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Title: Acute, Reproductive Toxicity and Two-generation Teratology Studies of a Standardized Quassinoid-rich Extract of *Eurycoma longifolia* Jack in Sprague-Dawley Rats

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Abstract: The roots of *Eurycoma longifolia* Jack are popularly sought as herbal medicinal supplements to improve libido and general health amongst the local ethnic population. The major quassinoids of *E. longifolia* improved spermatogenesis and fertility but toxicity studies have not been well documented. The reproductive toxicity, two generation of foetus teratology and the up-and-down acute toxicity were investigated in Sprague-Dawley rats orally treated with quassinoid-rich *E. longifolia* extract (TAF273). The results showed that the median lethal dose (LD50) of TAF273 for female and male rats was 1293 and > 2000 mg/kg, respectively. Fertility index and litter size of the TAF273 treated were significantly increased when compared with those of the non-treated animals. The TAF273-treated dams decreased in percentage of pre-implantation loss, post-implantation loss and late resorption. No toxic symptoms were observed on the TAF273-treated pregnant female rats and their foetuses were normal. The no-observed adverse effect level (NOAEL) obtained from reproductive toxicity and teratology studies of TAF273 in rats was 100 mg/kg body weight/day, being more than 10-fold lower than the LD50 value. Thus, any human dose derived from converting the rat doses of 100mg/kg and below may be considered as safe for further clinical studies. Copyright (C) 2013 John Wiley & Sons, Ltd.

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