Editorial

Recipe 2, A Thai Herbal Remedy in the Worayokasarn Scripture, for Reducing Obesity

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Recipe 2 is a Thai herbal medical remedy for treating obesity in the Worayokasarn scripture. The recipe consists of three plants: *Terminalia chebula* Retz. (Sa-Mor-Thai) fruits, *Cyperus rotundus* L. (Hua-Haw-Mhoo) rhizomes, and *Tinospora crispa* (L.) Miers ex Hook. f. & Thomson or *Tinospora cordifolia* (Thunb.) Miers (Bo-Ra-Pet) vines.[1] The three herbal ingredients of the remedy showed anti-obese effects by reducing lipid accumulation and lipogenesis. The ethanolic extract of *T. chebula* fruit decreased lipogenesis in obese mice by reducing fatty acid synthase, and increasing fatty acid oxidation through peroxisome proliferator-activated receptors, α (PPARα) and carnitine palmitoyltransferase-1 (CPT-1).[2] After 14 days of treatments, Haritaki or *T. chebula* at 1.05 and 2.10 mg/kg body weight (b.w.) concentrations reduced total cholesterol (TC) and total triglycerides (TG) in hyperlipidemia-induced Wistar rats with an atherogenic diet.[3] Majeed and coworker's presented that Piceatannol, Scirpusin A and Scirpusin B in the *C. rotundus* rhizome extract reduced adipogenesis in 3T3-L1 adipocytes.[4] 450 mg/kg concentrations of aqueous *T. crispa* extract in 0.5% cholesterol chow diet-inducing New Zealand White rabbits showed an effect in reducing blood serum TC, TG and low density lipoprotein-cholesterol (LDL-C) levels, while increasing high density lipoprotein-cholesterol (HDL-C) levels.[5] After the feeding of a high fat diet in rats for 12 weeks, leading to the development of obesity, the obese rats receiving *T. cordifolia* stem powder at 1 mg/g b.w. for 12 weeks had subsided body weight, adiposity index, serum cholesterol, and serum triglyceride.[6]

These scientific studies show the anti-obese effects of the herbal remedy ingredients: reducing lipid accumulation and reducing serum lipids. This remedy may be effective to reduce obesity and improve lipid profile following traditional Thai medical theory.

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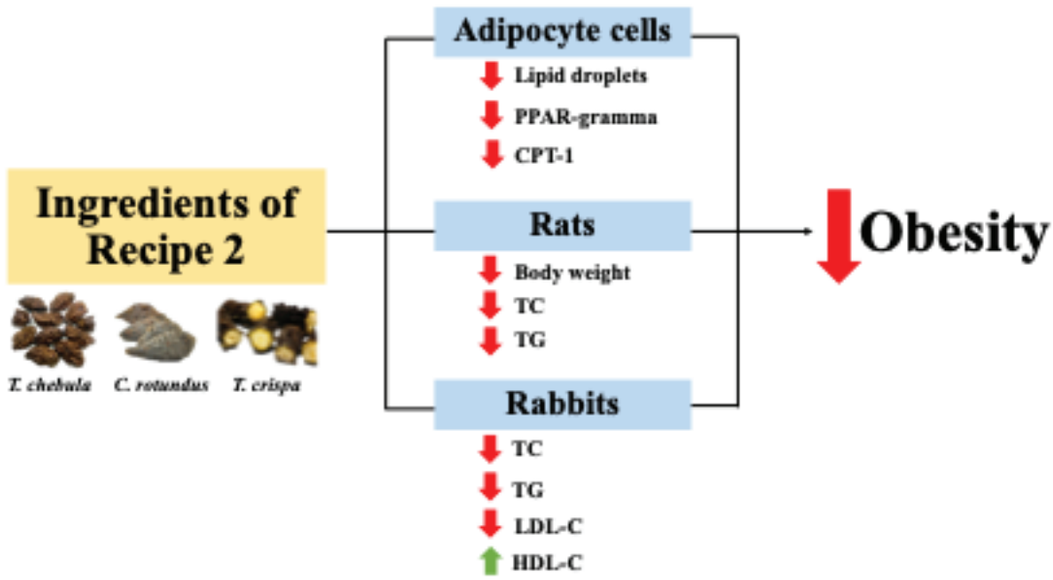

Figure 1 Lipid-lowering activities of the ingredients of Recipe 2 in Worayokasarn scripture.

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