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## Antidiabetic, antilipoperoxidation and hepatoprotective activities of *Fraxinus angustifolia* and *Pistacia lentiscus* extracts

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*Fraxinus angustifolia* (Lamiaceae) and *Pistacia lentiscus* L. (Anacardiaceae) are two common Mediterranean plants used extensively in Algerian traditional medicine to cure inflammatory-related disorders as well as symptoms of diabetes. The anti-diabetic effect of *F. angustifolia* (leaves and bark) and *P. lentiscus* (leaves and fruits) extracts was evaluated using the streptozotocin-induced diabetes model in rats, whereas anti-lipoperoxidation activity was assessed with the malonaldehyde assay after injection of paracetamol to mice. The results indicate that *F. angustifolia* leaf extract (50 mg/Kg of body weight) and *P. lentiscus* leaf extract (100 mg/kg of body weight) induced a significant reduction (60%) of blood glucose level after 2 hours of administration of the extracts. Furthermore, extracts from both plants significantly reduced  $\alpha$ -amylase activity. Analysis of liver homogenates showed an important decrease in the concentration of malonaldehydes in the group of mice treated with plant extracts ( $0.25 \pm 0.006$  and  $0.26 \pm 0.03$  for *F. angustifolia* and *P. lentiscus* extracts, respectively), compared to that of non treated animals ( $0.45 \pm 0.005$ ). Furthermore, plant extracts tested with concentrations up to 200mg/kg of body weight showed no signs of toxicity. Moreover, histological examination of the liver revealed significant protection against paracetamol-induced hepatic necrosis. Phenolic compounds identified in plant extracts could take, at least, partial responsibility for the observed anti-hyperglycemic and antioxidant activities, thereby conferring these plants a promising protective capacity against oxidative stress.

### Biography

Djebbar Atmani has completed his Master of Science degree at California State University, Los Angeles (USA) in 1987 and his PhD at the University of Sétif (Algeria) in 2004. He is the acting Dean of the Faculty of Nature and Life Sciences, University of Bejaia (Algeria). He has published more than 15 papers in reputed journals and has been serving as reviewer of many journals.

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