

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 63802

Title: Comparison of the chondrogenic potential of mesenchymal stem cells from synovial fluid, bone marrow, and adipose tissue using a magnetic 3D cell culture system

Reviewer's code: 03947982

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Full Professor

Reviewer's Country/Territory: Turkey

Author's Country/Territory: Brazil

Manuscript submission date: 2021-02-05

Reviewer chosen by: Ya-Juan Ma

Reviewer accepted review: 2021-02-11 07:46

Reviewer performed review: 2021-02-27 11:40

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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 Grade E: Do not publish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 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



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SPECIFIC COMMENTS TO AUTHORS

Study reporting extracellular matrix synthesis activity of equine MSCs derived from bone marrow, synovial fluid and adipose tissue during chondrogenic differentiation by extraction of proteoglycans in microspheroids after chondrogenic differentiation is well written and the experimental design is well. However, phenotype of MSCs for surface markers is missing. The phenotype of the isolated cells should be characterized by surface markers and included as a figure with the flow cytometry analysis to confirm the MSC population. Passage number of MSCs used for characterization and differentiation should be indicated. Assessment of Chondrogeic differentiation was only determined by aggrecan. For proper evaluation of the microspheroid system types II, X, I collagens, and glycosaminoglycan (G AG) are also determined.