



## Antimalarial xanthenes from *Calophyllum caledonicum* and *Garcinia vieillardii*

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Titre	Antimalarial xanthenes from <i>Calophyllum caledonicum</i> and <i>Garcinia vieillardii</i>
Type de publication	Article de revue
Auteur	Hay-de Bettignies, Anne-Emmanuelle [1], Helesbeux, Jean-Jacques [2], Duval, Olivier [3], Labaïed, Mehdi [4], Grellier, Philippe [5], Richomme, Pascal [6]
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Résumé en anglais	<p>The antimalarial activity of 22 xanthenes against chloroquino-résistant strains of <i>Plasmodium falciparum</i> was evaluated. Natural caloxanthone C, demethylcalabaxanthone, calothwaitesixanthone, calozeyloxanthone, dombakinaxanthone, macluraxanthone, and 6-deoxy-<math>\gamma</math>-mangostin were isolated from <i>Calophyllum caledonicum</i>. 1,6-dihydroxyxanthone, pancixanthone A, isocudraniaxanthone B, isocudraniaxanthone A, 2-deprenylrheediaxanthone B and 1,4,5-trihydroxyxanthone were isolated from <i>Garcinia vieillardii</i>. Moreover, synthetic compounds are analogues or intermediates of xanthenes purified from <i>Calophyllum caledonicum</i> (Oger J.M., Morel C., Hélesbeux J.J., Litaudon M., Séraphin D., Dartiguelongue C., Larcher G., Richomme P., Duval O. 2003. First 2-Hydroxy-3-Methylbut-3-Enyl substituted xanthenes isolated from Plants: structure elucidation, synthesis and antifungal activity. <i>Natural Product Research</i> 17(3), 195-199; Hélesbeux J.J., Duval O., Dartiguelongue C., Séraphin D., Oger J.M., Richomme P., 2004. Synthesis of 2-hydroxy-3-methylbut-3-enyl substituted coumarins and xanthenes as natural products. Application of the Schenck ene reaction of singlet oxygen with ortho-prenylphenol precursors. <i>Tetrahedron</i> 60(10), 2293-2300). The relationship between antimalarial activity and molecular structure of xanthenes has also been explored. The most potent xanthenes and (IC<sub>50</sub> = c.a. 1.0 <math>\mu</math>g/mL) are 1,3,7-trioxygenated and prenylated on the positions 2 and 8.</p>
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