



## Protective Effect of D-003 on Renal Ischemia-Reperfusion in Rats

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**SUMMARY.** The effects of D-003, a mixture of higher aliphatic acids purified from sugarcane wax with antioxidant effects, and a grape seed extracts (GSE) on serum creatinine levels and on histological damage, were evaluated in a rat model of renal ischemia-reperfusion (I/R). Rats were subjected to sham operation or renal I/R. One group was treated orally with the vehicle, two were treated with D-003 (250 and 500 mg/kg) and other with GSE (200 mg/kg). Renal morphological alterations were assessed by histopathological examination of haematoxylin-eosin stained. After 24 h of post-ischemic acute renal failure, serum creatinine levels was increased, effect that was significantly decreased by about 30 % and 60 % with D-003 and with GSE, respectively. Compared with sham rats, ischemic controls demonstrated severe damage of renal function and morphology, while both D-003 and GSE treatments protected against these I/R-induced histological abnormalities too. D-003 protected moderately against the increase of serum creatinine and histological findings of I/R-induced renal injury in rats.

**KEY WORDS:** Creatinine, D-003, Grape seed extract, Ischemia-reperfusion, Renal failure, Sugarcane wax.

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