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## Synthesis, molecular characterization and biological activity of novel synthetic peptide derivatives

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Our interest in the design, synthesis and biological investigations of peptides is, progressively, reported [1-5]. Herein, the search for potent biological agents presents an updated area of the organo-biochemical literature. Herein,  $\text{N}\alpha$ -1,3-benzenedicarbonyl linear peptide candidates, has the structure:  $\text{N}\alpha$ -1, 3-benzenedicarbonyl-bis-(Amino acids)-X, general structure A. On the other hand,  $\text{N}\alpha$ -benzene dicarbonyl bridged cyclo-pentapeptides, having the structure: Cyclo-[ $\text{N}\alpha$ - benzene dicarbonyl- bis-(dipeptide)-L-Lys]-Y, general structure B. Variable synthetic coupling methods, in solution, as well as experimental reaction conditions, were experimented. The candidates were, chromatographically purified and spectroscopically characterized. A preliminary cytotoxicity evaluation, against eight human cancer cell lines, was realized (National Cancer Institute, Egypt). The detailed cytotoxic and hepato-toxic results, compared to those of five common anticancer drugs and their biochemical assays, particularly, as histone deacetylase inhibitors are currently in progress. Structure-activity relationships were outlined and suggested prospective were proposed.

### Biography

Gaber O Moustafa has completed his Ph.D. (Organic Chemistry ) May 2014, from chemistry Dept, faculty of science, Banha University, Egypt and he has the best Doctoral Thesis 2014 in the field of chemical sciences and their applications award by the National Research Centre and postdoctoral studies from Rennes University (France). He has published 4 papers in the last year only (2017), now he worked as the researcher in peptide chemistry dept., National Research Centre, Cairo, Egypt.

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