PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 53592

Title: Bone Marrow-Derived Products: A Classification Proposal - ACH

Reviewer's code: 02566952

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Chief Doctor, Senior Researcher, Surgeon

Reviewer's country: Romania

Author's country: Brazil

Reviewer chosen by: Ruo-Yu Ma

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Reviewer performed review: 2020-01-13 09:21

Review time: 1 Hour

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[ ] Grade E: Do not publish		[ ] Rejection	[Y] Advanced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

SPECIFIC COMMENTS TO AUTHORS

A well written manuscript aiming the role of a concept paper meant to classify bone

marrow derived products for clinical use . Comments I would recommend not including abbreviations within the title (ACH is not explained in the abstract as well, its meaning might be notorious for the authors but the situation can be different for international readers The Introduction chapter defines the concept of orthobiologics and argues about the necessity of a working classification for bone marrow based products orthobiologic In the following a summary description of BM composition and function is presented. I would argue that VSELS remained controversial and their bone marrow born origin has not been actually proven while MUSE cells (written with caps as is an acronym which need to be explained as well) have been obtain from other tissues (such as adipose or skin) and is not characteristic for BM. It is good to cite the papers mentioning VSELS and MUSE. The hematopoetic function of BM is supported by mesenchymal stroma which harbor MSCs. Indeed MSCs can be driven to differentiate (rather than transdifferentiate) towards mesenchymal lineages in vitro and in vivo in animal models of various diseases. More contemporary evidence refer to scheletal stem cells as being the source for musculoskeletal tissue regeneration (Chan et all Cell 2018, Ambrosi et al Frotiers in Cell and Developmental Biology 2019) Excellent idea to include description of macrophage and neutrophil role in BM as they are likely to play important role in orthobiologics preparation of which there is not too much clinical investigation about The classification system proposed actually aims to inform the user(s) if the product has or not been investigated in terms of cellular/molecular content, sites of harvesting and so on The classification system proposed is scientifically correct however it might be not too much practical Every classification system needs to introduce a motivation for patient clustering and for improving therapeutic selection. What is the authors opinion regarding the correlation between classification system they propose and specific patient outcome? Are there studies supporting this or they plan to perform such studies in order to assert the classification system?

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

[   ] The same title

[   ] Duplicate publication

[   ] Plagiarism

[Y] No

BPG Search:

[   ] The same title

[   ] Duplicate publication

[   ] Plagiarism

[Y] No