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Synthesis of some benzocoumarin and benzochromone: Antielastase, antihyaluronidase, anticollagenase and antidiabetic activities and *in silico* ADME and molecular docking studies

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Coumarins are compounds commonly found in nature and have many biological effects. So it is a molecule that continues to be popular. Benzocoumarin and benzochromone, which are coumarin derivatives, are a group of molecules obtained from plants and it is important to understand the biological activity of the derivatives of these molecules. In our study, the inhibitory effects of newly synthesized 9-hydroxy-1-methyl-3H-naphto[2,1-b]piran-3-on (benzocoumarin)(**1**) and 9-hydroxy-2-methyl-4H-naphto[2,1-b]piran-4-on (benzochromone)(**2**) on elastase, hyaluronidase, collagenase, alpha-amylase, and alpha-glucosidase were investigated. As a result of *in vitro* studies, the inhibition effect of compounds **1** (132.64±16.12 μM) and **2** (400.25±64.77 μM)), was observed relative to the dose. only the inhibition effect on collagenase was found to have a lower IC_{50} value than the positive control (479.03±38.40 μM). In line with the data obtained as a result of *in vitro* studies, molecular docking studies were also carried out for compounds **1** and **2** with collagenase. As a result, due to the inhibitory effect of compounds **1** and **2** on the collagenase activity, a way has been opened for further studies to prove it

Keywords: Benzocoumarin, Benzochromone, Enzyme inhibition, Molecular docking, ADME