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Novel chalcone derivatives: Synthesis, QSAR studies and evaluation of their anti-prostate cancer activities and cathepsin B inhibition

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Prostate cancer is one of the most commonly diagnosed cancers in men, and the second leading cause of cancer deaths in the European Union and United States of America. The high mortality rate is mainly attributed to the invasiveness and metastasis of advanced prostate cancer. Cathepsin B is a cysteine protease found mainly in the lysosomes. The increased expression and secretion of cathepsin B have been shown to be involved in migration and invasion of numerous human and experimental tumors. Therefore, the use of cathepsin B inhibitors reduces both tumor cell motility and invasiveness *in vitro*. In the present study a series of novel chalcones were prepared and studied for both their anti-prostate and cathepsin B inhibition. Furthermore, a QSAR study was carried out where models were successfully built from which the physicochemical parameters were correlated to the activity.

Biography

Dalia Hussein Soliman has completed her PhD from AL-Azhar University and Postdoctoral studies from the same University in addition to Ain-Shams University. She is currently working as an Associate Professor at Pharmaceutical Chemistry Department at the Egyptian Russian University. She has published more than 12 papers in reputed journals.

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