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Basic Study

Human mesenchymal stem cells derived from umbilical cord and bone marrow exert immunomodulatory effects in different mechanisms

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Abstract

BACKGROUND

Mesenchymal stem cells (MSCs) have considered as an attractive tool to treat graft-versus-host disease because of their unique immunoregulatory properties. Although

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<https://onlinelibrary.wiley.com/doi/abs/10.1002/jcb.28705>

In recent years, as an alternative to stem cell therapy for cardiovascular diseases (CVD), exosomes have attracted wide attention among researchers. The present study aimed to investigate the role of human umbilical cord mesenchymal stem cells (UC-MSCs) derived exosomes play on H9C2 cells apoptosis and possible mechanisms.

Human umbilical cord mesenchymal stromal cells-derived ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7019162>

Jan 16, 2020 · Human umbilical cord-derived mesenchymal stromal cells (hucMSCs) are considered to be significantly superior to stem cells from other sources, since they have a more readily available source, non-invasive collection procedure, powerful immunomodulation capacity and prominent self-renewal property 10, 11.

Author: Yin Hu, Yan Zhang, Chu-Yu Ni, Chun-... Publish Year: 2020

Therapeutic Effects of Human Umbilical Cord-Derived ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5209685>

Jan 04, 2017 · The bone marrow-derived mesenchymal stem cells (BM-MSCs) have presented ability in resolving lipopolysaccharide (LPS)-induced ALI, hyperoxia, pneumonia and systemic sepsis in animal models 7. However, the clinical application of BM-MSCs is limited due to invasive sample collection, reduced cell number, proliferation, and differentiation capacity in aging donors 8 .

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Human bone marrow-derived and **umbilical cord-derived mesenchymal stem cells** for alleviating neuropathic pain in a spinal **cord** injury model ... These **cells** have **immunomodulatory** ... Luongo L, de Novellis V, Rossi F, et al. Long-lasting **effects** of **human mesenchymal stem cell** systemic administration on pain-like behaviors, cellular, and ...

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In this study, we investigated the potential cartilage-regenerating and anti-inflammatory **effects** of **human umbilical cord matrix-mesenchymal stem cells** (hUCM-MSCs) for the treatment of TMJ-OA. hUCM-MSC lines, isolated from **different** donors, which showed **different** activities in vitro. Using a selected **cell** line, we used **different** concentrations ...

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Mar 08, 2016 · **Stem cell** therapy can be used for alleviating the neuropathic pain induced by spinal **cord** injuries (SCIs). However, survival and differentiation of **stem cells** following their transplantation vary depending on the host and intrinsic factors of the **cell**. Therefore, the present study aimed to determine the effect of **stem cells derived** from **bone marrow** (BM-MSC) and **umbilical cord** (UC-MSC) on ...

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22. Mennan, C. et al. Isolation and characterisation of **mesenchymal stem cells** from **different** regions of the **human umbilical cord**. Biomed Res. Int. 2013, (2013). 23. Ishige, I. et al. Comparison of **mesenchymal stem cells derived** from arterial, venous, and Wharton's jelly explants of **human**