Selection of Clusiaceae and Calophyllaceae extracts based on dereplication and anti-inflammatory properties

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Auteur	Rouger, Caroline [1], Derbré, Séverine [2], Charreau, Béatrice [3], Litaudon, Marc [4], Awang, Khalijah [5], Richomme, Pascal [6]
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Résumé en anglais	Inflammation is associated with many pathogenic disorders including endothelial dysfunction. Calophyllaceae and Clusiaceae which are rich in polyphenolic compounds such as coumarins, xanthones, benzophenones and biflavonoids1 are well-known for their anti-inflammatory properties2. Bark, leaves and occasionally fruits of thirteen plants belonging to the genus Calophyllum, Mesua (Calophyllaceae), Garcinia (Clusiaceae) and native from Malaysia, were extracted using DCM and MeOH as the solvents. Extracts of interest were selected according to two distinct criteria. Firstly, a dereplication analysis was conducted though HPLC-PDA-MSn. Secondly the VCAM-1 surface-expression of (TNF-α)-stimulated endothelial cells from human umbilical veins (HUVECs) was evaluated. It appeared that several extracts particularly rich in xanthones and phenylcoumarins significantly decreased inflammatory marker expression. In this context, a new phenylcoumarin was identified as the major component of the bioactive fruits DCM extract from a Mesua. References: [1] V. Cechinel Filho et al. Chem. Biodivers. 2009, 6, 313-327 [2] J. Gonzalez-Gallego et al. Br. J. Nutr. 2010, 104, S15-S27
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