



Preclinical Models of Collagen Induced Arthritis (CIA)

Rheumatoid Arthritis (RA)

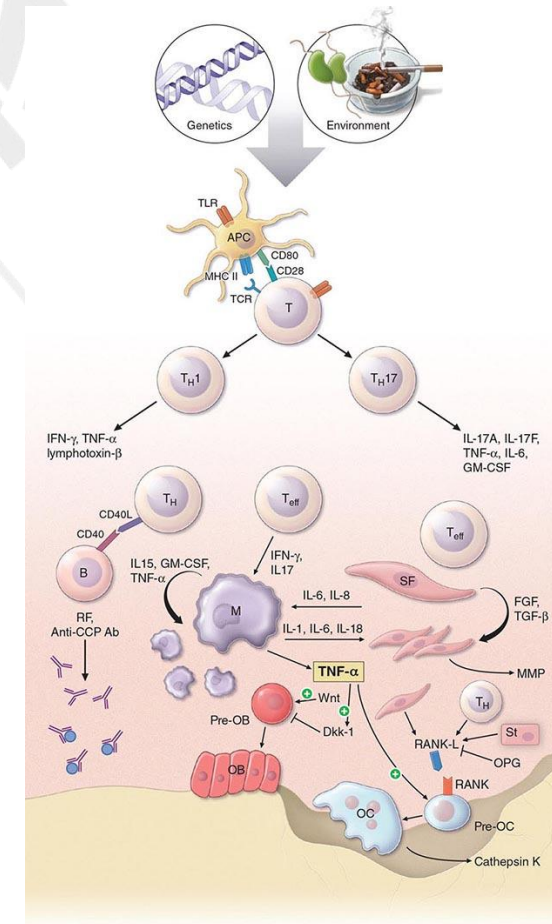
Symptoms and Causes

Rheumatoid arthritis is a chronic inflammatory disorder that can affect more than just your joints. In some people, the condition can damage a wide variety of body systems, including the skin, eyes, lungs, heart and blood vessels.

Rheumatoid arthritis is an autoimmune disease. Normally, immune system helps protect body from infection and disease. In rheumatoid arthritis, immune system attacks healthy tissue in joints. It can also cause medical problems with heart, lungs, nerves, eyes and skin.

Models in place:

- Collagen Induced C57BL/6 Arthritis
- Collagen Induced DBA/1 Arthritis
- Collagen Induced Wistar Arthritis



Rheumatoid Arthritis
Ankoor Shah, E. William St. Clair

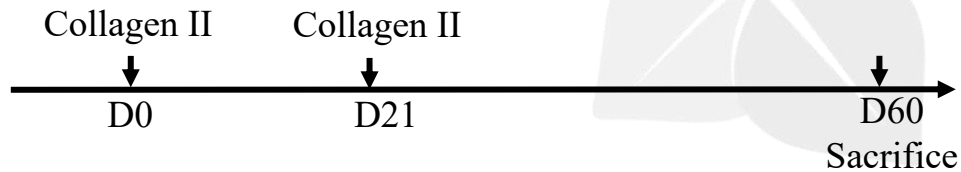
Collagen Induced Arthritis Model

■ Mechanism

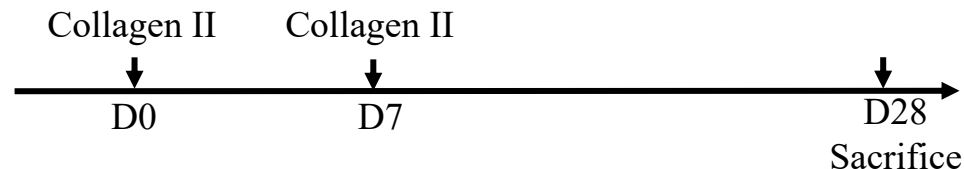
Collagen-induced arthritis (CIA) is an experimental autoimmune disease that can be elicited in susceptible strains of rodents (rat and mouse) and nonhuman primates by immunization with type II collagen (CII), the major constituent protein of articular cartilage. Following immunization, these animals develop an autoimmune polyarthritis that shares several clinical and histological features with rheumatoid arthritis.

■ Collagen Induced Arthritis Model

Mouse



Rat



Animal	DBA1, C57BL/6, Wistar
Evaluation	Clinical: Body weight, Clinical score
	Biochemical examination: CRP
	Cytokine: IL-6
	Pathology: HE

Collagen Induced C57BL/6 Arthritis Model

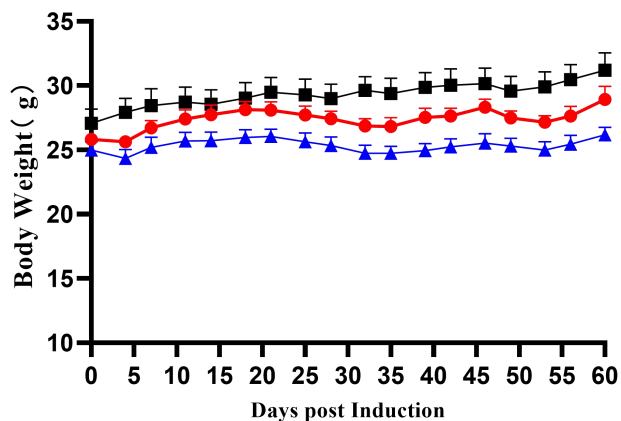


Fig 1 Body Weight

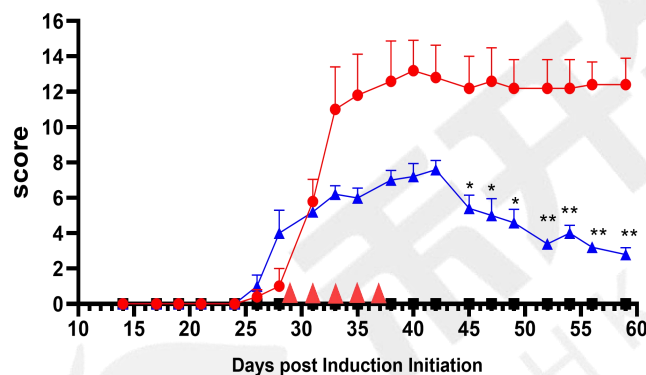


Fig 2 Clinical score

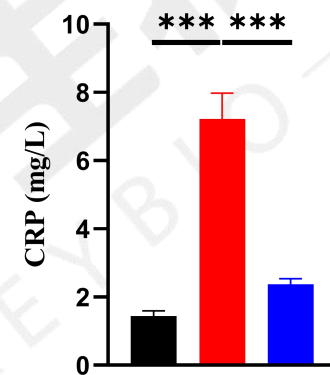


Fig 3 CRP level in serum

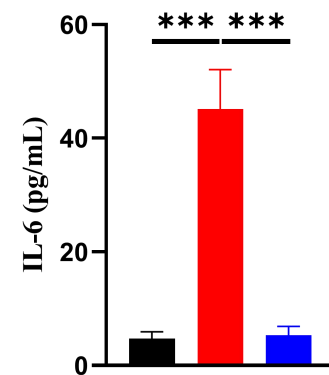


Fig 4 IL-6 level in joint

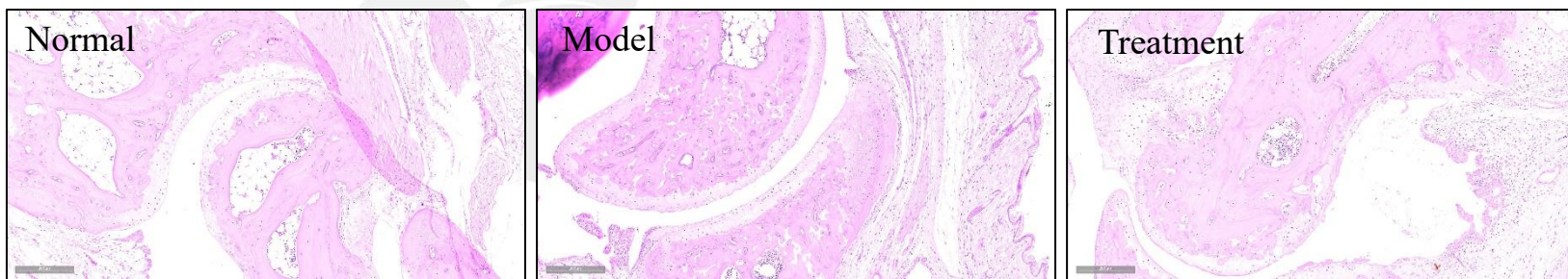


Figure 5 HE staining of ankle joint

Collagen Induced DBA/1 Arthritis Model

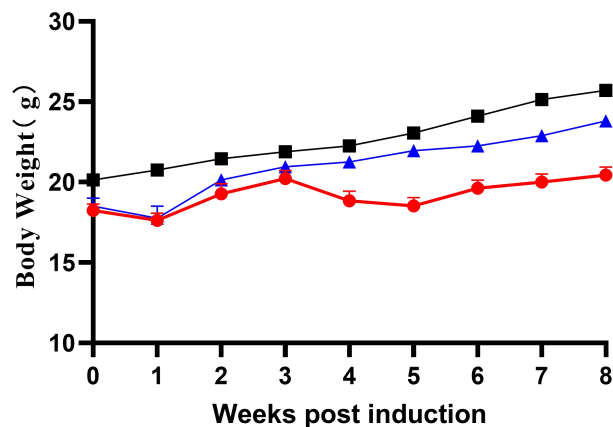


Fig 1 Body Weight

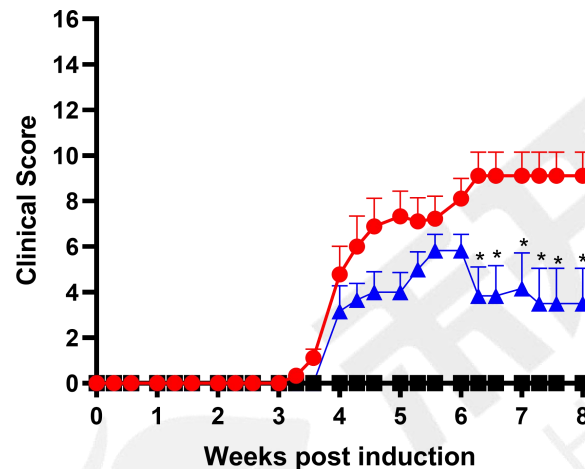


Fig 2 Clinical score

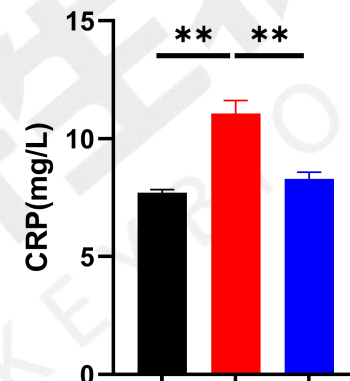


Fig 3 CRP level in serum

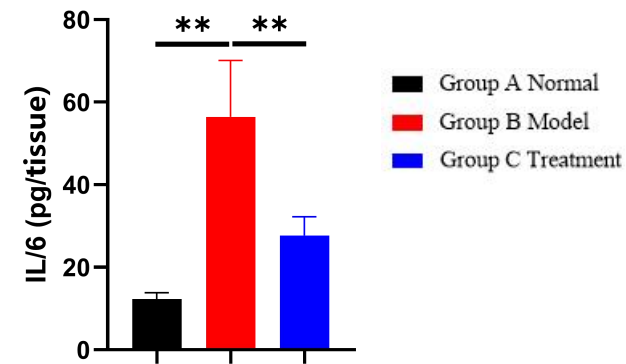


Fig 4 IL-6 level in joint

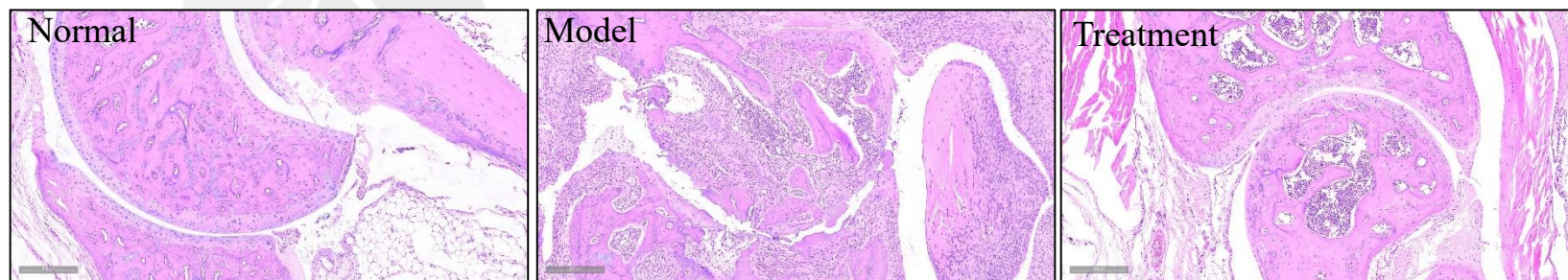


Figure 5 HE staining of ankle joint

Collagen Induced Wistar Arthritis Model

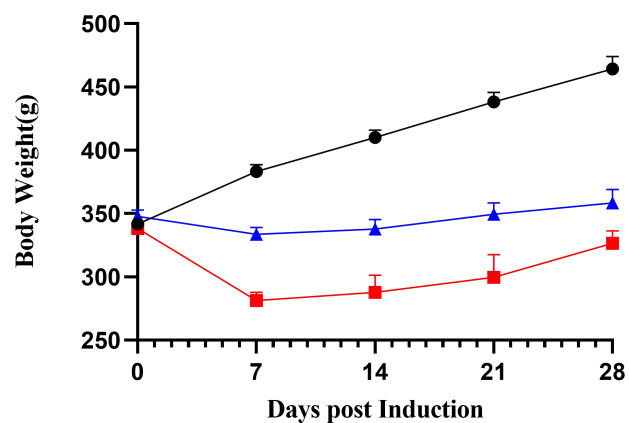


Fig 1 Body Weight

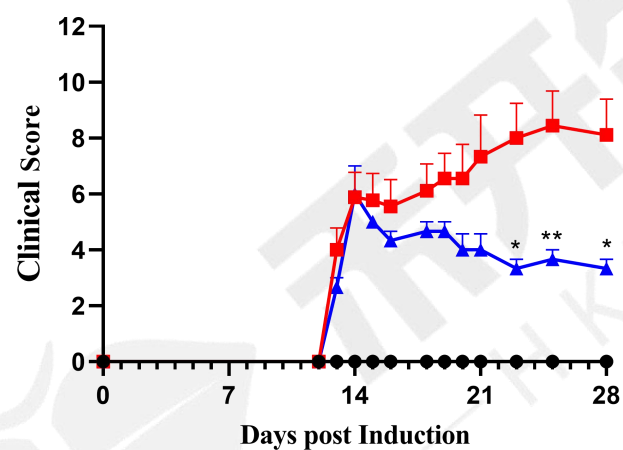


Fig 2 Clinical score

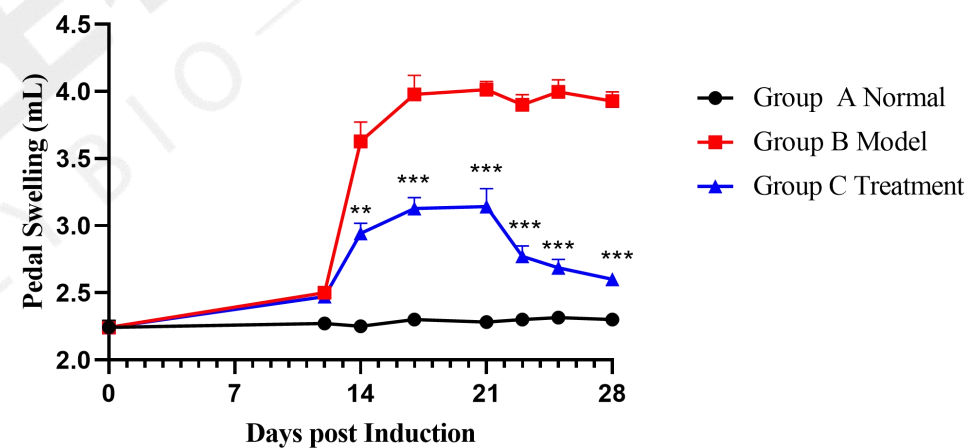


Fig 3 Pedal swelling



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