

P-198**Xanthine Oxidase Inhibitory Activity of Selected Chalcone Derivatives**

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Xanthine oxidase (XO) is a key molybdoflavoprotein enzyme that functions in catalysing the oxidation of hypoxanthine and xanthine to uric acid. Excessive uric acid will result in hyperuricaemia which is the crucial cause of gout. In the present study, a series of thirty-five of chalcone derivatives were evaluated for inhibitory activity against xanthine oxidase *in vitro*. From the study, seventeen compounds (47.2%) exhibited XO inhibitory activity at 200 µg/mL which only four compounds (0.1%) inhibited XO activity at more than 50%. Compound 14, 1,3-bis(4-hydroxyphenyl)prop-2-en-1-one, showed the strongest activity more than 50% at 20 µg/mL with IC₅₀ values of 15.31 µg/mL as compared to positive control of allopurinol (IC₅₀ = 12.86 µg/mL). The results suggest that compound 14 can be further investigated to be developed into a XO inhibitor.

Keywords: Chalcone, Xanthine oxidase, Inhibitor.
