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## Ameliorative effects of *Aquilaria malaccensis* leaves aqueous extract on reproductive toxicity induced by cyclophosphamide in male rats

(Article) [\(Open Access\)](#)
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### Abstract

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**Background:** Cyclophosphamide (CP) is a widely used anti-neoplastic and immunosuppressive agent that is associated with adverse side effects including reproductive toxicity. *Aquilaria malaccensis* (AM) is a traditional medicinal plant which was reported to exhibit high anti-oxidant and free radical scavenging properties. The present study was aimed to evaluate the protective effects of AM leaves extract on sperm quality following toxic exposure to CP. **Methods:** Forty-eight male Sprague Dawley rats were allocated into eight groups of six rats ( $n = 6$ ): control, CP only ( $200 \text{ mg kg}^{-1}$ ), AM only ( $100 \text{ mg kg}^{-1}$ ,  $300 \text{ mg kg}^{-1}$  and  $500 \text{ mg kg}^{-1}$ ) and CP + AM ( $100 \text{ mg kg}^{-1}$ ,  $300 \text{ mg kg}^{-1}$  and  $500 \text{ mg kg}^{-1}$ ). Animals were sacrificed after 63 days of treatment and the sperm from the caudal epididymis was taken for sperm analysis. **Results:** The body and the reproductive organs weight, sperm count and motility did not differ between CP and other groups ( $P > 0.05$ ). A significant increase ( $P < 0.05$ ) in percentage of the dead and abnormal sperm were seen in the CP alone treated group compared to the control group. Co-administration of AM to the CP exposed rats significantly reduced the ( $P < 0.05$ ) percentage of abnormal sperm as compared to the CP only group. **Conclusion:** Overall, the present results represent the potential of AM to protect against CP induced reproductive toxicity. © Penerbit Universiti Sains Malaysia, 2019.

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