



Cedrelopsis grevei improves endothelial vasodilatation in aged rats through an increase of NO participation

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Auteur	Mingorance, Carmen [1], Andriantsitohaina, Ramaroson [2], de Sotomayor, Maria Alvarez [3]
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Mots-clés	Aging [4], Antioxydant [5], Cedrelopsis grevei [6], Endothelium [7], Nitric oxide [8]
Résumé en anglais	<p>Cedrelopsis grevei Baill. (Ptaeroxylaceae) trunk bark extract is empirically used in Madagascar against several pathologies, from persistent catarrh to hypertension. The effect C. grevei extract on age-related changes in systolic blood pressure (SBP) and endothelial function was investigated. Rats (90-100 week-old) received treatment either with C. grevei extract (80 mg kg⁻¹) or vehicle for 8 weeks. SBP was evaluated by tail-cuff and vascular reactivity and endothelial vasodilatation of both aortae and small mesenteric arteries (SMA) were assessed by acetylcholine (ACh) in the presence or in the absence of either reactive oxygen species (ROS) scavengers superoxide dismutase (SOD) plus catalase or the nitric oxide synthase inhibitor, NG-l-arginine methyl ester (l-NAME). Plasma nitric oxide (NO) was evaluated by nitrite assay and expressions of eNOS, Cu/Zn-, Mn- and EC-SOD were determined by Western Blot. C. grevei administration prevented the increase of SBP and improved endothelium-dependent relaxations in aortae and SMA from aged rat via increased NO and decreased participation of ROS. Furthermore, C. grevei treatment enhanced plasma nitrite content but did not modify eNOS, Cu/Zn-, Mn- or EC-SOD expressions in the two arteries studied. These results suggest that C. grevei prevents both increased blood pressure and age-related endothelial dysfunction supporting the empirical use of C. grevei trunk bark extract against mild hypertension often associated with aging.</p>
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