

INTISARI

Riset dan penemuan obat saat ini berkembang sangat pesat terbukti dengan banyaknya senyawa yang ditemukan memiliki efek terapeutik. Salah satunya adalah pengembangan senyawa kurkumin dan analognya. Senyawa kurkumin ini dikenal dengan berbagai khasiatnya, salah satunya adalah sebagai anti inflamasi. Sudah banyak penelitian tentang analog kurkumin dan aktivitasnya sebagai anti inflamasi. Oleh karena itu, tujuan penelitian ini adalah untuk mengevaluasi prosedur sintesis berbagai analog kurkumin yang sudah diteliti sebelumnya dan mengevaluasi aktivitas anti inflamasi dari analog kurkumin tersebut.

Penelitian ini merupakan penelitian berbentuk *Narrative Review*. Data penelitian diambil dari berbagai artikel penelitian yang sudah dipublikasikan. Artikel penelitian diambil dari beberapa database yaitu: Google scholar, Pubchem, ACS publications, dan Science Direct.

Hasil *review* menunjukkan analog kurkumin dapat dikelompokkan menjadi: analog kurkumin derivat aseton, analog kurkumin derivat siklopentanon, analog kurkumin derivat sikloheksanon, analog kurkumin derivat piperidinon, dan analog kurkumin modifikasi reaksi Pabon. Pada umumnya analog kurkumin tersebut disintesis dengan metode Claissen-Schmidt. Aktivitas anti-inflamasi analog kurkumin terjadi melalui beberapa mekanisme, antara lain penghambatan sitokin pro inflamasi, penghambatan jalur pensinyalan inflamasi, dan penghambatan protein inflamasi.

Kata kunci: kurkumin, analog, anti-inflamasi

ABSTRACT

Research and drug discovery are currently developing very rapidly, as evidenced by the many compounds that have been found to have therapeutic effects. One of them is the development of curcumin compounds and their analogues. Curcumin compound is known for its various properties, one of them is as an anti-inflammatory. There have been many studies on curcumin analogues and their activity as anti-inflammatory. Therefore, the aim of this study was to evaluate the synthesis procedure of various curcumin analogues that have been studied previously and to evaluate the anti-inflammatory activity of these curcumin analogues.

This research is a research in the form of Narrative Review. The research data was taken from various published research articles. Research articles were taken from several databases, namely: Google scholar, Pubchem, ACS publications, and Science Direct.

The results of the review showed that curcumin analogues could be collected into: acetone-derived curcumin analogues, cyclopentanone-derived curcumin analogues, cyclohexanone-derived curcumin analogues, piperidinone-derived curcumin analogues, and Pabon reaction-modified curcumin analogues. In general, the curcumin analogs were synthesized by the Claissen-Schmidt method. The anti-inflammatory activity of curcumin analogues occurs through several mechanisms, including inhibition of pro-inflammatory cytokines, inhibition of inflammatory signaling pathways, and inhibition of inflammatory proteins.

Keywords: curcumin, analog, anti-inflammatory