

OR-81***Pandanus Amaryllifolius Extract has Anticholinergic and Antihistaminergic Effects in the Guinea Pig Ileum***

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Background: *Pandanus amaryllifolius* (PA), from *Pandanaceae* family, is widely distributed in Asia. This study determines the interaction of the ethanolic extract of PA with cholinergic and histaminergic receptors in the guinea pig ileum.

Methods: The effect of PA was investigated in the isolated guinea pig ileum, suspended in organ baths containing aerated Krebs solution at 36.9°C. Different doses of agonists (acetylcholine and histamine) were injected into the organ baths in the presence of different doses of PA or selected antagonists (atropine or mepyramine). The contractions of the tissues were recorded using Powerlab™.

Results & Discussion: Mepyramine and atropine showed competitive reversible antagonistic characteristics on the actions of histamine or acetylcholine. Dose response curves of histamine and acetylcholine in the presence of different doses of PA (1.0mg/mL, 2.5mg/mL and 5.0mg/mL) were shifted to right with significantly increased in the EC₅₀ ($p < 0.05$). Through Schild plot, the pA₂ value obtained for PA on histaminergic receptors was 1.12 while equilibrium coefficient, K_B was 1.31 x 10⁻¹M. On the other hand, the pA₂ value for PA on cholinergic receptors acquired was 0.852 whereas K_B was 7.12M.

Conclusion: PA extract has antimuscarinic and antihistaminic action in the guinea pig ileum. Further studies should be conducted to determine the role of other types of receptors that could be involved in the action of PA on ileum.

Keywords: *Pandanus amaryllifolius*, guinea pig ileum, acetylcholine, histamine.
