

# 3º Encontro Nacional de Química Terapêutica



3<sup>rd</sup> Portuguese Meeting on Medicinal Chemistry  
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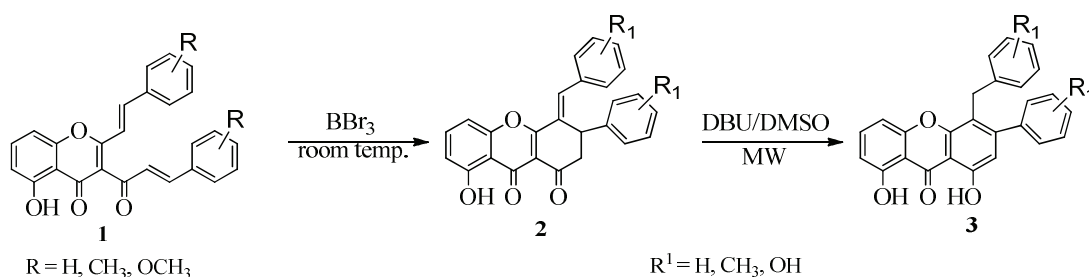
## Synthesis and antioxidant activity of new xanthone-type compounds

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As far as we know only four natural xanthenediones have been reported, more precisely xanthene-2,9-diones,<sup>[1]</sup> and one of them showed moderate activity against two strains of *Plasmodium falciparum*.<sup>[2]</sup> Synthetic derivatives are more frequent, being 9-aryl-3,4,5,6,7,9-hexahydro-1*H*-xanthene-1,8(2*H*)-dione derivatives the more reported ones.<sup>[3]</sup> On the other hand, xanthene-1,9(2*H*)-diones were not found in Nature and synthetic derivatives are also scarce. Otherwise, xanthenes are widely and mainly isolated from plants of the *Guttiferae* and *Gentianaceae* families. Xanthone derivatives are also attractive to the pharmaceutical industry due to their well-known and interesting phytochemical properties. Natural and synthetic derivatives have been described as presenting several important biological properties, such as antitumor, anti-inflammatory, antioxidant and anticoagulant/antiplatelet activities.<sup>[4]</sup>

Owing to our continuing interest in the synthesis of novel oxygen heterocycles we have recently developed a unique synthetic procedure towards the synthesis of new xanthenodiones (**2**)<sup>[5]</sup> and extend the work to their aromatization into xanthenes (**3**). Our aim was also to obtain new derivatives with potential biological activities, therefore their ability to scavenge the DPPH radical and to reduce iron(III) were also evaluated. In the present communication we will present and discussed our last results on the synthetic and potential application of xanthenes (**3**).



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