Inhibitory effect of Morinda citrifolia L. on lipoprotein lipase activity.

ABSTRACT

Efficacy of Morinda citrifolia L. leaf (MLE) and fruit extracts (MFE) in inhibiting lipoprotein lipase (LPL) was determined in vitro. The result of the study showed that the highest inhibition on the LPL activity was exhibited by MLE (66%± 2.1%), which is significantly higher than that demonstrated by MFE (54.5%± 2.5%), green tea extract (GTE) (54.5%± 2.6%), and catechin (43.6%± 6.1%). Percent of LPL inhibition increase with concentration of the extracts. Quantitative analysis of the extracts revealed the presence of high levels of (+)−catechin at 63.5 ± 17 and 53.7 ± 5.7 mg/g in MLE and MFE, respectively, although not as high as that found in GTE (530.6 ± 42 mg/g). Appreciable amount of epicatechin was found in all extracts tested, while rutin was only found in MLE and MFE. The study suggested that both leaf and fruit of M. citrifolia may be used as antiobesity agents in body weight management.

Keyword: Catechin; Epicatechin; Lipoprotein lipase; Morinda citrifolia L.