

**PENGARUH AIR REBUSAN DAUN GAHARU  
(*Aquilaria malaccensis*) PADA IKAN ZEBRA (*Danio sp.*)  
HIPERLIPIDEMIA**

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**INTISARI**

Ikan zebra telah banyak digunakan sebagai hewan model alternatif untuk beberapa penelitian fisiologis yang memiliki kesamaan dengan mammalia. Kemiripan beberapa sistem fisiologis dengan manusia, serta kemudahan dalam pemeliharaan menjadi pertimbangan dalam pemilihan hewan model ini. Penelitian ini bertujuan untuk menguji potensi daun gaharu (*Aquilaria malaccensis*) dalam menurunkan kadar lipid pada ikan zebra (*Danio sp.*) sebagai hewan model hiperlipidemia. Pemilihan daun *A. malaccensis* sebagai bahan terapi hiperlipidemia karena memiliki beberapa senyawa metabolit sekunder yang berpotensi sebagai antihiperlipidemia. Larva ikan zebra yang digunakan berumur 5dpf. Larva ikan zebra diinduksi hiperlipidemia menggunakan 0,1% larutan kuning telur puyuh selama 48 jam. Larva kemudian diberi perlakuan air rebusan *A. malaccensis* selama 24 jam. Dosis air rebusan *A. malaccensis* didasarkan pada uji toksisitas dengan metode MNLC (*Maximum Non-Lethal Concentration*). Parameter pengamatan hasil perlakuan meliputi pengamatan pewarnaan ORO dan pengukuran konsentrasi kolesterol dengan metode spektrofotometri. Konsentrasi maksimum yang dapat diberikan kepada larva ikan zebra berdasarkan uji MNLC air rebusan *A. malaccensis* adalah 0,5 mg/ml. Hasil pengamatan ORO pada perlakuan air rebusan *A. malaccensis* menunjukkan adanya penurunan intensitas warna merah sebesar 8,75%, membuktikan bahwa air rebusan berhasil menurunkan kadar lipid larva. Pengukuran spektrofotometri berkorelasi positif dengan hasil perwarnaan ORO, kadar kolesterol larva perlakuan air rebusan *A. malaccensis* mengalami penurunan sebesar 78,94%. Hasil tersebut menunjukkan bahwa air rebusan daun *A. malaccensis* memiliki potensi sebagai antihiperlipidemia dan dapat dipelajari menggunakan larva ikan zebra.

**Kata kunci:** Gaharu, Hiperlipid, Ikan Zebra, *Maximum Non-Lethal Concentration*

**THE EFFECT OF GAHARU LEAF DECOCTION  
(*Aquilaria malaccensis*) ON ZEBRAFISH (*Danio sp.*) HYPERLIPIDEMIA**

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**ABSTRACT**

Zebrafish have been widely used as an alternative animal model for several physiological studies that have similarities to mammals. The similarity of several physiological systems to humans, also ease of maintenance are considerations in selecting this animal model. This research aim is to study the potential of gaharu leaves (*Aquilaria malaccensis*) in reducing lipid levels in zebrafish (*Danio sp.*) as an animal model of hyperlipidemia. The leaves of *A. malaccensis* were chosen as a therapeutic ingredient for hyperlipidemia because they contain several secondary metabolites that have the potential to act as antihyperlipidemia agents. The zebrafish larvae used in this study aged 5 dpf. Zebrafish larvae were induced hyperlipidemia using 0.1% quail egg yolk solution for 48 hours. The larvae were then treated with *A. malaccensis* decoction for 24 hours. The dose of *A. malaccensis* decoction is based on a toxicity test using the MNLC (Maximum Non-Lethal Concentration) method. Observation parameters for treatment results include observing ORO staining and measuring cholesterol concentration using the spectrophotometric method. The maximum concentration that can be given to zebrafish larvae based on the MNLC test of *A. malaccensis* decoction is 0.5 mg/ml. The results of ORO observations on *A. malaccensis* decoction treatment showed a reduction in red color intensity of 8.75%, proving that the decoction was successful in reducing larval lipid levels. Spectrophotometric measurements were positively correlated with the results of ORO staining, the cholesterol levels of larvae treated with *A. malaccensis* decoction decreased by 78.94%. These results indicate that *A. malaccensis* leaf decoction has antihyperlipidemic potential and can be studied using zebrafish larvae.

**Keywords:** Agarwood, Hyperlipidemia, Maximum Non-Lethal Concentration Test, Zebrafish.