



# From dereplication and anti-inflammatory screening of Clusiaceae and Calophyllaceae species to novel immunomodulatory coumarins from *Mesua lepidota*

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Auteur	Rouger, Caroline [1], Derbré, Séverine [2], Litaudon, Marc [3], Awang, Khalijah [4], Charreau, Béatrice [5], Richomme, Pascal [6]
Pays	France
Ville	Nantes

Vascular endothelium plays a central role in the development of inflammatory and immune processes, which are involved in graft rejection<sup>1</sup>. Many Clusiaceae/Calophyllaceae species (pantropical plants) biosynthesize original polyphenolic compounds exhibiting antioxidant and anti-inflammatory properties<sup>2-3</sup>. Bark, leaves and occasionally fruits from thirteen Malaysian plants belonging to the genus *Calophyllum*, *Mesua* (Calophyllaceae), *Garcinia* (Clusiaceae) were extracted using DCM and MeOH as the solvents. Each extract was then submitted to a HPLC-PDA-MSn dereplication analysis and its anti-inflammatory potential was evaluated on Human Umbilical Vein Endothelial Cells (HUVECs). This allowed to select the bioactive fruits DCM extract of *Mesua lepidota* T. Anderson for an advanced phytochemical study, which led to the identification of several new coumarin derivatives. A flow cytometry study revealed that the major component of this extract, namely lepidotol A (1), significantly inhibited the VCAM-1, HLA-II and HLA-E expression of HUVECs previously activated by TNF- $\alpha$  or IFN- $\gamma$  cytokines.

Résumé en anglais

## References

1. P. T. Clesca, Int. Congr. Ser., 2002, 1237, 181-191.
2. F. V. Cechinel, C. Meyre-Silva, and R. Niero, Chem. Biodivers., 2009, 6, 313-327.
3. J. González-Gallego, M. V. García-Mediavilla, S. Sánchez-Campos and M. J. Tuñón, Br. J. Nutr., 2010, 104, S15-S27

URL de la notice <http://okina.univ-angers.fr/publications/ua10593> [7]

## **Liens**

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