Medicinal Chemistry



Prondicic acid (2-oxetanon-3, 4-diacetic acid): discovery, in silico drug design, syhtehic route, and importance as a highly potent enzyme inhibitor and the possible uses as a funtional group attached to dihalogenated anti-cancer drug compounds to increase efficacy and enzymatic target binding for more specific tumour targeting

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Abstract

Discovery of new and specific enzyme inhibitor drugs is the growing problem in Pharmaceutical industry and the Research and there is a huge increase in billions of dollars for the development costs for new Chemotherapeutic and Highly potent new drug compounds that specifically target a certain enzyme, receptor or a protein. Recently, Computational Chemistry and Receptor based in silico drug design and discovery is becoming popular among Researchers because the developed methods help with saving time and money by reducing the costs of compounds to be synthesized for the discovery of new drug molecules. In this study, a new drug molecule discovered and computationally predicted to be highly enzyme inhibitor and possibly a potent anti-oxidant and/or anti-cancer drug compound, namely Prondicic Acid (2-Oxetanon-3,4-Diacetic Acid or Beta Propiolactone Diacetic Acid) will be introduced. In addition , the computational methods for the possible activities for the derivatives of these compounds, predicted H-NMR and C-NMR datas and a possible Synthetic route to obtain the compound Prondicic Acid , and reaction mechanisms to possible modify the functional groups that could be synthetically attached to the compound's Carboxyl groups for derivatization of other Prondicic Acid will be defined.



Biography

Mustafa Pehlivan is PhDc in Pharmaceutical Chemistry. He is the inventor of Flavocillin antibiotics (Patent ref. no: EP3752509). His expertise and experience to date includes the synthesis of Chalcons, Flavonoids, Anti-infective agents. He has experience in new drug synthesis, research in Medicinal Chemistry and Computational Chemistry. He was awarded KTTO (Turkish Cypriot Trade Cooperation) Entrepreneurship award in 2017.

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