

1 / 45

**Name of Journal:** *World Journal of Stem Cells***Manuscript NO:** 54893**Manuscript Type:** SYSTEMATIC REVIEWS

**Mesenchymal stem cell and mesenchymal stem cell-derived extracellular vesicles: Potential roles in rheumatic diseases**

Jing-Han Yang, Feng-Xia Liu, Jing-Hua Wang, Min Cheng, Shu-Feng Wang,  
Dong-Hua Xu

## Abstract

### BACKGROUND

Mesenchymal stem cells (MSCs) have been widely investigated in rheumatic disease due to their immunomodulatory and regenerative properties. Recently, mounting studies have implicated the therapeutic potency of MSCs mostly due to the bioactive factors they produce. Extracellular vesicle (EV)

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3. **Extracellular Vesicles** of **Stem Cells**. The composition of EVs depends on the type of parental cell and conditions under which **vesicle** release occurs [] and often reflects the specific expression profile and changes in epigenetic regulation of the EV-producing cell [39,40,41]. Previous studies have shown that MSCs do not require direct contact with neighboring cells to induce regeneration [42 ...

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**Publish Year:** 2018

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**Mesenchymal Stem Cell-derived Extracellular Vesicles: Toward Cell-free** Therapeutic Applications.

**Mesenchymal stem (stromal) cells (MSCs)** are **multipotent cells** with the ability to differentiate into several **cell types**, thus serving as a **cell reservoir** for regenerative medicine. Much of the current interest in therapeutic application of MSCs to various disease settings can be linked to their ...

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**Author:** Sweta Rani, Aideen E Ryan, Matthew D ...

**Publish Year:** 2015

## Mesenchymal stem cell-derived extracellular vesicles ...

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Mar 09, 2018 · **Mesenchymal stem cell-derived extracellular vesicles:** novel frontiers in regenerative medicine. Keshtkar S(1)(2), Azarpira N(3)(4), Ghahremani MH(1)(5). Author information: (1)Department of Molecular Medicine, School of Advanced Technologies in Medicine, Tehran University of Medical Sciences, Tehran, Iran.

**Cited by:** 85

**Author:** Somayeh Keshtkar, Somayeh Keshtkar, ...

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Feb 09, 2016 · Abstract. **Mesenchymal stem cells (MSCs)** are **adult multipotent stem cells** that are

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