



## Red wine polyphenols correct vascular function injured by chronic carbon tetrachloride intoxication

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

Titre	Red wine polyphenols correct vascular function injured by chronic carbon tetrachloride intoxication
Type de publication	Article de revue
Auteur	Cačányiová, Soňa [1], Pechanova, Olga [2], Babál, Pavel [3], Cerná, Andrea [4], Janega, Pavol [5], Andriantsitohaina, Ramaroson [6]
Editeur	Rand d Print
Type	Article scientifique dans une revue à comité de lecture
Année	2011
Langue	Anglais
Date	2011/06
Numéro	2
Pagination	207 - 213
Volume	30
Titre de la revue	General physiology and biophysics
ISSN	0231-5882
Mots-clés	Acetylcholine [7], Animals [8], Aorta [9], Aorta, Thoracic [10], Carbon [11], Cardiovascular [12], Flavonoids [13], Heart [14], Male [15], Nitric [16], Norepinephrine [17], Phenols [18], Polyphenols [19], Rats [20], Rats, Wistar [21], Ventricular Dysfunction, Left [22], Wine [23]
Résumé en anglais	<p>The aim of the study was to evaluate the effect of red wine polyphenols extract Provinols™ on the development of cardiovascular injury in the model of carbon tetrachloride (CCl4) intoxication. We followed the thoracic aorta vasoactivity and left ventricle nitric oxide (NO) synthase activity in male Wistar rats. In the preventive experiment lasting for 12 weeks the control group, the group receiving CCl4 (0.5 ml/kg) two times a week subcutaneously, the group receiving Provinols™ (30 mg/kg/day) in drinking water and the group receiving CCl4+Provinols™ was used. In the recovery experiment, the initial 12 weeks of CCl4 treatment were followed by 3 weeks of spontaneous recovery or recovery with Provinols™. CCl4-intoxication resulted in the injury of vasoactivity which was demonstrated by the inhibition of acetylcholine-induced relaxation as well as noradrenaline-induced contraction. In the preventive as well as recovery experiment administration of polyphenols refreshed endothelium-dependent relaxant response and normalized inhibited contraction to adrenergic stimuli. Provinols™ treatment significantly increased NO-synthase activity in all groups. The results revealed beneficial effects of red wine polyphenols on vascular function injured by chronic CCl4 intoxication. The correction of endothelial function seems to be attributed to the activation of NO pathway by polyphenols.</p>
URL de la notice	<a href="http://okina.univ-angers.fr/publications/ua242">http://okina.univ-angers.fr/publications/ua242</a> [24]
DOI	10.4149/gpb_2011_02_207 [25]

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- [24] <http://okina.univ-angers.fr/publications/ua242>
- [25] [http://dx.doi.org/10.4149/gpb\\_2011\\_02\\_207](http://dx.doi.org/10.4149/gpb_2011_02_207)

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