

**Efek Neuroprotektor dan Neuroterapi
Ekstrak Akar *Acalypha indica* Linn (Akar Kucing)
secara *Eks Vivo* dan *In Vivo***

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The studies of the neuro-protection and neuro-therapy of *Acalypha indica* Linn. extract have already done. This extract has also proven as neuro-protection and neuro-therapy, both *ex vivo* on m. gastrocnemius of frog and *in vivo* on frog, beside anti-urosemic and anti-diabetic's effect.

The experimental studies were done on 4 groups of frog, 2 groups for *ex vivo* and 2 groups for *in vivo* studies. The *ex vivo* groups divided into 7 subgroups of application, 4 samples each. There were 5 subgroups of doses: 5; 10; 15; 20; 25 mg and 2 subgroups as control. For *in vivo* study, there were 6 subgroups of application (2 subgroups as control, 4 subgroups of doses 6; 9; 12; 15 mg/frog). Pancuronium Bromide 0.2 %, 4 mg, is used for muscle relaxant. The parameters which have measured in these studies were the electrical activities such as amount and duration (second) of re-polarization; depolarization, resting potential, and the high of spike after stimulation.

The dose of extract *Acalypha indica* Linn. of 15 mg and 20 mg/mL have shown better activities than the lower dose or 25 mg of extract, both as neuro-protection (Ringer - Extract - Pancuronium Bromide) and neuro-therapy (Ringer – Pancuronium Bromide – Extract).

In *in vivo* studies, the administration of extract 9 mg – 15 mg, orally, were proven as neuro-protection before injecting with Pankuronium Bromide 0.2 % (1:40) and neuro-therapy, after injecting with Pankuronium Bromide 0.2 % (1:40). The effects of their recovery time (minutes), more effective compare to their negative control, but have not significant different between these dose and the positive control of Piracetam 50 mg/Kg.BW.

Keywords: neuro-protection, neuro-therapy, Acalypha indica Linn. *ex vivo, in vivo.*