Abstract:
A collection of both commercial and non-commercial galloyl derivatives (either isolated from plants or synthesized) was examined for an in vitro structure-activity relationship (SAR) screening of their anti-yeast activity. Most of the compounds exhibited an antimycotic activity when used together with amphotericin B (AMB) and none when used alone. The SAR study indicated the presence of two galloyl moieties in adjacent position as an important structural characteristic. In fact, among the compounds tested, 2,3-O-digalloyl-O-methylglucose and 2,3-O-digalloyl-Omethylmannose exhibited a synergistic interaction with AMB against a set of Candida albicans, Candida glabrata and Pichia kudriavzevii strains. A similar biological activity has also been observed for epigallocatechin gallate (EGCG). The high structural similarity between the two digalloyl derivatives and EGCG was advocated as possible rationale to explain their synergy with AMB.