



Molecular mechanisms of the cardiovascular protective effects of polyphenols

Submitted by Emmanuel Lemoine on Wed, 12/11/2013 - 17:07

Titre	Molecular mechanisms of the cardiovascular protective effects of polyphenols
Type de publication	Article de revue
Auteur	Andriantsitohaina, Ramaroson [1], Auger, Cyril [2], Chataigneau, Thierry [3], Étienne-Selloum, Nelly [4], Li, Huige [5], Martinez, Maria Carmen [6], Schini-Kerth, Valérie B [7], Laher, Ismail [8]
Pays	Royaume-Uni
Editeur	Cambridge University Press (CUP)
Ville	Cambridge
Type	Article scientifique dans une revue à comité de lecture
Année	2012
Langue	Anglais
Date	Nov 2012
Numéro	9
Pagination	1532 - 1549
Volume	108
Titre de la revue	British journal of nutrition
ISSN	1475-2662
Mots-clés	Antioxydants [9], Cardiovasculaire system [10], Endothélium [11], Free radicals [12], Nitric oxide [13], Polyphénols [14]
Résumé en anglais	<p>Epidemiological studies have reported a greater reduction in cardiovascular risk and metabolic disorders associated with diets rich in polyphenols. The antioxidant effects of polyphenols are attributed to the regulation of redox enzymes by reducing reactive oxygen species production from mitochondria, NADPH oxidases and uncoupled endothelial NO synthase in addition to also up-regulating multiple antioxidant enzymes. Although data supporting the effects of polyphenols in reducing oxidative stress are promising, several studies have suggested additional mechanisms in the health benefits of polyphenols. Polyphenols from red wine increase endothelial NO production leading to endothelium-dependent relaxation in conditions such as hypertension, stroke or the metabolic syndrome. Numerous molecules contained in fruits and vegetables can activate sirtuins to increase lifespan and silence metabolic and physiological disturbances associated with endothelial NO dysfunction. Although intracellular pathways involved in the endothelial effects of polyphenols are partially described, the molecular targets of these polyphenols are not completely elucidated. We review the novel aspects of polyphenols on several targets that could trigger the health benefits of polyphenols in conditions such as metabolic and cardiovascular disturbances.</p>
URL de la notice	http://okina.univ-angers.fr/publications/ua223 [15]
DOI	10.1017/S0007114512003406 [16]

Liens

- [1] <http://okina.univ-angers.fr/r.andrian/publications>
- [2] [http://okina.univ-angers.fr/publications?f\[author\]=525](http://okina.univ-angers.fr/publications?f[author]=525)
- [3] [http://okina.univ-angers.fr/publications?f\[author\]=526](http://okina.univ-angers.fr/publications?f[author]=526)
- [4] [http://okina.univ-angers.fr/publications?f\[author\]=527](http://okina.univ-angers.fr/publications?f[author]=527)
- [5] [http://okina.univ-angers.fr/publications?f\[author\]=528](http://okina.univ-angers.fr/publications?f[author]=528)
- [6] <http://okina.univ-angers.fr/c.martinez/publications>
- [7] [http://okina.univ-angers.fr/publications?f\[author\]=530](http://okina.univ-angers.fr/publications?f[author]=530)
- [8] [http://okina.univ-angers.fr/publications?f\[author\]=531](http://okina.univ-angers.fr/publications?f[author]=531)
- [9] [http://okina.univ-angers.fr/publications?f\[keyword\]=987](http://okina.univ-angers.fr/publications?f[keyword]=987)
- [10] [http://okina.univ-angers.fr/publications?f\[keyword\]=5960](http://okina.univ-angers.fr/publications?f[keyword]=5960)
- [11] [http://okina.univ-angers.fr/publications?f\[keyword\]=50](http://okina.univ-angers.fr/publications?f[keyword]=50)
- [12] [http://okina.univ-angers.fr/publications?f\[keyword\]=6541](http://okina.univ-angers.fr/publications?f[keyword]=6541)
- [13] [http://okina.univ-angers.fr/publications?f\[keyword\]=6048](http://okina.univ-angers.fr/publications?f[keyword]=6048)
- [14] [http://okina.univ-angers.fr/publications?f\[keyword\]=994](http://okina.univ-angers.fr/publications?f[keyword]=994)
- [15] <http://okina.univ-angers.fr/publications/ua223>
- [16] <http://dx.doi.org/10.1017/S0007114512003406>

Publié sur *Okina* (<http://okina.univ-angers.fr>)