

ABSTRACT

Malaria is a disease that is dangerous to humans. Various attempts to find a drug that can overcome this disease. However, resistance from parasites to drugs is still found. Therefore we need an alternative medicine that can overcome this resistance problem. To find these alternative drugs, testing activities are needed in the laboratory. However, this requires a lot of time and money. One such alternative substance is fusidic acid which is known to have good potential to become a compound of anti-malaria agents. However, the IC₅₀ value of fusidic acid compounds is still high so the optimization of fusidic acid derivatives is needed. In studies like this, the Quantitative Structure Activity Relationship (QSAR) method is commonly used. Mainly to predict the chemical properties of a compound. In hopes of creating predictive models of hereditary compounds that have better anti-malaria activity, the authors use the QSAR Method by Using Genetic Algorithms for feature selection and Artificial Neural Networks to create predictive models.

Keywords: Fusidic Acid, Quantitative Structure Activity Relationship, Genetic Algorithms, Artificial Neural Networks Introduction