The preventive ankle inflammatory effects of sesamin from *Sesamum indicum*


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[Aim] Knowing the nutritional and pharmacological significance of foods enables the understanding of their role against several diseases. Among the foods that can potentially be considered as medicine, is sesame or *Sesamum indicum* L, which is part of the Pedaliaceae family and are composed of its lignans components. Sesamin is a major active compound from sesame. Aim of this study was to investigate the anti-inflammatory property of sesamin using Monoiodoacetate acid (MIA)-Induced Model of Osteoarthritis.

[Method] *In vitro* assay: the anti-inflammatory effects of sesamin was evaluated in lipopolysaccharide (LPS) and IL-1β induced raw 264.7 and SW 1353 for investigating the inflammatory cytokines, respectively. *In vivo* assay: the preventive ankle inflammatory by MIA-induced osteoarthritis in rat model.

[Result] Sesamin could inhibit the NO, PGE₂ production and iNOS, COX-2 expression in LPS-induced RAW 264.7 cells. Furthermore, the MMPs and COX-2 expression of IL-1β-stimulated SW 1353 was inhibited by sesamin. *In vivo* assay, sesamin could reduce the paw edema and the pain response in MIA-induced rat osteoarthritis model. Therefore, we suggest sesamin possess anti-inflammatory effect and can be application for arthritis.