

2<sup>nd</sup> International Conference on

# PHARMACEUTICAL CHEMISTRY

October 02-04, 2017 Barcelona, Spain

## Spermicidal and antifertility activity of *Costus spiralis* leaf ethanolic extract in male rats

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*Costus spiralis* belongs to *Costus* genus which is one of the sources of steroidal saponin that can potentially be an antifertility agent. This study investigated the effect of *Costus spiralis* leaf 70% ethanolic extract on male reproductive system using rat model. The study was divided into four groups of five adult Sprague-Dawley male rats aged 12 weeks; control group, and treatment group those received 12.5; 25 and 37.5 mg/kg body weight of *Costus spiralis* extract. The 70% ethanolic extract of *Costus spiralis* was administered orally once a day for 48 days. Different parameters were studied including sperm motility, sperm count, tubulus seminiferous diameter, spermatocyte pachytene at stage VII-VIII, serum testosterone and spermicidal activity. The result of the analysis showed that the extract dosages had a significant difference ( $p \leq 0.05$ ) on the decrease of sperm motility, tubulus seminiferous diameter, sperm count and number of spermatocyte pachytene at stage VII-VIII compared to control without commensurate decline in serum testosterone levels. The minimum effective concentration of *Costus spiralis* leaf 70% ethanolic extract to totally immobilise sperm within 20 seconds was 20 mg/mL. The results of present experiment suggested that the *Costus spiralis* leaf 70% ethanolic extract exerted a significant anti-spermatogenic effect in male rat.

### Biography

Azrifitria completed her PhD at the Indonesia University School of Medicine. She is the Head of Pharmacy Department at Syarif Hidayatullah Islamic State University Jakarta, Indonesia. She has published several papers in reputed journals and pursued some course in pharmacy field at Tokushima Bunry Japan.

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