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JOURNAL EDITORIAL BOARD'S REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 89107

Title: High quality repair of osteochondral defects in rats using the extracellular matrix

of antler stem cells

Journal Editor-in-Chief/Associate Editor/Editorial Board Member: Shengwen Calvin Li

Country/Territory: United States

Editorial Director: Jia-Ping Yan

Date accepted review: 2024-01-12 08:16

Date reviewed: 2024-01-18 07:36

Review time: 5 Days and 23 Hours

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION
[Y] Grade A: Excellent	[Y] Grade A: Priority publishing	[] Accept
[] Grade B: Very good	[] Grade B: Minor language polishing	[Y] High priority for publication
[] Grade C: Good	[] Grade C: A great deal of	[] Rejection
[] Grade D: Fair	language polishing	[] Minor revision
[] Grade E: Poor	[] Grade D: Rejected	[] Major revision

JOURNAL EDITORIAL BOARD COMMENTS TO AUTHORS

The preliminary study utilizing decellularized antler ECM-sheets, obtained from either quiescent (APC) or active (RMC) stem cells, showed effective restoration of complete osteochondral lesions. Notably, the utilization of these extracellular matrices (ECMs) successfully repaired defects without the inclusion of viable cells. The increasing prevalence of decellularized extracellular matrix (ECM), especially xenogeneic ECM, in the field of cartilage tissue engineering shows great potential because it can replicate certain characteristics that cannot be achieved with artificial biomaterials. The lack of blood vessels in cartilage poses a difficulty for natural healing, but it also provides benefits like as immunological protection. This allows for the use of extracellular matrix (ECM) from sources like other individuals or different species, which reduces the risk of rejection problems. Moreover, the compact structure of cartilage extracellular matrix (ECM), as demonstrated by antler cartilage ECM, can potentially strengthen its low immunogenicity or even lack of immunogenicity, so offering a



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physical shield to chondrocytes against T and natural killer cells that are generated after the rejection of a graft.