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Ethyl acetate extract of *Lagenaria siceraria* attenuates peripheral diabetic neuropathy via inhibition of AGEs and oxidative stress in experimental rats**Anu Kajal and Randhir Singh**

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Diabetic neuropathic pain is amongst the most difficult types of pain to treat mainly due to lack of understanding of its etiology and inadequate relief from available drug therapy. The consumption of food and food products as medicine has been in tradition more than centuries. Therefore, dietary measures can provide potential alternative for treatment of diabetes and its complications. Cucurbitaceae family comprises of numerous vegetables which are used as medicinal agents for a variety of diseases in Ayurveda as well as ancient Chinese medicine system. The most commonly available vegetable of Cucurbitaceae family in India is *Lagenaria siceraria* (Molina) Standley, also known as bottle gourd. Present study focuses on phytochemical investigation of ethyl acetate extract of *L. siceraria* (LEA) fruit and its possible role in amelioration of multiple indices of Diabetic Peripheral Neuropathy (DPN) in Streptozotocin (STZ)-Nicotinamide (NAD) induced T1DM model. Diabetes mellitus was determined by serum glucose and insulin levels after 60th day of STZ administration. Indexed marker of DPN i.e. thermal and mechanical hyperalgesia, motor nerve conduction velocity, levels of nitrosative as well as oxidative stress were found to be altered on 60th day of STZ administration. Oral administration of LEA at doses of 100, 200 and 400 mg/kg for 30 days significantly attenuated hyperglycemia and decreased the pain response in diabetic rats through modulation of oxidative-nitrosative stress. Formation of Advanced Glycation End Products (AGEs) was also reduced. Results suggest that *L. siceraria* might inhibit progression of DPN and could be a possible therapeutic agent for regulating several pharmacological targets for treatment or prevention of diabetic neuropathy.

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