited as TruGraf® - In page 18 it's the first time GEP is mentioned and should explained - In page 20 it's the first time CMS is mentioned and should explained - In page 21 the P values mentioned omits the zero to the left of the comma - In page 22 DART is used before explained (although explained just after) - Allosure is registered trademark and it should be cited as Allosure® in Page 22 - In page 24 DGF it's the first time GEP is mentioned and should explained - In page 26 the number KTr evaluated should be reviewed; I believe the final study population of 1027 and not 2207. - In page 28 please review the polymorphism designation NFKB1-94ins/ins; should it be -94ins/delATTG? Other consideration: - Do the authors think that Bk virus should be mentioned in the Infection sub-section? What about covid-19 pneumonia infection?