

**ABSTRACT**  
**(*LITERATURE REVIEW*)**

**IN VIVO ASSESSMENT OF THE NEPHROPROTECTIVE EFFECTS OF  
HERBAL PLANTS ON GENTAMICIN-INDUCED NEPHROTOXICITY**

**Erlyn Dwi Cahyani**

Gentamicin is an aminoglycoside antibiotic that is widely used in the treatment of gram-negative infections. Based on research that has been done, gentamicin triggers the production of free radicals that induce nephrotoxicity. Nephrotoxicity is characterized by increased levels of BUN and creatinine as well as renal histopathological damage which includes tubular necrosis, glomerular atrophy, swelling, degeneration and desquamation of the kidneys. This research was conducted experimentally. The experimental animal used was wistar rat. The test is carried out in several groups. In the control group, rats were not given any treatment. In the gentamicin treatment group, rats were given gentamicin alone with varying doses. In the plant extract treatment group, rats were given gentamicin and then given the tested herbal plant extract. The plants tested were herbal plants that contain antioxidants. The nephroprotective mechanism of antioxidants is to capture free radicals in the body.

The results showed that there were differences in the results of measurements of BUN and creatinine levels in each treatment group. Histopathological test results, BUN and creatinine levels in the group that received the herbal plant extract treatment were better than the group that was only given gentamicin. From the tests conducted, it is known that the antioxidant effect of the tested plant extracts is effective as a nephroprotector and can prevent nephrotoxicity due to gentamicin.

**Keywords:** Gentamicin, Antioxidant, BUN, Creatinine, Wistar Rat