

**UJI AKTIVITAS ANTIULCER EKSTRAK ETANOL DAUN LARUNA  
(*Chromolaena odorata*. L) TERHADAP TIKUS (*Rattus norvegicus*) YANG  
DIINDUKSI ASETOSAL DAN POTENSINYA SEBAGAI INHIBITOR  
HISTAMIN 2 SECARA IN SILICO**

**ABSTRAK**

**Latar Belakang :** Penyakit ulkus peptikum merupakan gangguan gastrointestinal yang umum dan berdampak signifikan terhadap kesehatan. Namun, penggunaan jangka panjang obat sintetik seringkali menimbulkan efek samping. Banyak penelitian berfokus pada senyawa alami yang memiliki efek gastroprotektif, salah satunya adalah golongan flavonoid. Memiliki kemampuan melindungi mukosa lambung. Dengan demikian, senyawa alami seperti ekstrak daun laruna berpotensi dikembangkan sebagai terapi alternatif yang lebih aman dalam pengobatan ulkus peptikum. Banyak tumbuhan memiliki manfaat dalam penyembuhan penyakit, tetapi belum diketahui secara pasti ikatan antara zat aktif yang terkandung didalamnya. Terkait hal ini dilakukan metode in silico untuk memahami dan memprediksi serta menggambarkan interaksi antara molekul obat sebagai ligan dengan reseptor

**Tujuan Penelitian :** Penelitian ini bertujuan untuk mengetahui bagaimana reaksi antara reseptor histamin 2 dan zat aktif (ligan) secara In Silico dan berapakah dosis yang efektif serta bagaimana pengaruh pemberian ekstrak daun Laruna (*Chromolaena odorata*. L) terhadap kondisi tukak lambung pada tikus (*Rattus Norvegicus*)

**Metode Penelitian:** Metode penelitian ini adalah eksperimental laboratorium dengan melakukan serangkaian penelitian mulai dari ekstraksi hingga pengujian Aktivitas Antiulcer Ekstrak Etanol Daun Laruna (*Chromolaena odorata*. L) Terhadap Tikus (*Rattus norvegicus*) yang Dinduksi Asetosal dan Potensinya Sebagai Inhibitor Histamin 2 Secara In Silico

**Hasil Penelitian:** Pada in silico metode dokin senyawa yang paling negatif *biding afinitinya* yaitu luteolin -7,7 sedangkan pada kontrol positif sendiri memiliki *biding afiniti* -7,6. Ekstrak etanol daun laruna dosis 300mg/kg, 400mg/kg dan 500mg/kg efektif menyembuhkan, mengurangi jumlah tukak dan tidak ada perbedaan dengan yang signifikan dengan kontrol positif  $P>0,05$

**Kata Kunci :** Antiulcer, inhibitor Histamin 2, *Chromolaena odorata*. L, In Silico

**FACULTY OF MEDICINE AND HEALTH SCIENCES UNIVERSITY OF  
MUHAMMADIYAH MAKASSAR**

**Thesis**

**ACTIVITY OF ANTIULCER EXTRACT OF ETHANOL DAUN LARUNA  
(*Chromolaena odorata*. L) ON RATS (*Rattus norvegicus*) INDUCED BY  
ACETOSAL AND ITS POTENCY AS AN INHIBITOR OF HISTAMINE 2  
IN SILICO**

**ABSTACT**

**Background:** Peptic ulcer disease is a common gastrointestinal disorder that has a significant impact on health. This disease is generally caused by the use of nonsteroidal anti-inflammatory drugs (NSAIDs), *Helicobacter pylori* infection, and stress. Treatment for peptic ulcer disease generally involves acid-neutralizing drugs. However, long-term use of synthetic drugs often causes side effects such as kidney dysfunction. Many studies are now focusing on natural compounds with gastroprotective effects, one of which is the flavonoid group. These compounds have the ability to protect the stomach lining. Therefore, natural compounds such as Laruna leaf extract have the potential to be developed as a safer alternative therapy for the treatment of peptic ulcers. Many plants have benefits in healing diseases, but the exact relationship between the active compounds they contain is not yet fully understood. In this context, an in silico method was employed to understand, predict, and describe the interaction between the drug molecule as a ligand and the receptor.

**Research Objective:** This study aims to determine how the interaction between the histamine 2 receptor and the active compound (ligand) occurs in silico, what the effective dose is, and how the administration of Laruna leaf extract (*Chromolaena odorata* L) affects gastric ulcer conditions in rats (*Rattus Norvegicus*)

**Research Method:** The research method used was an experimental laboratory study involving a series of experiments from extraction to testing the antiulcer activity of ethanol extract from Laruna leaves (*Chromolaena odorata* L) on rats (*Rattus norvegicus*) induced by acetosal and its potential as a histamine-2 receptor Histamine 2 In Silico

**Research Results:** In the in silico method, the compound with the most negative binding affinity was luteolin -7.7, while the positive control itself had a binding affinity of -7.6. Ethanol extracts of Laruna leaves at doses of 300 mg/kg, 400 mg/kg, and 500 mg/kg were effective in healing, reducing the number of ulcers, and showed no significant difference compared to the positive control ( $P > 0.05$ ).

**Keywords:** Anti-ulcer, histamine 2 inhibitor, *Chromolaena odorata* L., in silico