

Antidiabetic Effects and Enzymatic Antioxidant Activity of Chicken Drumstick Mushroom (*Coprinus comatus*) Extract in Diabetic Rats Model

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First Author	
Last Author	
Authors	Ratnaningtyas, NI; Husen, F; Sukmawati, D; Wibowo, ES; Hikam, AR; Aksoy, A;
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Abstract	<p><i>Coprinus comatus</i> (O.F. Mull.) Pers. is a medicinal and edible mushroom containing bioactive compounds known as antidiabetic and antioxidant agents. The pancreatic beta-cells were sensitive to reactive oxygen species (ROS) attacks, which can cause necrosis and disrupt insulin production. Therefore, this research aimed to evaluate the <i>C. comatus</i> ethyl acetate extract for antidiabetic and antioxidant to decrease fasting blood glucose, dipeptidyl peptidase-4 enzyme (DPP-4) levels, and increase glutathione peroxidase (GPx). Subsequently, 24 male Wistar rats were divided into six groups, namely 2- 5 streptozotocin (STZ)-induced 45 mg/kg, 1/HC (without any treatment), 2/NC (negative control), 3/PC (administered metformin 45 mg/kg Body weight (BW), 4-6 (T1: administered 250 mg, T2: administered 500 mg, and T3: administered 750 mg/kg BW extract). The parameters were analyzed using ANOVA, followed by Duncan's multiple range test. According to the results, the extract significantly decreased DPP-4 levels, blood glucose and increased GPx ($p \leq 0.05$). The 500 mg extract effectively reduced blood glucose levels and DPP-4 enzyme as well as increased levels of GPx.</p>
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Author	Dr Dra NUNIEK INA RATNANINGTYAS, M.S