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꾸지뽕나무의 추출방법에 따른 생리활성

최소라,*, 유동현, 김종엽, 박춘봉, 류정
전라북도농업기술원 약초연구소

꾸지뽕나무의 잎과 열매를 증류수, 메탄올, 에탄올, 아세톤 등으로 상온과 환류추출한 결과 잎보다는 열매, 상온보다는 환류추출에서 추출수율이 높았으며 추출수율은 증류수>메탄올>에탄올>아세톤 순이었다. 총폴리페놀 함량은 증류수로 환류추출 하였을 때 잎에서111.6mg/g DW, 열매에서 35.7mg/g DW로 나타났으며 에탄올, 메탄올, 아세톤 추출 순으로 낮아졌다 또한 항산화성은 잎을 아세톤 추출했을 때 79.2~79.5%로 높았는데 증류수 추출의 경우 상온추출에서는12.9%, 환류추출의 경우 50.8%로 나타난 반면 열매에서는 모든 추출방법에서 10.3% 이하로 낮았다. *Staphylococcus aureus* 등 10종에 대한 항균성은 열매에서는 나타나지 않았고 잎의 경우 메탄올 추출시 가장 높았으며 증류수 추출시 항균성이 거의 없었다 따라서 꾸지뽕나무의 생리활성은 추출방법에 따라 상당한 차이가 있는 것으로 나타났다
*주저자 : Tel. 063-433-7452, e-mail: sora0909@hanmail.net

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Neuroprotective activity of Phytoceramides

Joo Youn Kim[1], Hwan-Soo Yoo[2], Yong-Moon Lee[2], Sekwan Oh[3] and Yeon Hee Seong[1*]
[1]College of veterinary medicine, Chungbuk National university, [2]College of pharmacy, Chungbuk National University, [3]College of medicine, Ewha womans University

Sphingolipids are ubiquitous compounds of cell membranes and their metabolites ceramide, sphingosine and sphingo-1-phosphate (S1P) have important physiological function, including regulation of cell growth and survival. Many stress stimuli increase levels of ceramide. Increased concentration of ceramide induces apoptosis via increasing Ca^{2+} release, while S1P supresses. However, in a low conecentraion, ceramide shows to protect against cell death. In the present study, we investigated protective effect of phytoceramides against Aβ (25-35)-induced neurotixicity in *in vitro* and Aβ (25-35)-induced memory impairment and cerebral ischemia in *in vivo*. Ceramide and S1P inhibited neuronal cell death measured by 3-[4,5-dimethylthiazole-2-yl]-2,5-diphenyl-tetrazolium bromide (MTT) assay in cultured neurons. Memory impairment in mice was established by intracerebroventricular (i.c.v.) microinjection of A β (25-35) (8 nmol) and examined using passive avoidance test. Focal ischemia was created in SD rats (280-300 g) by middle cerebral artery occlusion (MCAo) for 2h and reperfusioin for 24 h. Cerabral infarct volume was evaluated by TTC staining. Phytoceramide improved Aβ (25-35)-induced memory impairment and reduced MCAo-induced infarct volume. These antidementic and antiischmic effects of phytoceramides suggest their roles as novel and promising therapeutics for neurodegenerative diseases including Alzheimer's disease and stroke.
*vepharm@cbnu.ac.kr