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Antidiabetic activity and modulation of antioxidant status by *Ocimum canum* in Streptozotocin-induced diabetic rats

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The aqueous extract of *Ocimum canum* (Family: Lamiaceae) leaf was investigated for its antidiabetic effect in Wistar Albino rats. Diabetes was induced in albino rats by administration of streptozotocin (45 mg/kg, I.P). The aqueous extract of *Ocimum canum* at a dose of 100 mg/kg and 200 mg/kg of body weight was administered to diabetes induced rats for a period of 28 days. The effect of aqueous extract of *Ocimum canum* leaf extract on blood glucose, plasma insulin, glycosylated haemoglobin, serum lipid profile low density lipoprotein (LDL), very low density lipoprotein (VLDL), high density lipoprotein (HDL), atherogenic index and the activities of alanine aminotransferase (ALT), aspartate aminotransferase (AST) and alkaline phosphatase (ALP) of all groups were analyzed. Antioxidant enzyme catalases (CAT), superoxide dismutase (SOD), reduced glutathione (GSH), serum thiobarbituric (TBAR) were measured in the diabetic rats. The aqueous extract of *Ocimum canum* leaf elicited significant reductions of blood glucose ($p < 0.01$), lipid parameters except HDL-C, serum enzymes and significantly increased HDL-C and antioxidant enzymes. From the above results it is concluded that aqueous extract of *Ocimum canum*

possesses significant antidiabetic, antihyperlipidaemic and antioxidant effects in streptozotocin induced diabetic rats.

Biography

Alok Kumar Dash received his B. Pharm from IGIPS, M. Pharma from KMIPS and PhD Degree from Suresh Gyan Vihar University, Jaipur, Rajasthan, India. He is working as an Assistant Professor in Institute of Pharmacy, Veer Bahadur Singh Purvanchal University, U.P, India. His field of research focuses is on natural products chemistry, pharmacognosy, pharmacological screening and standardization method development for herbals. He has more than 40 national and international publications and two patents to his credit. He is having 10 years of experience in research and teaching. His biography is published in Asian Admirable Achievers (volume ninth) 2016. He is recipient of most coveted institutional and globally reputed Rashtriya Gaurav Award 2017. His profile is selected for Bharat Vikas Award. He is recipient of "Certificate of Excellence in Reviewing-2017" by European Journal of Medicinal Plant, Science Domain International and has been serving as an Editorial Board Member of International Journal of Modern Botany, Scientific and Academic Publishing, Asian Journal of Chemical Sciences, BMC Complementary and Alternative Medicine, Bioequivalence and Bioavailability International Journal, British Journal of Pharmaceutical research and many more.