

# Introduction to General Pharmacy

Third Edition

for First Semester Bachelor of Pharmacy

aims to bridge the existing gap of long-needed demand for budding pharmacy technocrats, academicians and pharmacists, especially the upcoming professionals of pharmacy.

The main objective of the book is to explain the fundamentals of pharmaceuticals in the simplest possible language, easy for the students to understand. The textbook keeps the balance between the basic essentials and advanced areas of knowledge, apart from the usual topics.

The book is a thoughtful compilation which focuses on the primary aspects for students of pharmacy completing degree and diploma in institutions under various universities/boards. The most distinguishing feature of the book is ample long-answer and short-answer type questions given at the end of every chapter which are highly useful for the readers.

**Gaurav Agarwal** MPharm, PhD

is currently Director, Shikhar Institute of Pharmacy, Budaun, UP. He obtained first class academic degrees from BITS-Pilani and MJP Rohilkhand University. There are numerous projects and publications to his credit, and he has successfully guided more than 20 students of postgraduate and doctorate levels. He is the author of 14 renowned books by CBS Publishers and Distributors such as *Pharmaceutics I* and *Pharmaceutics II*, *Pharmaceutical Technology I* and *Pharmaceutical Technology II*, and *Drug Regulatory Affairs*. He has worked on taste masking techniques at F&D Department of IPCA Lab Research Center, Mumbai. He has an excellent track record in academic institutions of high repute like IFTM University, Moradabad, and SGIT, Ghaziabad, and is actively engaged in teaching, research, industrial tie-ups and administrative service to pharmacy profession.



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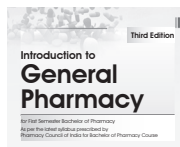
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*to  
my loving kids  
Shreya and Vaidish*



## Preface to the Third Edition

This book *Introduction to General Pharmacy* is designed specifically as per PCI (Pharmacy Council of India) B Pharmacy first semester students. This book covers wide areas & contains a comprehensive description on existing knowledge of Pharmaceutics. The text not only deals with the basic concepts but also emphasizes technical and practical aspects of the subject. The book is primarily intended as textbook for students of Pharmacy for degree and diploma courses.

The book contains numerous specimens, vivid illustrations, tables, diagrams and flow diagrams to present the ideas. The distinguishing feature is ample question bank at the end of the book. The structure and the contents of the book have been changed to reflect modern thinking and current university curricula throughout the world. Another distinctive feature is practical related to subject at the end of the book. In spite of great care there might be some mistakes and deficiencies. I will be grateful for giving suggestions to improve. So go through the content and mail to me at [gbitsian@rediffmail.com](mailto:gbitsian@rediffmail.com).

**Gaurav Agarwal**



## Preface to the First Edition



The book *Introduction to General Pharmacy* is expected to be one of the its kind to span a wide gamut of basic of Pharmaceutics from the very traditional to what is cutting edge today. This book although designated for entry-level students, covers wide areas. It contains a comprehensive description on an overview of existing knowledge of Pharmaceutics and making it appropriate for introductory and institutional purposes.

Being an interdisciplinary subject, it is today covering a wide range of interest both among the students and teaching communities. Taking this increasing interest into account, this book gives a comprehensive introduction to the subject. The text not only deals with the basic concepts but also emphasizes technical and practical aspects of the subject. The book is primarily intended as textbook for students of Pharmacy for degree and diploma courses.

The book contains numerous specimens, vivid illustrations, tables, diagrams and flow diagrams to present the ideas. The distinguishing feature is ample question bank at the end of the book. In spite of great care there might be some mistakes and deficiencies. I will be grateful for giving suggestions to improve upon myself. So go through the contents and do mail to me at [gbitsian@rediffmail.com](mailto:gbitsian@rediffmail.com). Because you share that spirit, the book is dedicated to you.

**Gaurav Agarwal**

## Acknowledgments

It is a moment of great pleasure and immense satisfaction for me to express deep gratitude and gratefulness to Shri Subhash Chandra, Chairman, Shikhar Institute of Pharmacy, Budaun (UP) for his all time support and encouragement.

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I express my gratitude to my father ErV K Agarwal and my mother Asha Agarwal for their all time blessings and moral support. The book is dedicated to my loving kids, Shreya and Vaidish. Last but not least, I express my love to my wife, Shilpi, for her all time inspiration and dedication. She is the major driving force in bringing out this achievement!

To our numerous students, whom I cannot possibly name individually, I thank for their class interactions which have been the guiding spirit in selection of the subject matter and its logical arrangement.

**Gaurav Agarwal**



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