

# Collavant<sup>®</sup> n2

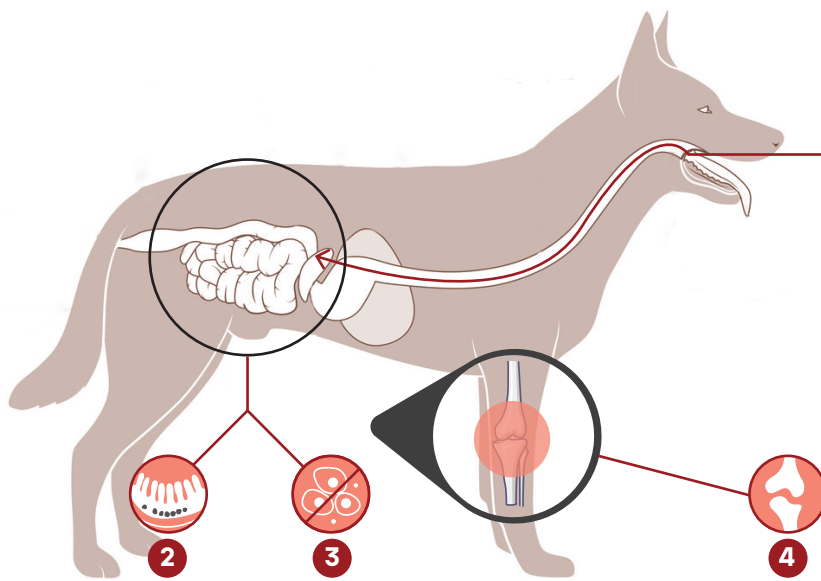
Native (undenatured) type II collagen



**Collavant<sup>®</sup> n2** is a trusted source of quality native (undenatured) type II collagen - the main structural protein in cartilage and other connective tissues. Compared to its hydrolysed counterpart, native collagen works via an immune-mediated mechanism

of action called Oral Tolerance, to support joint health at very low dose. This mechanism helps to regulate the body's response to endogenous type II collagen, reducing its degradation and supporting healthy joints.

## ORAL TOLERANCE COMPRISES THE FOLLOWING STAGES:



**1** Native (undenatured) type II collagen reaches the intestine.



**2** It interacts with the Peyer's patches in the intestine, which are responsible for immune surveillance.



**3** It turns off the immune response against endogenous type II collagen.



**4** It reduces collagen degradation in the joint supporting joint health.

## RECOMMENDED CLAIMS

- Helps reduce collagen degradation in joints.
- Helps reduce inflammation markers of degenerative joint conditions.

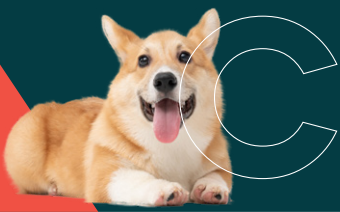
## PRODUCT DOSE in pet food

For nutritional supplements, consult on a case-by-case basis

**Dogs:** 25 ppm

**Cats:** 25 ppm





# Collavant<sup>®</sup>n2



## TRIAL

Mannelli LDC, et al. Low dose chicken native type II collagen is active in a rat model of osteoarthritis. *Osteoporosis Int.*, 2015, vol. 26, pg. 184.

## PURPOSE

To evaluate the role of low doses of chicken native type II collagen in the rat model of osteoarthritis, induced by sodium monoiodoacetate (MIA).

## MATERIALS & METHODS

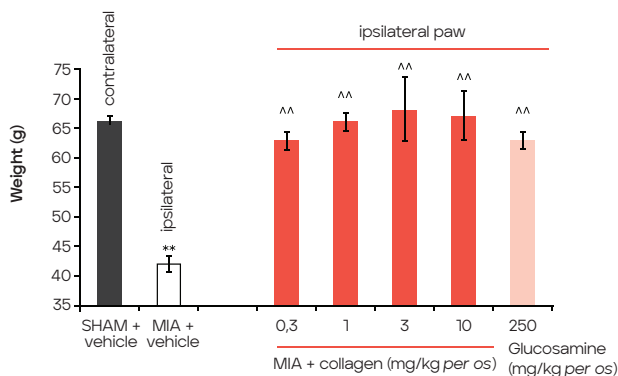
0.3-10 mg/kg chicken native type II collagen was daily administered orally for 14 days starting from the day of MIA intra-articular injection. Glucosamine (250 mg/kg p.o.) was used as a reference compound. Pain behaviour

measurements (paw pressure test; Plantar Test; Von Frey test; Incapacitance test; Animex test) were performed on days seven and fourteen. On day fourteen, plasma samples were collected to evaluate biochemical parameters.

## RESULTS

Native (undenatured) type II collagen (1-10 mg/kg) significantly reduced mechanical hyperalgesia (Figure 1 paw pressure test) at fourteen days. Efficacy was comparable to those induced by 250 mg/kg glucosamine. On day fourteen, collagen counteracted thermal hyperalgesia, as measured by the Plantar Test. Moreover, collagen significantly decreased the response to mechanical sensitivity (Von Frey test) both on days seven and fourteen. As evaluated by the Incapacitance test, collagen (1-10 mg/kg) was able to reduce MIA-induced spontaneous pain. Repeated treatment with collagen improved the spontaneous mobility of the animals, as evaluated by the Animex test. Also, native type II collagen was able to reduce the MIA-dependent plasmatic increase of IL-1 $\beta$  (Figure 2) and TNF- $\alpha$ . Finally, repeated collagen administrations reduced the degradation of endogenous collagen since the plasmatic levels of the degraded fragment C2C were significantly decreased. The stimulus to a de novo synthesis of collagen (propeptide CPII) was maintained.

PLANTAR TEST AT 14 DAYS



\*\* P<0.01 vs sham + vehicle treated animals  
^^ P<0.01 vs MIA + vehicle treated animals

INCAPACITANCE TEST AT 14 DAYS

