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Basic Study

Assessment of tobacco heating system 2.4 on osteogenic differentiation of mesenchymal stem cells and primary human osteoblasts compared to conventional cigarettes

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Assessment of Tobacco Heating System 2.4 on osteogen



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Osteogenic Differentiation of Human Mesenchymal Stem ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4358956>

Cell culture. Human Mesenchymal stem cells (MSCs) obtained from two different male donors (Lonza Inc, Walkersville, MD, USA) were utilized in this study ().The MSCs were cultured at 37°C in a humidified atmosphere containing 5% CO₂ in mesenchymal stem cell growth medium (Lonza). To induce osteogenic differentiation the media was added bone morphogenetic protein 2 (BMP-2, 300ng/mL, ...

Cited by: 66

Author: Marita Westhrin, Minli Xie, Magnus Ø. Ol...

Publish Year: 2015

Osteogenic differentiation of human mesenchymal stem cells ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4959308>

Jul 12, 2016 - Over the past few years, the potential of using human mesenchymal stem cells (hMSCs) to regenerate different tissue types has been highlighted due to the cells' inherent capability to commit into different types of mature cells such as osteoblasts or chondrocytes, among others. 8,9 The differentiation of hMSCs into bone-forming cells has also ...

Shockwaves Induce Osteogenic Differentiation of Human ...

<https://stemcellsjournals.onlinelibrary.wiley.com/doi/10.1002/stem.1356>

Shockwave or ATP treatment induces osteogenic differentiation of human mesenchymal stem cells (hMSCs). (A) hMSCs were subjected to shockwaves (0.18 mJ/cm²) and then cultured for 14 or 20 days



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Jun 14, 2019 · 2.1. CSE Downregulated TGF- β Signaling Through Disruption of **Primary** Cilia on SCP-1 **Cells**. Previous studies revealed that exposure to CSE disrupts the **primary** cilia structure and therefore impairs the **osteogenic differentiation** of the **human** telomerase reverse transcriptase immortalized single-cell **human mesenchymal** cell line (SCP-1 **cells**) [24,25]. ...

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Author: Romina H. Aspera-Werz, Tao Chen, Sabr...

Publish Year: 2019

Electronic Cigarette Smoke Impairs Normal Mesenchymal ...

<https://www.nature.com/articles/s41598-017-14634-z>

Oct 27, 2017 · Synergistic effects of orbital shear stress on in vitro growth and **osteogenic differentiation** of **human** alveolar bone-derived **mesenchymal stem cells**. BioMed research international 2014 , 316803 ...

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Cigarette smoke inhibits osteogenic differentiation and ...

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Publish Year: 2019

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Although **osteoblasts** and osteoblast-like **cells** have been used extensively to study the impact of nicotine, few studies have been performed on **human mesenchymal stem cells** (hMSCs).

[Electronic Cigarette Smoke Impairs Normal Mesenchymal Stem ...](#)

<https://www.nature.com/articles/s41598-017-14634-z>

Oct 27, 2017 · Synergistic effects of orbital shear stress on in vitro growth and **osteogenic differentiation** of **human** alveolar bone-derived **mesenchymal stem cells**. BioMed research international 2014 , 316803 ...

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Publish Year: 2017

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Comparative analysis of **tobacco heating system** and combustion of **conventional cigarettes** on **osteogenic differentiation of mesenchymal stem cells** and **human osteoblasts**. Abstracts of the 85th Annual Meeting of the German Society for Experimental and Clinical Pharmacology and Toxicology (DGPT) and the 21th Annual Meeting of the Association of the ...

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