

# **Knowledge Objectives in Medical Pharmacology**

## **2012 Edition**

**Chaired and Edited by**

**Richard Eisenberg, Ph.D. and Carl Faingold, Ph.D.**

### **PREFACE**

The Knowledge Objectives in Medical Pharmacology was originally the product of the effort and vision of Dr. James Fisher and other senior Pharmacologists in 1985. The 2012 edition is intended to describe the minimum essential knowledge and competencies in Pharmacology which should be taught to, and mastered by, students completing their basic medical education. The Knowledge Objectives is organized into sections containing specific and detailed knowledge for each of the major areas of Pharmacology. With the exception of the sections on "Scope of Pharmacology" and "Principles," the information in this edition is presented in the tabular form that was introduced in the last revision. After much discussion by the members of the Association of Medical School Pharmacology Chairs (AMSPC) and the contributors to this revision, a decision was reached to include Clinical Pharmacology aspects in each section. For that, the editors are especially indebted to Dr. Dan Sitar of the University of Manitoba Medical School. Embedded in each section and subsection is a list of the relevant drugs (primary in CAPS, secondary in lower case).

What appears in this document is the consensus of more than 80 Chairs/Course Directors/Faculty who are specialists in their particular areas. Its significance as an educational tool in Pharmacology was acknowledged in the recent AAMC report on "Education In Safe and Effective Prescribing Practices." Added to each section in this revision is the direct relevance connection to specific items this AAMC document and to specific topics detailed by the USMLE.

Pharmacology is accepted as an integrated science. It bridges the gap between the introductory disciplines, such as physiology and biochemistry, and clinical medicine. Therapeutics serves as the cornerstone in the practice of clinical medicine. For this reason, Pharmacology has significant emphasis in the licensure examinations indicating that mastery is essential. Thus, it is important for medical educators to make certain that Pharmacology remains a primary component of every medical school curriculum. In this regard, we hope that the Knowledge Objectives will serve as a guide to curriculum committees as they contend with more competition among courses for time in the medical school curriculum, more diverse and time consuming methods of information delivery, and more self-study and independent learning. The 2012 edition of the Knowledge Objectives has undergone significant change. Increased emphasis on transducing systems effected by receptor activation has been included in each of the drug categories. The profound influence of genomics in altering therapeutic application is cited where applicable. The increased use of herbal

medications has resulted in the addition of a new section.

This document is being made available through the AMSPC and its web site, and is intended to be a dynamic instrument. Users are urged to make suggestions for change and/or enhancements to the Chair of the selected subcommittee (the email address is provided). Following approval by the subcommittee, we will update that section of the Knowledge Objectives.

The editors are grateful to all of the members of AMSPC and their faculties who participated in revising the Knowledge Objectives.