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### Repair of articular cartilage defects in rabbits through tissue-engineered cartilage constructed with chitosan hydrogel and chondrocytes

Keywords: Articular cartilage, Repairs, Tissue-engineering, Chitosan hydrogel

# **Research Purpose**



Due to the lack of blood supply, articular cartilage has limited capacity for regeneration once it is injured.



To repair the articular cartilage defects through cartilage tissue engineered construced by chitosan hydrogel and costal chondrocytes.

# **Research design**



Japanese white rabbits

P2 Chondrocyte



Chitosan Hydrogel

Gross morphology

**H&E Stainning** 

Safranin-O/fast Stainning

**Immunohistochemical Stainning** 

ICRS assessment scale \_\_\_\_



Repaired Cartilage defect



Tissue-Engineered Cartilage

# **Research Results**

The novel tissue-engineered cartilage constructed in our research can completely repair the structure of damaged articular cartilage.



**Gross morphology** 



**H&E Stainning** 

#### implantation

12 weeks post



Immunohistochemical Stainning



Safranin-O/fast Stainning