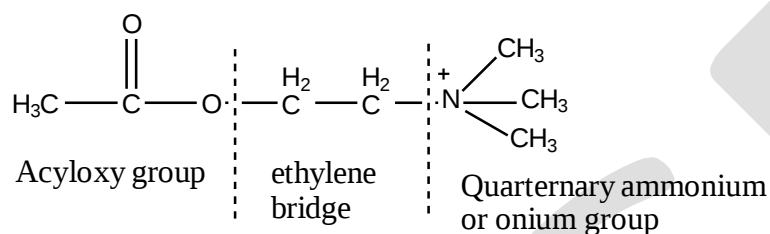


MEDICINAL CHEMISTRY-I – BP402T

UNIT: 3

CLASS: 4

TOPIC: SAR OF PARASYMPATHOLYTICS**SAR:****Ach:-**

-Oxygen atom or ester linkage participate in hydrogen bonding with receptor.

Compound should possess two carbon chain between nitrogen and ester linkage oxygen atom.

-Nitrogen with positive charge and 3 methyl group gives maximum activity.

-Replacement of acetyl group by higher groups like propionyl, butyryl decrease the activity and replacement of terminal methyl group of acyloxy with $-\text{NH}_2$ increase the activity.

e.g. Carbachol

-Addition of methyl group in ethylene bridge at α -position increases nicotinic action and β -position increases muscarinic action.

-Replacement of nitrogen of onium group by sulphur or phosphorus decreases the activity and replacement of all $-\text{CH}_3$ by 'H' have no activity. Replacement of one $-\text{CH}_3$ by ethyl or propyl lead to formation of compound with less activity.