**PHL 512**

**ADVANCED PHARMACOLOGY-I ( 2 +1)**

**Course Contents:** **Hours**

- **General principles:** 2

 Origin of the receptor theory - binding energy and the excitation of

 receptors- how fast dodrugs work - desensitization, receptors and

 calcium signalling, et...

- **Advanced concepts of autonomic nervous system:** 4

 Physiological considerations - recent approach to classification -

 identification of autonomic receptors functionally and using radio

 ligand techniques.

- **The autonomic receptors:** 8

 - The acetylcholine receptor.

 - The adrenergic receptors:

 - & ß-receptors - receptors subtypes chemical

 and functional characterization.

 - Dopaminergic receptor.

 - Purinergic receptor.

- **The chemical transmitters:** 5

 Actions of hormones and neurotransmitters at plasma membrane -

 presynaptic receptors and control of release - release, uptake,

 depletion and repletionof transmitters.

- The pharmacology of cyclic AMP.2

**-** Therapeutic applications of the autonomic drugs.5

**-** New perspectives on the mode of action of drugs influencing 2

 the autonomic transmitters.

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 Total Hours: 28

**PHL 512 - ADVANCED PHARMACOLOGY**

**PRACTICALS:**

**No. Experimen**t

1. Isolated field stimulated G.P. ileum.

2. Isolated innervated rabbit jejunum reserpinized

 (Finkelman's prep.

3. Isolated rat stomach fundus.

4. Isolated atria.

5. Isolated G.P. tracheal chain.

6. Isolated rabbit aorta.

7. Isolated rat's phrenic hemidiaphragm.

8. Isolated G.P. vas deferens.

9. Four-point assay using isolated guinea pig ileum.

10. Two Practical Exams.