

**Name of Journal:** *World Journal of Clinical Cases*

**Manuscript NO:** 56441

**Manuscript Type:** ORIGINAL ARTICLE

### *Basic Study*

**Application of molybdenum target X-Ray photography in imaging analysis  
of caudal intervertebral disc degeneration in rats**

Qihang Su, Yan Zhang, Bin Shen, Yongchao Li, Jun Tan

### **Abstract**

#### BACKGROUND

Conventional plain X-ray images of rats, the most commonly used animals as degeneration models, exhibit unclear vertebral structure and blurry intervertebral disc spaces due to their small size, slender vertebral bodies.

### Match Overview

**1** **Crossref** 12 words  
Yang Hou, Wen Yuan. "Influences of disc degeneration and b...  
ne mineral density on the structural properties of lumbar end p

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## Aspirin-Mediated Attenuation of Intervertebral Disc ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6874877>

Nov 06, 2019 · X-Ray and Magnetic Resonance Imaging (MRI) Analysis Seven days after the initial **annulus puncture**, each **group of rats** ( n = 20) was randomly selected to undergo X-ray ( n = 10) and **MRI** ( n = 10) scans before these were sacrificed.

**Cited by:** 2

**Author:** Yu Liu, Jiayi Lin, Xiexing Wu, Xiaobin Gu...

**Publish Year:** 2019

## The effect of needle size inducing degeneration in the rat ...

<https://www.sciencedirect.com/science/article/pii/S1529943010011083>

The effect of needle size inducing **degeneration** in the rat **caudal disc**: evaluation using radiograph, magnetic resonance **imaging**, histology, and immunohistochemistry ... A slowly progressive and reproducible animal model of **intervertebral disc degeneration** characterized by MRI, **X-ray**, and histology.

**Cited by:** 72

**Author:** Gun Keorochana, Gun Keorochana, Jare...

**Publish Year:** 2010

## 1. Introduction

[downloads.hindawi.com/journals/sci/2019/6806540.xml](https://downloads.hindawi.com/journals/sci/2019/6806540.xml)

After injection for 4, 8, 16, and 24 weeks, **caudal disc** radiographs were collected by a **molybdenum target** radiographic **imaging** unit (GE Mammography DMR Bucky 18 × 24, UK) to detect the **disc** height after injection. All the anesthetized **rats** were placed in a supine position to keep their tails straight.

## Small molecule natural compound agonist of SIRT3 as a ...

<https://www.nature.com/articles/s12276-018-0173-3>

Nov 12, 2018 · **Caudal** discs of **rats** were punctured to induce **intervertebral disc degeneration**, and radiographic images and MRIs were obtained at 0, 2, and 4 weeks after the **disc** puncture



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## Oxymatrine Liposomes for Intervertebral Disc Treatment ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7053530>

Feb 28, 2020 · **Western Blot.** Total protein extracted from NP cells was isolated by radioimmunoprecipitation assay buffer with 1% **phenylmethanesulfonyl fluoride** (Biothink Biological Technology), and then protein concentration was determined with the **bicinchoninic acid protein assay kit** (Biothink Biological Technology).

**Author:** Huan Wang, Yifan Ding, Wei Zhang, ... **Publish Year:** 2020

## Aspirin-Mediated Attenuation of Intervertebral Disc ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6874877>

Nov 06, 2019 · 2.15. **X-Ray and Magnetic Resonance Imaging (MRI) Analysis.** Seven days after the initial annulus puncture, each group of rats (n = 20) was randomly selected to **undergo X-ray** (n = 10) and MRI (n = 10) scans before these were sacrificed. The rats were kept in a supine position with their tails straight for placement on a **molybdenum target radiographic-image** unit (General Electric, ...

**Cited by:** 4 **Author:** Yu Liu, Jiayi Lin, Xiexing Wu, Xiaobin Gu...

**Publish Year:** 2019

## Intradiscal Injection of Induced Pluripotent Stem Cell ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6525958>

After injection for 4, 8, 16, and 24 weeks, **caudal disc radiographs** were collected by a **molybdenum target radiographic imaging unit** (GE Mammography DMR Bucky 18 × 24, UK) to detect the disc height after injection. The anesthetized rats were placed in a supine position to keep their tails straight.

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**Publish Year:** 2019

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### [Oxymatrine Liposomes for Intervertebral Disc Treatment ...](#)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7053530>

Feb 28, 2020 · To examine whether OMT-LIP has protective effects on degenerative **intervertebral disc**, we had the **caudal** vertebrae of **rats** underwent **X-ray** inspection. Prior to the puncture (0 weeks), all groups showed normal **disc** height (Figure 5A). However, the **X-ray** results at 2 weeks revealed a loss of **disc** height in IVDD group, indicating progressive ...

**Author:** Huan Wang, Yifan Ding, Wei Zhang, K... **Publish Year:** 2020

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<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6874877>

Nov 06, 2019 · 2.15. **X-Ray** and **Magnetic Resonance Imaging (MRI) Analysis**. Seven days after the initial annulus puncture, each group of rats (n = 20) was randomly selected to **undergo X-ray** (n = 10) and MRI (n = 10) scans before these were sacrificed. The rats were kept in a supine position with their tails straight for placement on a **molybdenum target radiographic-image** unit (General Electric, ...

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**Cited by:** 3 **Author:** Kaishun Xia, Jian Zhu, Jianming Hua, Zh...

**Publish Year:** 2019

### [\(PDF\) In vivo techniques for distraction and magnetic ...](#)

<https://www.researchgate.net/publication/283859358...>

In vivo techniques for distraction and magnetic resonance **imaging** of a **caudal intervertebral disc** in a rat-tail model Thesis (PDF Available) · August 2014 with 44 Reads How we measure 'reads'

**Author:** Joshua Booren