**MPH2D.6 RECENT ADVANCES IN PHARMACOLOGY THEORY** **3 Hrs/Week**

## UNIT-I

**Neurohumoral transmission in Central and Autonomic Nervous system :** Mechanism of Neurohumoral transmission in CNS and ANS, Adrenergic cholinergic, doparminergic, Serotoninergic, Histaminergic, GABA ergic, Glutamate and Purinergic systems.

## UNIT-II

**Autacoid Pharmacology :** A study of the mechanism involved in the formation, release Pharmacological actions and possible physiological role of histamine, serotonin, kinins, prostaglandins, Opioid autacoids, cyclic 3.5 AMP, leukotrienes, polypeptides & nitric oxide in central and peripheral tissues.

## UNIT-III

**Renin-angiotensin system:** Its physiological role, essential hypertension, Interrelationship between rennin angiotensin system and sympathetic nervous system – Pharmacology of Drugs acting on Renin-angiotensin system

## UNIT-IV

**Theories of Drug action:** Principles of drug action, ion channels, enzymes, Drug receptor theory : Types of receptors : G-Proteins, Second messengers and gentherapy, Principle of drug design, structure activity relationship of selected groups like opiod drugs, catecolamines, penicillins, barbiturates, benzodiazepines.

**REFERENCES:**


1. The Pharmacological basis of therapeutics by Joel G. Hardman, Lee E. Limbird and Alfred Goodman Gilman
2. Principles of Medicinal Chemistry by William O. Foye, Tomas L. Lemke & David A. Williams
3. Pharmacology by H.P. Rang, M.M. Dale, J.M. Ritter & P.K. Moore
4. Essentials of Pharmacotherapeutics by F.S.K.Barar
5. Principles of drug action by Golsteins, Aranow and Kalman.