

# Effect of marine natural product, OCB-2 on experimental arthritis rat model

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Rheumatoid arthritis (RA) is an autoimmune and chronic erosive inflammatory disease characterized by chronic edema and inflammation of the synovial tissue that lines joints. RA affects approximately 1% of the adult population worldwide. In recent years, a significant number of natural products with anti-inflammatory activity have been discovered from marine organisms, and several of these compounds are now under clinical trials. In this study, we evaluated a soft coral-derived compound, OCB-2 with anti-inflammatory and anti-arthritic activity in *in vitro* and *in vivo* model. *In vitro* study, the anti-arthritic activity of OCB-2 will be investigated in LPS induced osteoclast like cell differentiation on RAW 264.7 cell line. Furthermore, we will explore the possible effects of OCB-2 on adjuvant induced arthritis and collagen-induced arthritis by ankle edema assay, RA index, performing histological analysis, and immunohistochemistry. This study of rheumatoid arthritis mechanisms of OCB-2 can advance our understanding of RA mechanisms and enable rapid screening of marine natural compounds for clinical use.