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BOOK OF ABSTRACTS

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SYNTHESIS OF NEW CARBAMATE DERIVATIVES OF 2-OXO-2H-CHROMENE

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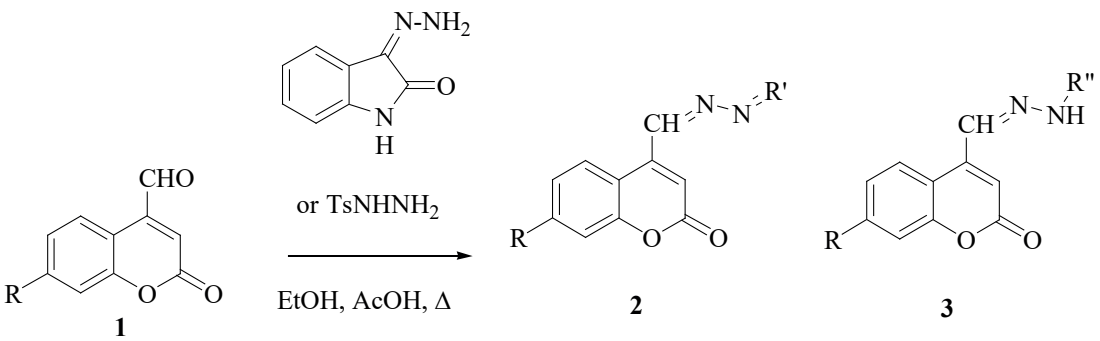
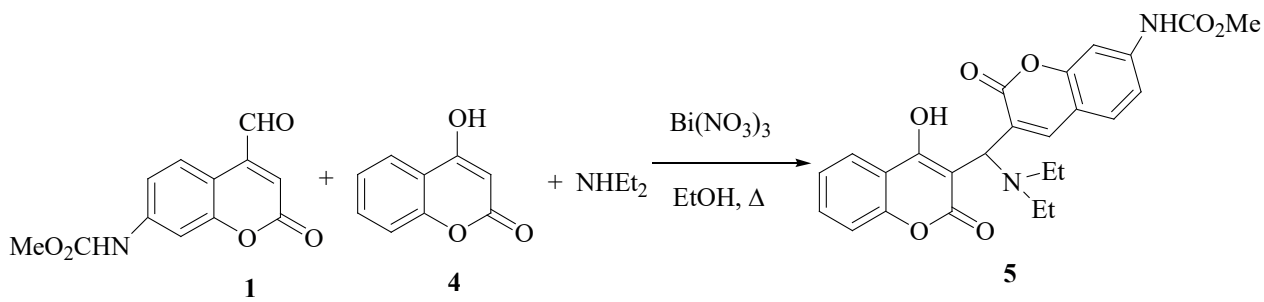
Natural and synthetic derivatives of 2-oxo-2*H*-chromene exhibit a variety of pharmacological activities such as anticoagulant, antimicrobial, anticancer, antioxidant, anti-inflammatory, and antiviral properties.

Previously, methyl *N*-(4-formyl-2-oxo-2*H*-chromen-7-yl)carbamate (**1**) was obtained in our laboratory in 81% yield by oxidation of methyl *N*-(4-methyl-2-oxo-2*H*-chromen- 7-yl)carbamate with selenium dioxide at the boiling in *o*-xylene [1]. This work presents the results of further functionalization of compound **1**. The corresponding hydrazones **2,3** were obtained in 84-87% yields by condensation of aldehyde **1** with 3-hydrazilidene-1,3-dihydro-2*H*-indol-2-one and 4-methylbenzenesulfonylhydrazide in ethanol in the presence of catalytic amounts of glacial AcOH. Methyl *N*-3-[(diethylamino)(4-hydroxy-2-oxo-2*H*-chromen-3-yl)methyl]-2-oxo-2H-chromen-7-ylcarbamate (**5**) was obtained in 78% yield by the reaction of methyl *N*-(4-formyl-2-oxo-2*H*-chromen-7-yl)carbamate (**1**), 4-hydroxy-2*H*-chromen-2-one (**4**) and diethylamine in ethanol in the presence of bismuth (III) nitrate pentahydrate.



R=$NHCO_2Me$, R'=1,3-dihydro-2H-indol-2-on-3-ylidene (2); R=$NHCO_2Me$, R"=Ts



The structures of new compounds **2-5** were confirmed by IR, ^1H, ^{13}C NMR spectroscopy.

References:

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