Evaluation of chemical constituents from the leaves of *Oroxylum indicum* as histone deacetylase inhibitors

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Abstract: This research focused on the chemical constituents from the leaves of *Oroxylum indicum* as histone deacetylase inhibitors. The ethyl acetate extract was purified by column chromatography on silica gel to afford four major compounds, 5,7-dihydroxy-3-methoxyflavone (1), chrysin (2), 4',5,7-trihydroxy-3-methoxy flavone (3) and ursolic acid (4). Their structures were confirmed by comparison of the spectroscopic data (IR, ¹H NMR and ¹³C NMR) with the previous reports. The isolated compounds were evaluated for histone deacetylase inhibitory activity. The preliminary results indicated that these compounds could act as non-hydroxamic acid based histone deacetylase inhibitors.

Keywords: *Oroxylum indicum*; Histone deacetylase; Enzyme inhibitors; Anti-cancer agents