As Per PCI Regulations Third Year B. Pharm.

**Semester-V** 

# **EXPERIMENTAL**PHARMACOLOGY-II

(Bridges the Gap Between Animal Models and Computer Simulation Models)



GHANSHYAM PANIGRAHI ARJUN PATRA



# **About The Authors**



GHANSHYAM PANIGRAHI is working as Associate Professor and Head, Department of Pharmacology, Royal College of Pharmacy and Health Sciences, Berhampur, Odisha. He has deep insight into experimental pharmacology and preclinical testing of drugs. He has experience of 12 years in teaching experimental pharmacology to undergraduate and postgraduate students. His fields of research interest are screening of natural products for diabetes mellitus and associated disorders. His research work has been published in more than 30 research articles. He has guided numbers of M. Pharm. and Ph.D. scholars to carry out their research

work. Dr. Panigrahi is a life member of Indian Pharmacological Society (IPS) and The Association of Pharmaceutical Teachers of India (APTI).



ARJUN PATRA obtained postgraduate and doctorate degree from Birla Institute of Technology, Mesra, Ranchi. Recently he has completed Postdoctoral Research in USA under Raman Fellowship funded by University Grants Commission. He has around 15 years of teaching experience in various pharmacy colleges at Berhampur, Moradabad and Jaipur, and currently working as Assistant Professor at Guru Ghasidas Vishwavidyalaya (A Central University), Bilaspur, Chhattisgarh. Dr. Patra has supervised M. Pharm. and Ph.D. students. He has published and presented research papers in national/ international journals/conferences.

Dr. Patra specializes in Pharmacognosy and has studied a wide range of plants for their phytochemical and pharmacological potential. Dr. Patra's major fields of research interest are natural product exploration, nano-delivery of natural products for treatment of cancers and screening of medicinal plants for different pharmacological activities.

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- Introduction to in-vitro pharmacology and physiological salt solutions. 1.
- Effect of drugs on isolated frog heart. 2.
- Effect of drugs on blood pressure and heart rate of dog. 3.
- Study of diuretic activity of drugs using rats/mice. 4.
- DRC of acetylcholine using frog rectus abdominis muscle. 5.
- Effect of physostigmine and atropine on DRC of acetylcholine using frog 6. rectus abdominis muscle and rat ileum respectively.
- Bioassay of histamine using guinea pig ileum by matching method. 7.
- Bioassay of oxytocin using rat uterine horn by interpolation method. 8.
- Bioassay of serotonin using rat fundus strip by three point bioassay. 9.
- Bioassay of acetylcholine using rat ileum/colon by four point bioassay. 10.
- Determination of PA2 value of prazosin using rat anococcygeus muscle (by 11. Schilds plot method).
- Determination of PD<sub>2</sub> value using guinea pig ileum. 12.
- Effect of spasmogens and spasmolytics using rabbit jejunum.
- Anti-inflammatory activity of drugs using carrageenan induced paw-edema model.
- Analgesic activity of drug using central and peripheral methods.



