**Background and Objectives** The interleukin (IL)-36 family consists of six members (IL-36α, IL-36β, IL-36γ, IL-36ε, IL-36δ, and IL-36r1). These cytokines are produced by various cell types and are involved in the regulation of immune responses. The IL-36 family plays a crucial role in the pathogenesis of psoriasis and other inflammatory diseases. The aim of this study was to investigate the expression and function of the IL-36 family in rheumatoid arthritis (RA) synovial tissue.

**Materials and Methods** Synovial tissue samples were obtained from patients with RA who underwent joint replacement surgery. The tissue samples were immediately frozen in liquid nitrogen and stored at -80°C until analysis. The IL-36 family mRNA levels were determined using quantitative real-time polymerase chain reaction (qRT-PCR). Immunohistochemical analysis was performed to examine the expression of the IL-36 family in synovial tissue.

**Results** The expression of the IL-36 family was significantly upregulated in RA synovial tissue compared to normal tissue. The IL-36α and IL-36β levels were particularly high, while the expression of IL-36γ, IL-36δ, and IL-36r1 was lower. These findings suggest that the IL-36 family may play a significant role in the pathogenesis of RA.

**Conclusions** The upregulation of the IL-36 family in RA synovial tissue suggests that these cytokines may be potential targets for therapeutic interventions. Further studies are needed to elucidate the exact role of the IL-36 family in the pathogenesis of RA and to develop effective therapeutic strategies.

**References**

