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Bioassay-directed isolation of hypotensive alkaloids from *Holarrhena pubescens*

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Holarrhena pubescens belongs to the family *Apocynacea*, commonly known as "Kurchi" is highly reputed in traditional medicine as a remedy for amoebic dysentery and other intestinal ailment. Bioassay-directed fractionation of the ethanolic extract of *Holarrhena pubescens* resulted in the isolation of steroidal alkaloids i.e. holamide and pubscinine. Holamide showed a three proton doublet at 1.45 (J=6.56 Hz) and two AB doubles at 3.17 and 3.00 each for on proton (J=12.06 Hz) in the 1H NMR spectrum suggested that it belongs to conanine series of alkaloid (A class of compound with the steroid nucleus and a five members heterocyclic ring with nitrogen). In contrast, pubscinine showed one methyl at 1.28 while the doublet is missing a three proton singlet was observed at 2.28 due to a vinylic methyl indicated a double bond in the 18,20–epimino ring of the conanine series of alkaloids. In anaesthetized rats, the holamide and pubscinine caused a fall in blood pressure in a dose-dependent manner. Pretreatment of animals with atropine completely abolished the hypotensive response of acetylcholine; whereas hypotensive effect of holamide and pubscinine were not modified by atropine. Similarly, acetylcholine produced contractile effect in guinea-pig ileum, which was antagonized by atropine, however both (holamide and pubscinine) failed to produce any stimulant response on guinea-pig ileum. These data indicate that the steroidal alkaloids i.e. holamide and pubscinine from *Holarrhena pubescens* mediated hypotensive response through a mechanism different to that of acetylcholine.

Biography

K Aftab, PhD, Pharmacologist, graduated from Department of Pharmacology, Faculty of Pharmacy, University of Karachi, Pakistan in 1995. He worked for pharmaceuticals industry as Quality Control & Quality Assurance Professional and was actively involved in research & development of pharmaceutical preparations. He has worked in few medical & dental colleges & universities as Assistant, Associate and became Full Professor of Pharmacology in 2005 and also worked as Visiting Professor in different universities & research institutions. From 2009-2011, he worked in KSA as a Full Professor of Pharmacology. Now, he has published more than 35 papers in scientific journals of international repute and presented many lectures & poster presentations throughout the world; most awards to him were for the science and technology success. He was involved in drug discovery and the scientific evaluation of traditional remedies used in different disorders. His group has developed expertise in a wide range of activities and made valuable contributions on medicinal value of plants by providing pharmacological basis for their usefulness as antihypertensive, cardio-tonic, laxative, antispasmodic and anti-diarrheal. In recent years, he focused on the biodiversity & pharmacological activities of marine organisms.

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