

## INTISARI

### **Profil Lipid dan Karakteristik Digesta Tikus *Sprague Dawley* Hiperkolesterol dengan Fungsi Tiroid Normal setelah Intervensi Diet Tepung Pisang Uter (*Musa paradisiaca Linn*)**

Gangguan fungsi tiroid dapat menyebabkan kondisi hiperkolesterolemia. Hiperkolesterolemia dapat diturunkan dengan mengonsumsi diet hipokolesterolemik seperti diet yang mengandung tinggi pati resisten. Tujuan dari penelitian ini adalah untuk mengetahui efek pemberian tepung Pisang Uter terhadap profil lipid dan karakteristik digesta pada tikus *Sprague Dawley* hiperkolesterol dengan fungsi tiroid normal.

Penelitian ini dilakukan dalam dua tahap. Tahap pertama adalah preparasi dan analisis kandungan pati resisten pada tepung buah utuh, daging buah dan kulit buah. Tahap kedua adalah pengujian bioassay efek hipokolesterolemik dan karakteristik digesta dari tikus *Sprague Dawley* hiperkolesterol dengan fungsi tiroid normal yang diberi pakan tepung Pisang Uter selama 28 hari.

Hasil penelitian menunjukkan kandungan pati resisten tepung daging buah, kulit buah dan buah utuh berturut-turut 17,58%, 11,00% dan 14,39%. Ketiga jenis tepung mempunyai potensi yang berbeda dalam efek hipokolesterolemik ( $p < 0,05$ ). Tepung kulit buah tidak mempunyai efek hipokolesterolemik. Penurunan kolesterol total, Trigliserida dan kolesterol LDL pada tikus yang diberi diet tepung buah utuh 41,9%, 40,21% dan 30,9% dan peningkatan HDL kolesterol 59,85%. Total kolesterol, Trigliserida dan kolesterol LDL menurun sebanyak 31,13%, 30,5% dan 18,6% serta peningkatan kolesterol HDL sebanyak 56,26% pada tikus yang diberi diet tepung daging buah.

Karakteristik digesta berbeda antar perlakuan ( $p < 0,05$ ). Kadar kolesterol digesta tikus dengan diet tepung buah utuh, daging buah dan kulit buah berturut-turut 89,3 mg/100g, 64,69 mg/100g dan 51,9 mg/100g, sedangkan pool SCFA sebanyak 0,49 mmol, 0,18 mmol dan 0,04 mmol, berat digesta tikus 4,13g, 4,09g dan 2,14g, kadar air 85,16%, 81,53% dan 46,09%. Pemberian diet tepung pisang Uter tidak mempengaruhi fungsi tiroid tikus hiperkolesterolemia.

**Kata kunci: Hiperkolesterol, fungsi tiroid normal, pati resisten, tepung Pisang Uter**

## ABSTRACT

### **Lipid Profile and Digesta Characteristics of Hypercholesterolemic *Sprague Dawley* rats with Normal Thyroid Function after Administration of Uter Banana Flour (*Musa paradisiaca Linn*)**

Thyroid dysfunction may promote a hypercholesterolemic condition. Hypercholesterolemic can be lower by consuming hypocholesterolemic diet such as diet containing high resistant starch. The aim of this study was to determine the effect of Uter banana flour on lipid profile and digesta characteristic in hypocholesterolemic *Sprague Dawley* rats with normal thyroid function.

This research was conducted in two stages. The first stage is preparation and resistant starch determination of pulp fruit, peeled fruit and whole fruit flour. The second stage is a bioassay to study the hypocholesterolemic effect and digesta characteristic of *Sprague Dawley* rats with Normal Thyroid Function feeding with Uter banana flour for 28 days.

It was found that Resistant starch content of pulp fruit, pelled fruit and whole fruit flours are 17.58%, 11.00% and 14.39%, respectively. The three types of flour have different potencies in lowering cholesterol ( $p < 0.05$ ). Pulp banana flour has no hypocholesterolemic effect. Decreasing of total cholesterol, triglycerides and LDL cholesterol of 41.9%, 40.21% and 30.9%, respectively and increasing of HDL cholesterol of 59.85%. were found in rats fed pulp fruit flour diet. Total cholesterol, triglycerides and LDL cholesterol of rats fed peeled fruit banana decrease of 31,13%, 30,5% dan 18,6%, respectively and HDL cholesterol increase of 56,26%.

Digesta characteristics differ between treatments ( $p < 0.05$ ). Digesta cholesterol levels of rats with diet whole fruit, pulp fruit and peeled fruit flour were 89.3 mg / 100g, 64.69 mg / 100g and 51.9 mg / 100g, respectively. The pool SCFA as much as 0.49 mmol, 0.18 mmol and 0.04 mmol, digesta weight 4.13g, 4.09g and 2.14g, the water content of 85.16%, 81.53% and 46.09%, respectively. Feeding of Uter banana flour diet did not affect thyroid function in hypercholesterolemic rats.

**Keywords: hypercholesterolemia, normal thyroid function, resistant starch, Uter Banana Flour**