CHAPTER 9

Chalcone Scaffold Bearing Natural Antigout Agents

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ABSTRACT

Gout is a form of an arthritic syndrome characterized by severe chronic pain, discomfort, swelling, and redness in the joint present in the big toe as a result of monosodium urate (MSU) crystals accumulation. This chapter focuses on the ability of the natural and semisynthetic chalcone compounds such as 3,5,2,4-tetrahydroxychalcone, 4-hydroxyderricin, hesperidin methylchalcone, isobavachalcone, okanin, polyhydroxylated chalcones, quercetin chalcone, sappanchalcone, tetrahydroxychalcone, *trans*-chalcone, xanthoangelol, xanthoangelol B, and xanthoangeleol F in expressing antigout activity by completely suppressing the active disease proliferating enzyme, xanthine oxidase (XO), reducing the pro-inflammatory components, and suppressing the activation of nuclear factor kappa-light-chain-enhancer of activated B cells (NF-κβ). This chapter will provide unparallel information of chalcone scaffold bearing natural and semisynthetic molecules having pharmacotherapeutic perspectives. However, at present, these molecules are at nascent stages and only preclinical studies have been done so far and a