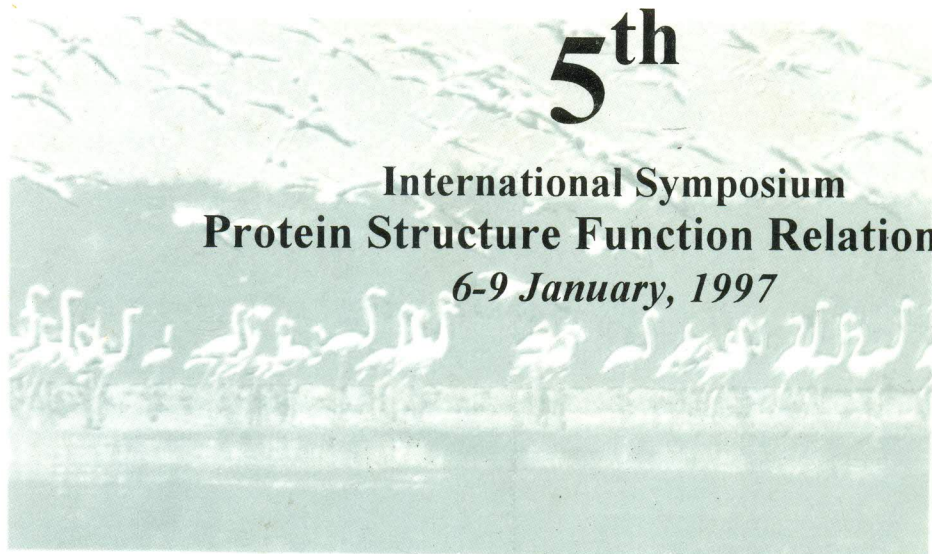


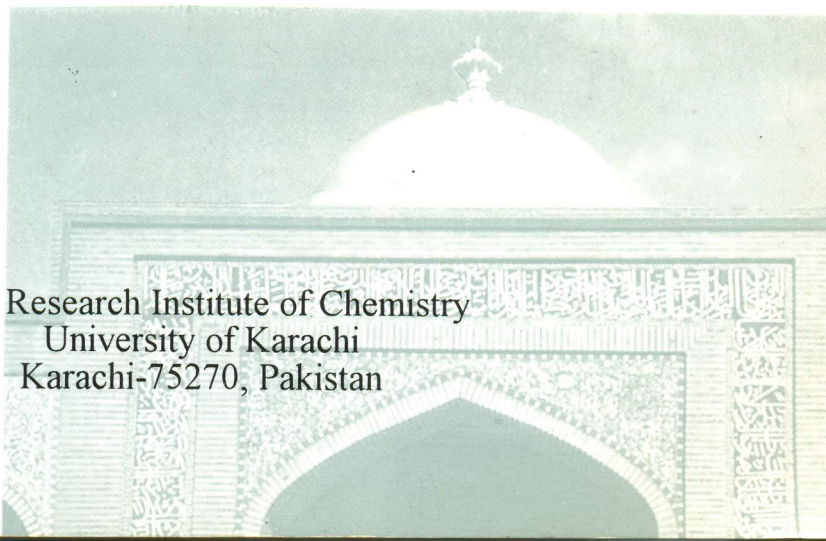
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**EFFECT OF AZADIRACHTIN ON THE INCORPORATION OF
RADIOLABELLED AMINO ACIDS INTO THE PROTEINS OF THE
LOCUST *SCHISTOCERCA GREGARIA***

Azadirachtin was isolated from seeds of neem tree *Azadirachta indica* by solvent extraction and flash chromatography. Although the antifeedant effect of azadirachtin is well characterized, the mode of action on physiological and biochemical level remains obscure. There is evidence that azadirachtin interferes with protein metabolism of insects. ^3H -glycine and ^{35}S -cystine were used as tracers to examine the effects of azadirachtin on the incorporation of these amino acids of the locust (*Schistocerca gregaria*) both *in vivo* and *in vitro*. The tissues examined were fat body ovary, gut brain and corpus cardiacum. It was found that the terpenoid eliminated the stimulatory effects of crude neurohormonal extracts from corpus cardiacum on protein synthesis in fat body and in the ovary, but had no effect on the secretion of stimulation of primary urine. Azadirachtin appears to have direct inhibitory effect on protein synthesis in the mid gut and this could partly account for observed secondary antifeedant effects. Incorporation of ^{35}S -cystine into the polypeptides including glutathione, synthesised in both brain and corpus cardiacum was strongly inhibited by azadirachtin. This suggested that many of the biological effects of the terpenoid are due to interference with neuroendocrine processes.