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Phytochemistry Profile and Histopathological Evaluation of *Phaseoleus vulgaris* L beans Ethanolic Extract in Alloxan-Induced Diabetic Rat

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Abstract:*Phaseous vulgaris L* (beans), is one of alternative medicine to treat diabetes mellitus (DM) in Indonesia. We investigated the phytochemistry profiles of ethanol extract of *Phaseous vulgaris* L (EEPV) beans and evaluated the histopathologicalalterations in diabetic rats. Phytochemical profiles were conducted using Ultraviolet Visible (UV) Spectrophotometer, Infra Red(IR) Spectrophotometer and Gas Chromatography Mass Spectrometry (GCMS). Alloxan (120 mg/kg, intraperitoneally)-induced diabetic rats were divided into 5 group (n=5) i.e. NC: normal, P1: diabetic-control, P2, P3 and P4 (200mg/kg, 400mg/kg and 600mg/kg of EEPV, orally) for 28 days. At the end treatment, the rats were sacrificed to obtain the liver and kidney for histopathological evaluation using Haematoxylin and Eosin technique.UVdata showed the presence of conjugated double bond, whileIR spectra identified some functional groupsi.e. hydroxyl group (OH). GCMS informed us 3 peaks with molecule relatives were (1) 177 (C_{12} $H_{14}O_4$;Molecular Weight(MW):222; Retention Time (RT):5.071), (2) 138 ($C_6H_{10}O$ MW:98 RT: 6.611), (3)147($C_{22}H_{42}O_4$; MW:370 RT:16.148), respectively.The liver and kidney histopathological appearance of P4 showed a complete restoration compared to NC whereas on P1 showed a high destruction.EEPV consist of double bond, hydroxyl,and phenolic functional group and was able to restore the liver and kidney destruction ofalloxan-induced diabetic rats at dose 600 mg/kg.
Keywords: Phaseoleus vulgaris L, beans, ethanolic extract, histopathological, diabetic rats.

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