



# SRI VENKATESWARA COLLEGE OF PHARMACY

*Approved by AICTE & PCI, New Delhi, Permanently Affiliated to JNTUA, Ananthapuramu*

*Accredited by NBA, New Delhi for UG Programme under Tier-II &*

*Accredited by NAAC, Bengaluru*

*Recognized under section 2(f) & 12(B) of UGC Act, 1956*

*Recognized Research Centre for Pharmaceutical Sciences by JNTUA*

**RVS NAGAR, TIRUPATI ROAD, CHITTOOR – 517127, A.P.**

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## **M. Pharmacy – Department of Pharmacology**

**Quality Policy:** Department of Pharmacology envisaged to impart last milestone research through pharmacological research and training to the needy researchers at par with public needs and thrust area of public health research

### **Programme Outcomes:**

1. Relate the acquired scientific information and principles of pharmacokinetics and pharmacodynamics in drug discovery process.
2. Interpret data of pharmaceutical experiments in drug discovery as per the needs of pharmaceutical industries.
3. Translate the high-level of understanding of drug action into key stages in preclinical and clinical research studies.
4. Apply skills to do specialized research in the core and applied areas of pharmaceutical sciences.
5. Evaluate current drug information in the delivery of pharmaceutical care and assure in regard to drug usage and their adverse effects
6. Demonstrate knowledge of professional and ethical responsibilities in clinical and non-clinical laboratory as required by regulatory bodies.
7. Develop an ability to visualize and work on multidisciplinary tasks in the area pharmaceutical and its allied field.
8. Appraise pharmacological model for investigation through logics and problem to solving ability.
9. Develop an ability to utilize novel tools in De novo drug design process to develop new drug candidates

**Course outcomes:**

**Name of the course: Modern Pharmaceutical Analytical Techniques (17S01101)**

1. About the instruments like NMR, Mass spectrometer, IR, HPLC, GC etc.
2. Understand the basic concepts and advances in analytical techniques and theoretical skills of the analytical instruments.
3. Advanced analytical instrumental techniques for identification, characterization and quantification of drugs. The analysis of various drugs in single and combination dosage forms.
4. Skills in selecting the suitable techniques for analysis of drugs and pharmaceuticals.
5. Knowledge for characterization of a drug.
6. Skills in selecting the suitable techniques for analysis of drugs and pharmaceuticals.
7. To apply the knowledge learnt in developing new procedures of their own design.

**Name of the course: Advanced Pharmacology - I (17S01102)**

1. Discuss the pathophysiology and pharmacotherapy of certain diseases
2. Explain the mechanism of drug actions at cellular and molecular level
3. Understand the adverse effects, contraindications and clinical uses of drugs used in treatment of diseases.

**Name of the course: Pharmacological and toxicological screening methods - I (17S01103)**

1. Appraise the regulations and ethical requirement for the usage of experimental animals.
2. Describe the various animals used in the drug discovery process and good laboratory practices in maintenance and handling of experimental animals
3. Describe the various newer screening methods involved in the drug discovery process
4. Appreciate and correlate the preclinical data to humans

**Name of the course: Cellular and molecular pharmacology (17S01104)**

1. Explain the receptor signal transduction processes.
2. Explain the molecular pathways affected by drugs.
3. Appreciate the applicability of molecular pharmacology and biomarkers in drug discovery process.
4. Demonstrate molecular biology techniques as applicable for pharmacology

**Name of the course: Advanced pharmacology - II (17S01201)**

1. Explain the mechanism of drug actions at cellular and molecular level
2. Discuss the Pathophysiology and pharmacotherapy of certain diseases
3. Understand the adverse effects, contraindications and clinical uses of drugs used in treatment of diseases

**Name of the course: Pharmacological and toxicological screening methods-II (17S01202)**

1. Explain the various types of toxicity studies.
2. Appreciate the importance of ethical and regulatory requirements for toxicity studies.
3. Demonstrate the practical skills required to conduct the preclinical toxicity studies.

**Name of the course: Principles of drug discovery (17S01203)**

1. Explain the various stages of drug discovery.
2. Appreciate the importance of the role of genomics, proteomics and bioinformatics in drug discovery
3. Explain various targets for drug discovery.
4. Explain various lead seeking method and lead optimization
5. Appreciate the importance of the role of computer aided drug design in drug discovery

**Name of the course: Clinical research and Pharmacovigilance (17S01204)**

1. Explain the regulatory requirements for conducting clinical trial
2. Demonstrate the types of clinical trial designs
3. Explain the responsibilities of key players involved in clinical trials
4. Execute safety monitoring, reporting and close-out activities
5. Explain the principles of Pharmacovigilance
6. Detect new adverse drug reactions and their assessment
7. Perform the adverse drug reaction reporting systems and communication in Pharmacovigilance.

**Name of the course: Research Methodology and Biostatistics (17S01301)**

1. Learn general research methodology
2. Understand the basic concepts of biostatistics
3. Learn different parametric and non-parametric tests
4. Understand the functions of ethics committees in medical research
5. Learn the guidelines for developing animal facilities
6. Explain the guidelines and importance of medical research
7. Learn the guidelines for the experimentation on animals
8. Understand the genesis of bioethics with special reference to Helsinki declaration