

## ABSTRACT

Psoriasis is the most common type of chronic inflammatory skin disease clinically characterized by a scaly erythematous eruption in the epidermal skin, primarily caused by the interaction of immune cells and keratinocytes that induces inflammatory skin response. Psoriasis is best characterized as a complex, multifactorial disorder, where both genetic and environmental factors play crucial roles. Current first-in-line topical therapies for psoriasis are costly and ineffective, highlighting the urgency of novel compound discovery with anti-inflammatory properties to develop an inexpensive and effective treatment. In light of this, the current focus of this project is to investigate whether novel synthetic compounds can inhibit the expression of inflammatory cytokines as candidates for potential psoriasis treatment. This was accomplished by inspecting the cytotoxic activity (through CCK-8 assay) and anti-inflammatory potential (through cytokine production assay) of 13 synthetic compounds using macrophages as the cell model. Among them, it was found that compounds CCL-7030d and CCL-7033g could reduce IL-6 overexpression as one of the reliable indicators of psoriasis, suggesting their potential as treatments for psoriasis-related inflammation.

Keywords: Psoriasis, inflammation, synthetic, treatment