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HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH : JURNAL ILMIAH

Judul Artikel Ilmiah : The Effect of Tempeh gembus on Malondialdehyde and Superoxide Dismutase Enzyme Levels in Rats with Diet-Induced Metabolic Syndrome

Penulis Artikel Ilmiah : Pristina Adi Rachmawati, **Diana Nur Afifah***, Ninik Rustanti, Gemala Anjani, Achmad Zulfa Juniarto

Status Pengusul : Penulis pertama/penulis anggota/**penulis korespondensi**

Identitas Jurnal Ilmiah :

- a. Nama Jurnal : Journal of Biomedicine and Translational Research (JBTR)
- b. Nomor/Volume/Hal : Vol 8, No 2 (2022): 91-98
- c. Edisi (bulan/tahun) : Agustus 2022
- d. Penerbit : Faculty of Medicine Universitas Diponegoro bekerjasama dengan Indonesian Society of Human Genetics and Indonesian
- e. Jumlah halaman : 8
- f. DOI artikel (Jika ada) : <https://doi.org/10.14710/jbtr.v8i2.14427>
- g. Alamat web Jurnal : <https://ejournal2.undip.ac.id/index.php/jbtr/article/view/14427>
- h. Terindeks di : Sinta 2, DOAJ, Garuda, Google Scholar
- i. Link Turnitin : https://doc-pak.undip.ac.id/13608/7/TURNITIN_The_Effect_of_Tempeh_gembuson.pdf

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Nilai Total = (100%)		25		23.8
Nilai pengusul =			40% x 23.8 =	9.52

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Kelengkapan dan Kesesuaian Unsur	: Unsur artikel sudah lengkap, meskipun demikian kurang terstruktur dengan baik
Ruang Lingkup dan Kedalaman Pembahasan	: Ruang lingkup keilmuan sesuai bidang ilmu pengusul. Hasil dibahas dengan cukup luas dan dalam disertai referensi yang cukup
Kecukupan & Kemutakhiran Data & Metodologi	: Penelitian eksperimental pada hewan coba yang dilaksanakan dengan standar yang baik. Jumlah sampel cukup
Kelengkapan Unsur dan Kualitas Penerbit	: Jurnal Nasional terindeks SINTA 2
Indikasi Plagiasi	: Tidak ada indikasi plagiasi
Linieritas (Kesesuaian dengan Bidang Ilmu)	: Bidang ilmu linier dengan bidang ilmu pengusul

Semarang, April 2023
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KARYA ILMIAH : JURNAL ILMIAH

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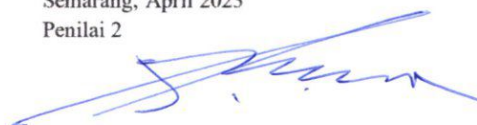
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d. Kelengkapan unsur dan kualitas penerbit (30%)		7.5		7
Nilai Total = (100%)		25		23
Nilai pengusul =			40% x 23 =	9.2

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Kelengkapan dan Kesesuaian Unsur	: Artikel lengkap, unsur sesuai
Ruang Lingkup dan Kedalaman Pembahasan	: penelitian ini telah memberikan informasi berharga tentang potensi manfaat Tempeh gembus dalam mengurangi penanda stres oksidatif pada tikus dengan sindrom metabolik.
Kecukupan & Kemutakhiran Data & Metodologi	: Metode penelitian yang digunakan cukup jelas dan terstruktur dengan baik. Peneliti menggunakan desain eksperimental post-test only, yang merupakan desain yang sederhana dan cepat. Namun, kelemahan dari desain ini adalah tidak adanya kontrol pra-perlakuan, sehingga tidak dapat menghilangkan efek variabel lain selain perlakuan.
Kelengkapan Unsur dan Kualitas Penerbit	: Journal Terindeks Sinta 2, DOAJ
Indikasi Plagiasi	: Index similarity 15%, tidak di temukan indikasi plagiasi
Linieritas (Kesesuaian dengan Bidang Ilmu)	: Sesuai bidang ilmu pengusul

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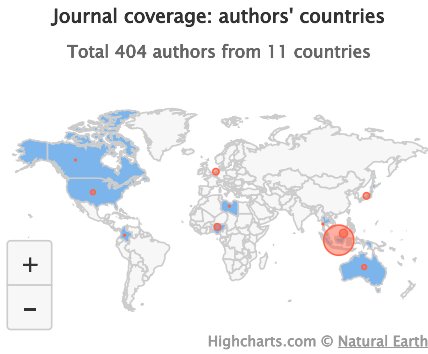
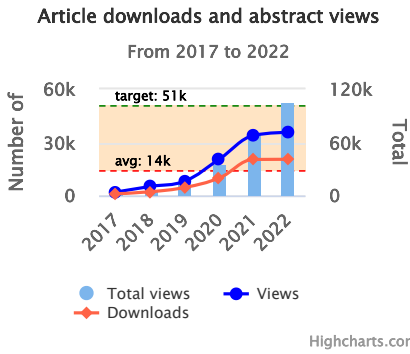


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The Effect of Tempeh gembus on Malondialdehyde and Superoxide Dismutase Enzyme Levels in Rats with Diet-Induced Metabolic Syndrome

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Abstract

Background: High level of malondialdehyde (MDA) and low level of superoxide dismutase (SOD) are markers of oxidative stress and indicate enhance metabolic syndrome. *Tempeh gembus* is a food that has antioxidant properties which can decreased MDA concentration and increased SOD enzyme activity.

Objective: The aim of this research was to determine the effect of *Tempeh gembus* on plasma MDA and serum SOD enzyme levels in metabolic syndrome rats.

Methods: A post-test only experimental design was used in which 25 Sprague Dawley rats were divided into 5 equal groups of 2 control groups (K- and K+) and 3 treatment groups (P1, P2, P3). Metabolic syndrome was induced in the K+ control and the 3 treatment groups. *Tempeh gembus* were given for 4 weeks with the doses of 2.5g (P1), 5g (P2), and 7.5g (P3). Plasma MDA levels were measured by the Thiobarbituric Acid Reactive Substance (TBARS) method and serum SOD enzyme levels were measured by the Enzyme Linked Immunosorbent Assay (ELISA) method. The statistical analysis used One Way Anova test.

Results: *Tempeh gembus* significantly decreased plasma MDA levels of metabolic syndrome rats (P=0.000) but had no significant effect on serum SOD enzyme levels in each treatment group (P=0.449).

Conclusion: The dose of 7.5g *Tempeh gembus* was the most effective dose in reducing the plasma MDA level. *Tempeh gembus* in the 3 treatment doses significantly decreased plasma MDA levels but had no significant effect on serum SOD enzyme levels.

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Keywords: malondialdehyde; metabolic syndrome; superoxide dismutase; tempeh gembus

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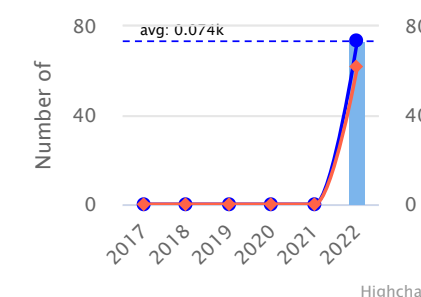
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