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# New syntheses of potential biologically active xanthones and benzoxanthones

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Xanthones have a rather restricted occurrence among higher plants, being found almost exclusively in *Guttiferae* and *Gentianaceae*.[1] Natural and synthetic xanthone derivatives have been described as exhibiting several important biological properties, such as anti-tumor,[2a] anti-inflammatory[2b] and antioxidant[2c] activities which make them attractive to the pharmaceutical industry.

The synthesis of xanthones, adequately functionalized for a specific application, is a challenging task. In this presentation, will be disclosed our recent studies with this unique family of compounds, namely the one-pot photoinduced electrocyclisation of (*E*)-3-styrylflavones **1** and *in situ* oxidation of cycloadducts to give 5-phenyl-7*H*-benzo[*c*]xanthen-7-one derivatives **2**,[3a] and aromatization studies of (*E*)-3-aryl-4-benzylidene-8-hydroxy-3,4-dihydro-1*H*-xanthene-1,9(2*H*)-diones **3**[3b] into 4-benzyl-1,8-dihydroxy-3-phenyl-9*H*-xanthen-9-one derivatives **4** (**Figure 1**).

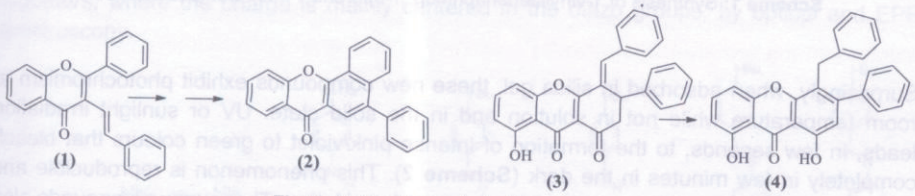


**Figure 1:** Xanthone derivatives structure.

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