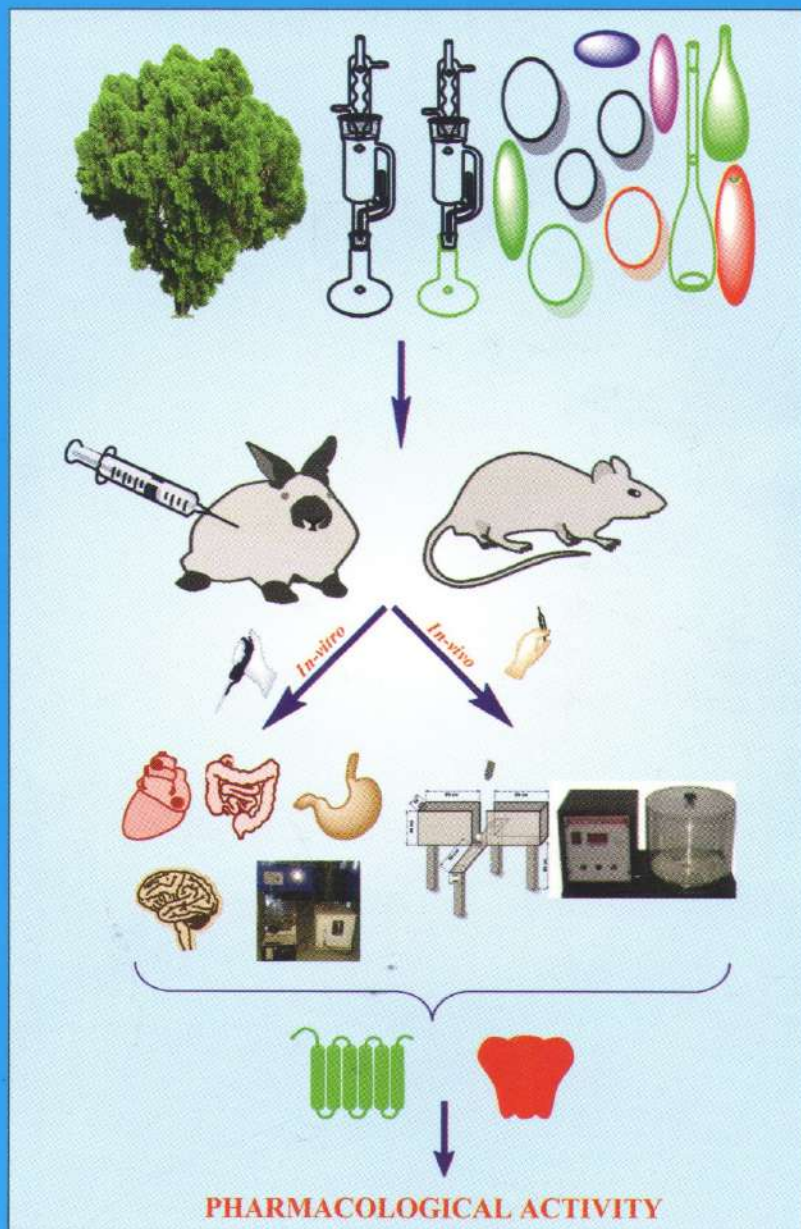


# PHARMACOLOGICAL SCREENING METHODS

Dr. NISHANT S. JAIN





## About the Author



**Dr. Nishant S. Jain** is M. Pharm and Ph.D. in Pharmacology from University Department of Pharmaceutical Sciences, RTM Nagpur University, Nagpur, India. He has total 17 years of teaching and research experience at UG, PG and Ph.D. level. Currently, he is working as an Assistant Professor in Pharmacology at Department of Pharmacology, Institute of Pharmaceutical Sciences, Guru Ghasidas Vishwavidyalaya (A Central University), Bilaspur, C.G. India.

His research area of interest is neurobiology of addiction and neuropharmacology with main thrust on the key targets like Central Histaminergic, Dopaminergic, GABAergic, Nicotinic, Serotonergic system and their role in the development of dependence, tolerance, withdrawal associated symptoms, relapse of drug of abuse like ethanol, caffeine and nicotine. Moreover, to assess the role of these endogenous targets in the pathophysiology of various mood disorders like depression, psychosis, anxiety etc.

On these topics of his research interest, he has published several research publications in reputed international journals. Moreover, he has received a total funding of ₹ 67 lacs to his research project from various National funding agencies like Department of Science and Technology (DST), SERB, AICTE, University Grant Commission (UGC) till date. He is also a recipient of International Travel Grant from DST to present his work at Neuropharmacology Conference, Chicago, USA.



1312, Shivaji Nagar, 'Abhyudaya Pragati',  
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Assistant Professor (Pharmacology),

Institute of Pharmaceutical Sciences

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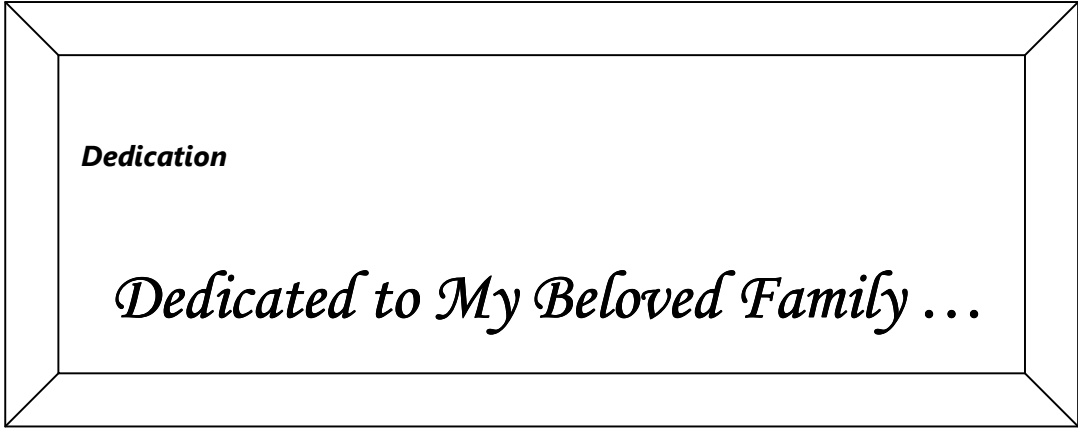
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**Dedication**

*Dedicated to My Beloved Family ...*



# Preface

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The first edition of the book ***Pharmacological Screening Methods*** is presented here. Considering the huge information currently available on the topic of this book in the electronic databases, it is extremely difficult for young pharmacologists with limited training in classical pharmacological methodologies to find sufficient and correct information on the methodological details regarding the pharmacological screening of drugs. Therefore, this book is an attempt to bridge this gap by comprehensively covering the most validated pharmacological methods utilized for discovery/screening of drugs in the treatment of disease. With this outlook, we have diligently included all the pharmacological screening methods using an easy language for the readers especially at **UG (B.Pharm) level** (As per New Pharmacy Council of India (PCI) recommended syllabus). Moreover, to cater the needs of **PG, Ph.D. and Research Level Readers** of all disciplines involved in preclinical screening of drugs, we meticulously incorporated in all the chapters, a panoramic view of various pharmacological screening *in-vivo* and *in-vitro* screening methods used in preclinical experimental pharmacology. Moreover, as described elsewhere, the ***Pharmacological Screening Methods*** are full of text but in this edition, we tried to incorporate the photographic representation of the model/apparatus wherever possible to provide a lively insight to the readers about the model/apparatus, construction and working. In this book, we also described genetic animal models of many diseases for ready reference of the pharmacologists involved in drug discovery. **Thus, we state that this is a concise, diversified and intriguing book on *Pharmacological Screening Methods*, is what every student, scientist or anybody interested in pharmacological screening should have in his shelf.** Although, all the chapters have been thoroughly checked but considering the volumes nature of the book, the readers are requested to communicate their views and suggestions for making the next edition free of anomalies, if any.

I am extremely grateful to the following chapter contributors who contributed to the new edition of this book. Their names and affiliations are given as follows:

1. **Mr. Lokesh Verma**, Department of Pharmacology, Institute of Pharmaceutical Sciences, Guru Ghasidas Vishwavidyalaya (A Central University), Koni, Bilaspur, Chhattisgarh, India.

2. **Mr. Rajesh Choudhary**, Department of Pharmacology, Institute of Pharmaceutical Sciences, Guru Ghasidas Vishwavidyalaya (A Central University), Koni, Bilaspur, Chhattisgarh, India.
3. **Ms. Richa Magar**, Department of Pharmacology, Institute of Pharmaceutical Sciences, Guru Ghasidas Vishwavidyalaya (A Central University), Koni, Bilaspur, Chhattisgarh, India.

Lastly I am thankful to the eminent publishers Mr. Dineshbhai Furia, Mr. Jignesh Furia of Nirali Prakashan for giving me opportunity to write this book. I am also thankful to Mr. S. B. Gokhale Sir for his valuable guidance in this work and the staff Mr. Santosh Bare, Mr. Kiran Valenkar, Mrs. Roshan Khan, Mrs. Anjali Muley for publishing this book in time.

**Dr. Nishant S. Jain**

**GGV, Bilaspur, India**



# Contents

---

## **Unit -I: General Aspects of Pharmacological Screening**

### **Chapters contributed by: Mr. Lokesh Verma**

- |  |         |
|--|---------|
| 1. Introduction to Pharmacological Screening Methods   | 1 – 6   |
| 2. Study of CPCSEA and OECD Guidelines   | 7 – 11  |
| 3. Experimental Common Lab Animals:  |         |
| (a) Different Species and Strains of Animals   | 12 – 20 |
| (b) Popular Transgenic and Mutant Animals (Dr. Nishant S. Jain)  | 21 – 32 |
| 4. Routes of Drug Administration in Laboratory Animals   | 33 – 45 |
| 5. Various Techniques of Blood Collection and Euthanasia   | 46 – 55 |
| 6. Dose Selection, Calculation, Conversions and Preparation of Drug Solutions, Suspension Control. (Dr. Nishant S. Jain) | 56 – 60 |
| 7. Rationale for Selection of Animal Species and Sex for the study (Dr. Nishant S. Jain)                                 | 61 – 64 |

## **Unit-II: Preclinical Screening Models for CNS**

### **Chapters contributed by: Dr. Nishant S. Jain**

- |                                     |           |
|-------------------------------------|-----------|
| 8. Nootropic Agents/Anti-alzheimers | 65 – 86   |
| 9. Antiparkinsons                   | 87 – 99   |
| 10. Antiinflammatory                | 100 – 114 |
| 11. Analgesics                      | 115 – 128 |
| 12. Antipyretics                    | 129 – 131 |
| 13. General Anaesthetics            | 132 – 139 |
| 14. Sedative and Hypnotics          | 140 – 154 |
| 15. Antipsychotics                  | 155 – 171 |
| 16. Antidepressants                 | 172 – 185 |
| 17. Antiepileptics                  | 186 – 194 |
| 18. Antianxiety                     | 195 – 208 |

## **Unit-III: Preclinical Screening Models for ANS**

### **Chapters contributed by: Mr. Rajesh Choudhary**

- |                               |           |
|-------------------------------|-----------|
| 19. Sympathomimetics          | 209 – 214 |
| 20. Sympatholytics            | 215 – 219 |
| 21. Parasympathomimetics      | 220 – 224 |
| 22. Parasympatholytics        | 225 – 229 |
| 23. Skeletal Muscle Relaxants | 230 – 234 |
| 24. Drugs Acting on Eyes      | 235 – 243 |
| 25. Local Anaesthetics        | 244 – 251 |

**Unit –IV: Preclinical Screening Models for CNS****Chapters contributed by: Mr. Rajesh Choudhary**

- |                      |           |
|----------------------|-----------|
| 26. Antihypertensive | 252 – 263 |
| 27. Antiarrhythmic   | 264 – 273 |
| 28. Antianginal      | 274 – 279 |
| 29. Antidyslipidemic | 280 – 285 |

**Unit-V: Preclinical Screening Models for Respiratory System****Chapters contributed by: Dr. Nishant S. Jain**

- |                    |           |
|--------------------|-----------|
| 30. Antiasthmatics | 286 – 302 |
| 31. Antitussive    | 303 – 311 |

**Unit-VI: Preclinical Screening Models for Urinary System****Chapters contributed by: Mr. Rajesh Choudhary**

- |               |           |
|---------------|-----------|
| 32. Diuretics | 312 – 317 |
|---------------|-----------|

**Unit-VII: Preclinical Screening Models for Drugs Acting on Blood****Chapters contributed by: Dr. Nishant S. Jain**

- |  |           |
|--|-----------|
| 33. Antiaggregatory, Coagulants and Anticoagulants | 318 – 340 |
|--|-----------|

**Unit-VIII: Preclinical Screening Models for Diabetes****Chapters contributed by: Ms. Richa Magar (Type II) and Mr. Lokesh Verma (Type I)**

- |                      |           |
|----------------------|-----------|
| 34. Type I Diabetes  | 341 – 347 |
| 35. Type II Diabetes | 348 – 364 |

**Unit-IX: Preclinical Screening Models for GIT****Chapters contributed by: Mr. Lokesh Verma**

- |                  |           |
|------------------|-----------|
| 36. Antiulcer    | 365 – 370 |
| 37. Antimotility | 371 – 376 |
| 38. Antiemetics  | 377 – 385 |

**Unit-X: Preclinical Screening Models for Cancer****Chapters contributed by: Mr. Rajesh Choudhary**

- |                                       |           |
|---------------------------------------|-----------|
| 39. Anticancer and Immunosuppressants | 386 – 392 |
|---------------------------------------|-----------|

**Unit-XI: Research Methodology and Biostatistics****Chapters contributed by: Dr. Nishant S. Jain**

- |   |           |
|---|-----------|
| 40. Selection of Research Topic, Review of Literature, Research Hypothesis and Study Design | 393 – 407 |
| 41. Pre-clinical Data Analysis and Interpretation using Students 't' test and One-way ANOVA | 408 – 415 |
| 42. Graphical Representation of Data  | 416 – 423 |
| <b>Model Index</b>  | 424 – 431 |