Preparative Isolation, Fast Centrifugal Partition Chromatography Purification and Biological Activity of Cajaflavanone from Derris ferruginea Stems

Titre	Preparative Isolation, Fast Centrifugal Partition Chromatography Purification and Biological Activity of Cajaflavanone from Derris ferruginea Stems
Type de publication	Article de revue
Auteur	Morel, Sylvie [1], Landreau, Anne [2], Nguyen, Van Hung [3], Derbré, Séverine [4], Grellier, Philippe [5], Le Pape, Patrice [6], Pagniez, Fabrice [7], Litaudon, Marc [8], Richomme, Pascal [9]
Pays	Etats-Unis
Editeur	Wiley
Ville	New-York
Type	Article scientifique dans une revue à comité de lecture
Année	2012
Langue	Anglais
Date	2012
Numéro	2
Pagination	152 - 158
Volume	23
Titre de la revue	Phytochemical Analysis
ISSN	1099-1565
Mots-clés	cajaflavanone [10], Derris ferruginea [11], Fabaceae [12], Fast centrifugal partition chromatography [13]

Résumé en anglais	**Introduction** The *Derris* genus is known to contain flavonoid derivatives, including prenylated flavanones and isoflavonoids such as rotenoids, which are generally associated with significant biological activity. **Objective** To develop an efficient preparative isolation procedure for bioactive cajaflavanone. **Methodology** Fast centrifugal partition chromatography (FCPC) was optimised to purify cajaflavanone from *Derris ferruginea* stems in a single step as compared to fractionation from the cyclohexane extract by successive conventional solid–liquid chromatography procedures. The purification yield, purity, time and solvent consumption per procedure are described. The anti-fungal, anti-bacterial, anti-leishmanial, anti-plasmodial, anti-oxidant activities and the inhibition of advanced glycation end-products (AGEs) by cajaflavanone accumulation are described. **Results** FCPC enabled cajaflavanone purification in a single separation step, yielding sufficient quantities to perform in vitro biological screening. Interestingly, cajaflavanone had an inhibitory effect on the formation of AGEs, without displaying any in vitro anti-oxidant activity. **Conclusion** A simple and efficient procedure, in comparison with other preparative methods, for bioactive cajaflavone purification has been developed using FCPC.
URL de la notice	http://okina.univ-angers.fr/publications/ua41 [14]
DOI	10.1002/pca.1336 [15]
Lien vers le document	http://dx.doi.org/10.1002/pca.1336 [15]

Liens
[1] http://okina.univ-angers.fr/publications?f[author]=56
[2] http://okina.univ-angers.fr/anne.landreau/publications
[3] http://okina.univ-angers.fr/publications?f[author]=211
[4] http://okina.univ-angers.fr/severine.derbre/publications
[5] http://okina.univ-angers.fr/publications?f[author]=58
[6] http://okina.univ-angers.fr/publications?f[author]=60
[7] http://okina.univ-angers.fr/publications?f[author]=61
[8] http://okina.univ-angers.fr/publications?f[author]=62
[9] http://okina.univ-angers.fr/p.richomme/publications
[10] http://okina.univ-angers.fr/publications?f[keyword]=96
[11] http://okina.univ-angers.fr/publications?f[keyword]=19721
[12] http://okina.univ-angers.fr/publications?f[keyword]=13
[13] http://okina.univ-angers.fr/publications?f[keyword]=19720
[14] http://okina.univ-angers.fr/publications/ua41
[15] http://dx.doi.org/10.1002/pca.1336