PENGARUH *Chlorella vulgaris* Beijerinck TERHADAP PROFIL LIPID TIKUS (*Rattus norvegicus* Berkenhout, 1769) GALUR WISTAR TERINDUKSI STRES

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INTISARI

Stres adalah gangguan kejiwaan/psikis yang ditandai dengan rasa ketidakmampuan, putus asa, anhedonia, penurunan aktivitas, dan pesimisme. Stres dapat mempengaruhi kondisi fisiologis tubuh dengan gejala gangguan metabolisme lipid. *Chlorella vulgaris* merupakan mikroalga yang diketahui berpotensi sebagai alternatif obat antidepresan. Penelitian dilakukan untuk mengetahui profil lipid darah tikus galur wistar setelah diinduksi stres dan pengaruh pemberian *Chlorella vulgaris* terhadap profil lipid darah tikus galur wistar yang diinduksi stres. Penelitian ini merupakan penelitian eksperimental menggunakan 5 perlakuan dengan hewan model *Rattus norvegicus* galur wistar sejumlah 25 ekor yang berusia 2 bulan. Kelompok perlakuan terdiri dari 1 kelompok kontrol, 1 kelompok stres, dan 3 kelompok variasi perlakuan yaitu perlakuan pemberian obat antidepresan, perlakuan pemberian pemberian *Chlorella vulgaris* budidaya, dan perlakuan pemberian *Chlorella* komersial. Induksi stres dilakukan dengan perlakuan yaitu air dingin, air hangat, kandang basah, siklus gelap-terang, dan pemaparan gelombang suara secara acak selama 40 hari. Pemeriksaan profil lipid darah dilakukan di Hari ke-0 setelah tikus diaklimasi, hari ke-40 setelah tikus diinduksi stres, dan hari ke-56 setelah tikus diberikan perlakuan *Chlorella vulgaris* Beijerinck budidaya. Hasil yang diperoleh adalah pada kondisi stress profil lipid darah tikus galur wistar yang mengalami peningkatan kadar trigliserida dan penurunan kadar HDL dan LDL. Pemberian *Chlorella vulgaris* berefek pada penurunan kadar kolesterol total, kadar trigliserida, dan kadar LDL serta peningkatan kadar HDL.

Kata kunci: *Chlorella vulgaris*, profil lipid, stres, antidepresan

THE EFFECT OF *Chlorella vulgaris* Beijerinck Beijerinck ON LIPID PROFILE STRESSED-WISTAR STRAIN RATS (*Rattus norvegicus* Berkenhout, 1769)

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ABSTRACT

Stress is a psychiatric / psychological disorder characterized by a sense of disability, despair, anhedonia, decreased activity, and pessimism. Stress can affect the physiological condition of the body with symptoms of lipid metabolism disorders. *Chlorella vulgaris* Beijerinck is a microalgae that is known to have the potential as an alternative antidepressant drug. The study was conducted to determine the lipid profile of blood wistar strain rats after stress induction and the effect of administration of *Chlorella vulgaris* Beijerinck on blood lipid profiles of stress-induced wistar rats. This research is an experimental study using 5 treatments with 25 models of *Rattus norvegicus* wistar strain, 2 months old. The treatment group consisted of 1 control group, 1 stress group, and 3 groups of treatment variations, namely the treatment of antidepressant medication, the treatment of administration of cultivated *Chlorella vulgaris* Beijerinck, and the treatment of commercial *Chlorella*. Stress induction is carried out by treatments that given to the rats randomly, namely cold water, warm water, wet cage, dark-light cycle, and sound wave exposure for 40 days. Examination of blood lipid profiles was carried out on Day 0 after mice were acclimated, day 40 after rats were induced stress, and day 56 after rats were given treatment of cultivated *Chlorella vulgaris* Beijerinck. The results obtained were the stress conditions of the lipid profile of the wistar strain of rats which had increased was triglyceride levels and who had decreased were HDL levels and LDL levels. Giving *Chlorella vulgaris* Beijerinck had effect on decreasing total cholesterol, triglyceride, and LDL levels along with increasing HDL levels.

Keywords: *Chlorella vulgaris*., lipid profile, stress, antidepressants