ABSTRAK

PENGARUH DIET TINGGI LEMAK TERHADAP DIAMETER NEURON NITRERGIK ILEUM TIKUS PUTIH (*Rattus norvegicus*) GALUR WISTAR

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Penelitian ini bertujuan untuk mengetahui pengaruh pemberian diet tinggi lemak pada neuron nitrergik ileum tikus putih *(Rattus norvegicus)* jantan galur Wistar. Hewan percobaan yang digunakan adalah sembilan ekor tikus putih jantan galur wistar dengan kisaran bobot 100 gram dan dibagi menjadi tiga kelompok secara acak. Kelompok satu sebagai kontrol (K1) diberi pakan dengan konsentrasi lemak 7%, kelompok dua perlakuan (K2) diberi pakan dengan konsentrasi lemak 10%, dan kelompok tiga perlakuan (K3) diberi pakan dengan konsentrasi lemak 13%.

Tikus dipelihara dalam kandang individual, diberi air minum RO secara *ad libitum*, dan diberi pakan *pellet* sesuai dengan diet tinggi lemak masing-masing kelompok selama 60 hari. Tikus dianasthesi kemudian eutanasi dengan cara dislokasi servikal. Segera setelah itu abdomen dibedah dan diambil organ ileum. Ileum dicuci dengan larutan *phosphate buffer saline* (PBS), direndam dengan formalin 10%, dan sampel tersebut diwarnai dengan teknik pewarnaan histokimia *Nicotinamide Adenine Dinucleotide Phosphate-diaphorase* (NADPH-d). Preparat yang telah diwarnai kemudian diamati gambaran morfologi dan diukur diameter neuron nitrergiknya. Data diameter neuron nitrergik ileum dianalisis statistik dengan uji anova satu arah.

Hasil penelitian diet tinggi lemak yang diberikan pada tikus putih (*Rattus norvegicus)* jantan galur Wistar selama 60 hari menunjukkan bahwa semakin tinggi konsentrasi lemak yang diberikan maka diameter neuron nitrergik ileum berukuran kecil jumlahnya semakin banyak dan semakin sedikit jumlah neuron nitrergik berukuran besar.

Kata kunci : Tikus, lemak, ileum, neuron nitrergi, NADPH-d.

ABSTRACT

THE EFFECT OF HIGH FAT DIET TO DIAMETER OF NEURON NITRERGIC IN ILEUM OF WHITE RATS (*Rattus norvegicus)* STRAIN WISTAR

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The aim of this study was to determine the effect of giving high-fat diets on male rats *(Rattusnorvegicus)* strain wistar inileum neuron nitrergic. The animals used were nine male rats strainwistar with a weight range of 100 grams and were divided into three groups randomly. Group one as a control (K1) was fed with 7% fat concentration, group two treatment (K2) was fed with 10% fat concentration, and group three treatment (K3) was fed with 13% fat concentration.

Rats were kept in individual cages, given RO drinking water ad libitum and given pellet feed according to the high-fat diet of each group for 60 days. Rats were anesthetized and euthanized by cervical dislocation. Immediately the abdomen was dissected and ileal organs were taken. Ileum was washed with phosphate buffer saline (PBS) solution, soaked with 10% formalin, and the sample was stained with histochemical staining technique Nicotinamide Adenine Dinucleotide Phosphate-diaphorase (NADPH-d). The preparations were observed for morphology and measured the diameter of neurons nitrergic. Data on diameter of nitrergicileal neurons were analyzed statistically by one-way ANOVA test.

The results of a studyofhigh-fat diet given to male wistar rats (*Rattusnorvegicus*) for 60 days that given high fat concentration showed that the smaller diameter of the ileal neuron nitrergic was greater and the number of large nitrergic neurons more fewer.

Keywords: Rat, fat, ileum, neuronal neurons, NADPH-d.