Anti-Obesity Properties Of Katuk Leaves (*Sauropus Androgynus*) Extract To Reduce Risk Factor Diabetes Type 2

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**ABSTRACT**

Obesity is a condition of excess fat accumulation in adipose tissue that affects human health. Cause of obesity is imbalance of calories entered and expended. Obesity can affect anyone of any age and in children is more dangerous because of high risk to get health problems in adult. Diabetes is non-communicable disease and closely related to obesity, especially type 2. More severe obesity condition, the higher possibility of developing diabetes type 2. Prevention and treatment of diabetes can be done through lifestyle changes. However, this prevention are ineffective cause of minimal participation so another effective ways are needed. *Sauropus androgynus* or katuk leaves is vegetable that is often found in Indonesia. Katuk leaves have anti-obesity properties because it contain flavonoid and polyphenol. Study use scooping review by searching for journals that match keyword “Obesity”, “Diabetes Type 2”, “Sauropus androgynus”, “Polyphenol”, ”Flavonoid”. Journals full text in English and Indonesia which can be accessed from 2014-2019. Study using mice strains Swiss Webster show that katuk leaves had potential to reduce weight, appetite, and fat storage contribute to obesity with effective dose of 400mg/kg. This effect cause of their compounds that contribute to anti-obesity properties. Flavonoid playrole in lowering blood glucose level so reducing fat accumulation too. Another study explain effect of katuk leaves is comparable to atidabetic drugs, gibenclamide and miglitol. Next, polyphenol have function to lower fat proliferation cell, adipose cell differentiation, increase lipolysis, and increase b-oxidation of fatty acid. Also polyphenol induce activation of several enzyme, such as sirtuin-1, and nf kappa B which regulates adipogenesis and antioxidant. All of them play a role in decreasing body mass, triglyceride and increasing use of body fat. Katuk leaves extract had anti-obesity properties to reduce risk of diabetes type 2.

**Keyword**: *Sauropus androgynus*, obesity, flavonoid, polyphenol, diabetes type 2