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Synthesis and biological evaluation of 1,2,3-triazol-1*H*-yl derivatives of chalcones as possible pharmacological analogues of benzo[*c*]phenanthridine alkaloids

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Abstract

Chalcone derivatives bearing in the ring A an 1,2,3-triazole substituent were synthesized. Biological activity of synthesized compounds were evaluated vs sanguinarine chloride on the common biological target – lysosomal cysteine proteases. The results suggest that the synthesized compounds besides some common structural features with natural benzo[c]phenanthridine alkaloids also possess some common biological properties, specifically influence on the activity of cathepsins B, L and H. Nevertheless, introducing in the position 3 of the ring A of the chalcones the 1,2,3-triazole substituent resulted in different kind of biological activity, that display as a stabilization of lysosomal membranes.