Solvent-free synthesis of chromene derivatives *via* three-component reactions of N-heterocycles

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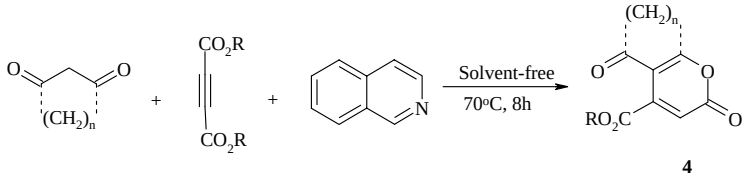
Chromenes have attracted considerable attention due to their biological activity and their presence in a variety of significant natural products [1]. Chromene derivatives are a class of important heterocycles with a wide range of biological properties [2] such as spasmolytic, diuretic, anticoagulant, anti-cancer, and anti-anaphylactic activity [3]. Moreover they can be used as cognitive enhancers, for the treatment of neurodegenerative diseases, including Alzheimer's disease, amyotrophic lateral sclerosis, Parkinson's disease, Huntington's disease, AIDS associated dementia and Down's syndrome as well as for the treatment of schizophrenia and myoclonus [4].

We report herein the results of our studies on the reaction of O-H acidic compounds **1** with activated acetylenic compounds **2** in the presence of isoquinoline **3** under solvent-free conditions at 70 ^{o}C (Scheme 1).



1 **2** **3** **4**

1, 2, 4	R	$(CH_2)_n$	Yield/ % of **4**
a	Me	$(CH_2)_3$	95
b	Et	$(CH_2)_3$	92
c	*iso*-pro	$(CH_2)_3$	80

Scheme 1.

References:

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