Synthesis and enzyme inhibition study of dihydrofurocoumarin and dihydrofuropyran compounds

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Coumarin derivatives such as Scopoletin, Esculatin, Fercoprolone, Hohneliacoumarin, Angelicin, Psoralen and Aureptene have been found in nature and they possess many biological activities varying from anticancer, antioxidant, antibacterial, antifungal and anticogulant. It is well known that Mn(OAc)3 have been used as radical oxidant in the synthesis of dihydrofuran derivatives forming C-C bond between active methylene compounds and alkenes. In here, we performed the reaction of 4-hydroxycoumarin and 4-hydroxypyrane with conjugated amide and esters promoted by Mn(OAc)3 leading to dihydrofurocoumarins and dihydrofuropyranes in moderate to good yields. All new compounds were characterized by spectroscopic techniques. Also, we investigated enzyme (cGMP PDE- cyclic guanozine mono phosphate phosphodiesterase) inhibitions of these compounds.

Biography
Asli Ustalar has completed his MS from Kocaeli University. She is a PhD student in Kocaeli University.

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