

# Veterinary Pharmacology & Toxicology

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Introduction to the Discipline  
(Lecture-1 : Dated 28.09.2020)



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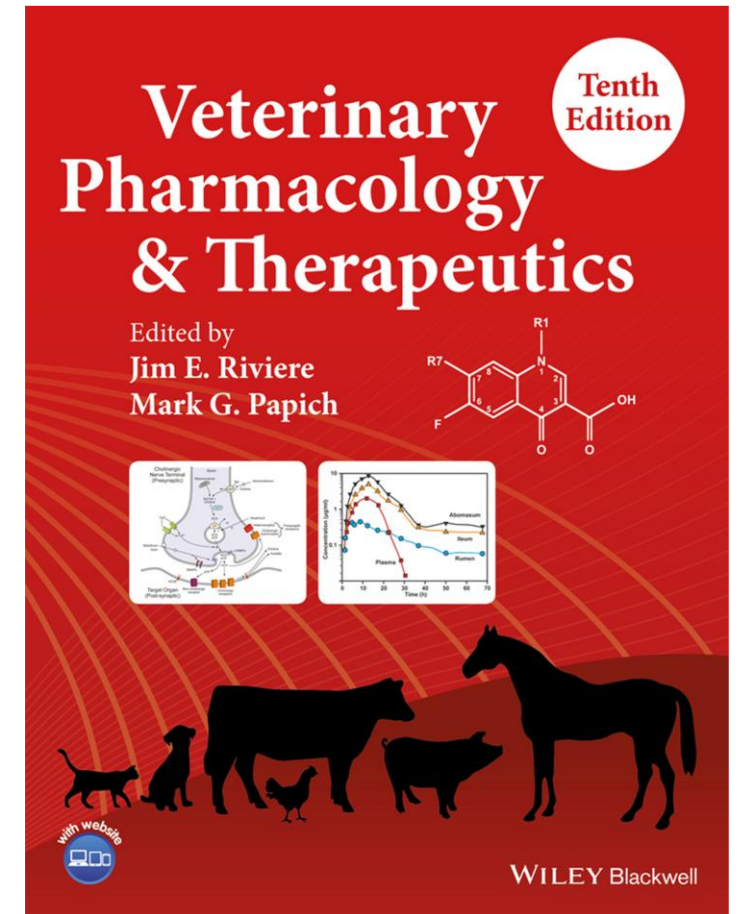
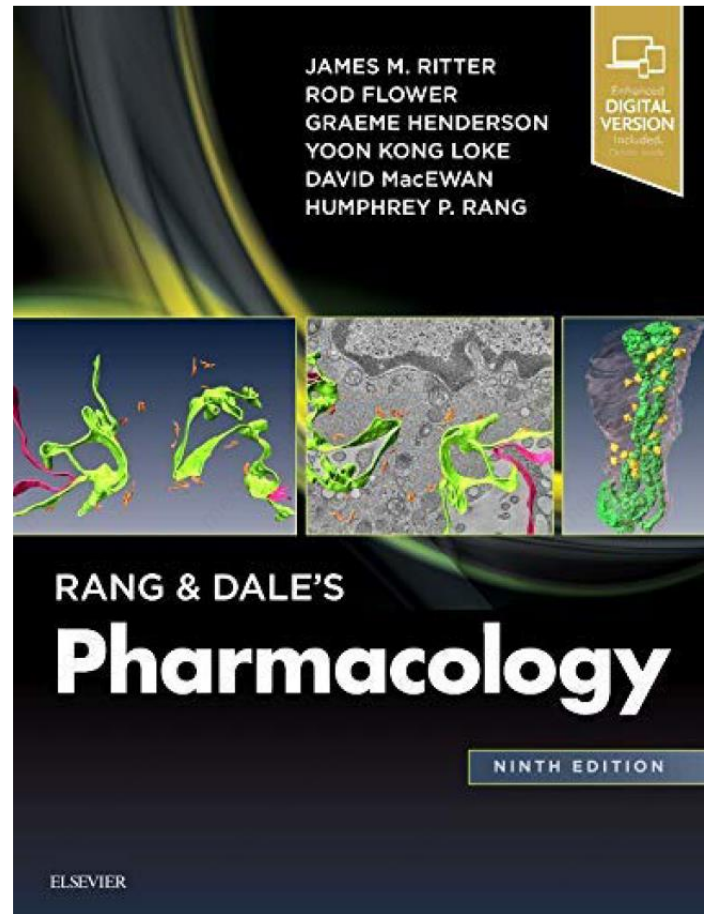
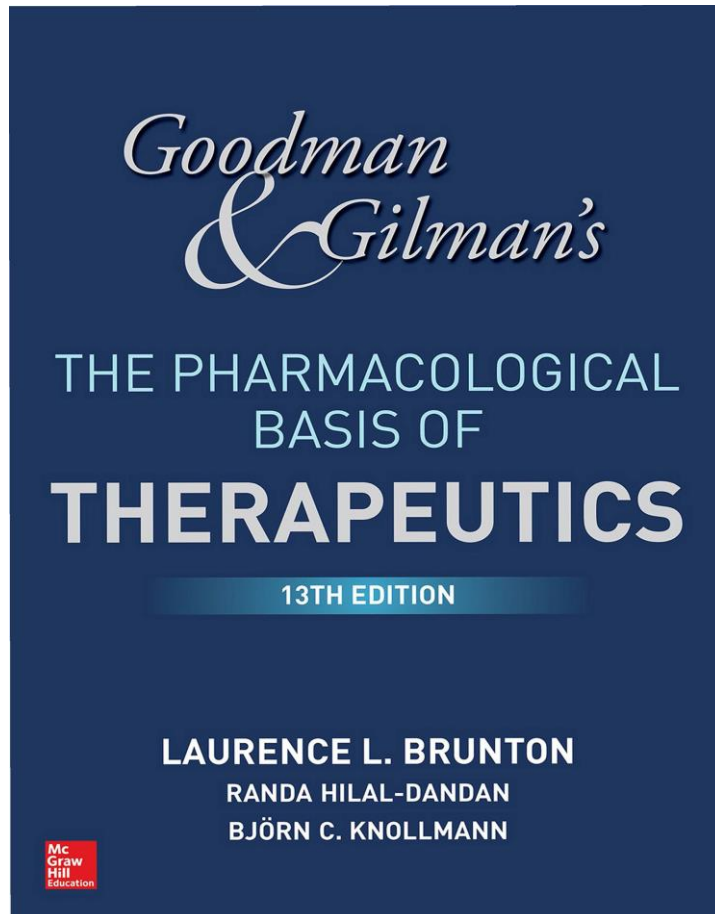


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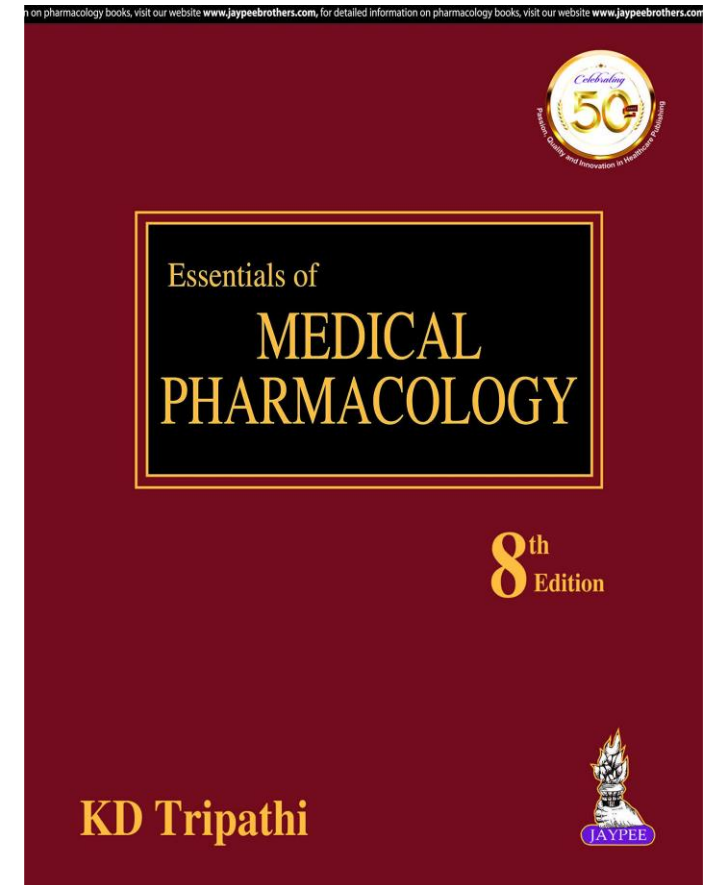
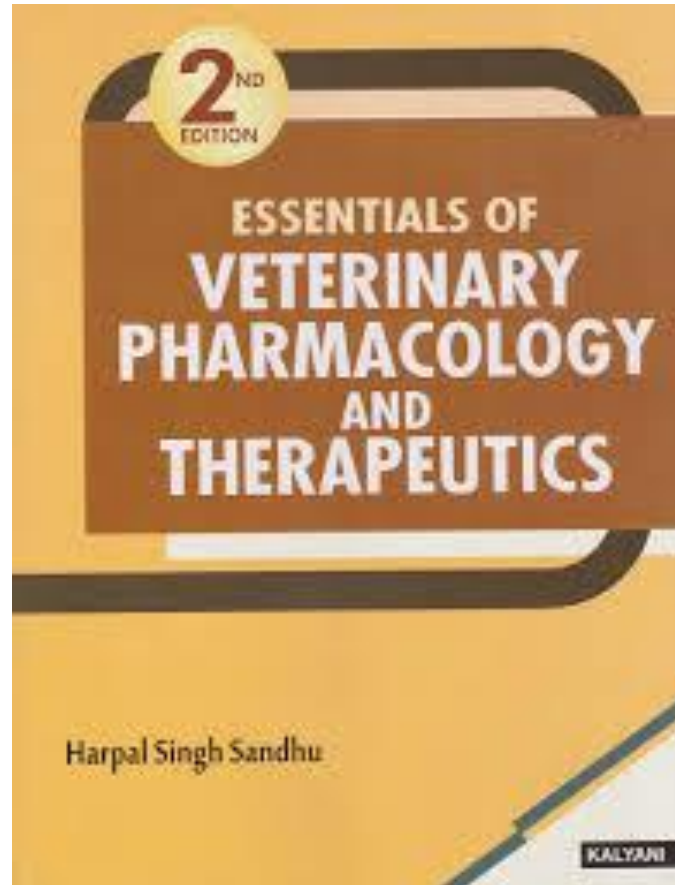
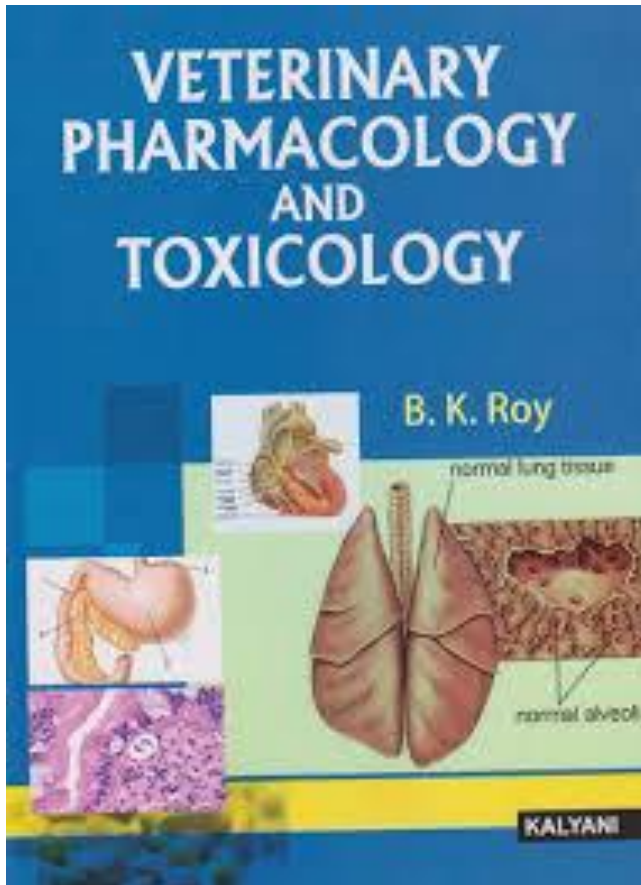
# Textbooks of Pharmacology

## Foreign Authors



# Textbooks of Pharmacology

## Indian Authors



# Pharmacology

- Pharmacology is the science of drugs (Greek: *Pharmacon*-drug; *logos*-discourse in).
- In a broad sense, it deals with interaction of exogenously administered chemical molecules with living systems, and any single chemical substance which can produce a biological response is a 'drug'.
- Pharmacology encompasses all aspects of knowledge about drugs, but most importantly those that are relevant to effective and safe use of drugs for medicinal purposes.

# Pharmacology

contd...

- Pharmacology is the science that broadly deals with the physical and chemical properties, actions, absorption, and fate of chemical substances termed *drugs* that modify biological function.
- It is a discipline that touches most areas of human and veterinary medicine and closely interfaces with pharmaceutical science and toxicology.



# Drug

- French: *Drogue*- a dry herb
- A drug can be defined as a **chemical substance** of known structure, **other than a nutrient** or an essential dietary ingredient, which, when administered to a living organism, **produces a biological effect**.
- It is the **single active chemical entity** present in a medicine that is used for diagnosis, prevention. treatment/cure of a disease.

# Drug

contd...

- The definition of drug also covers **toxins**, which again are not usually administered in the clinic but nonetheless are critical pharmacological tools.
- In everyday parlance, the word *drug* is often associated with **psychoactive substances and addiction** - unfortunate negative connotations that tend to bias uninformed opinion against any form of chemical therapy.

# Medicine

- A *medicine* is a chemical **preparation**, which usually, but not necessarily, **contains one or more drugs**, administered with the intention of producing a **therapeutic effect**.
- Medicines usually contain other substances (excipients, stabilisers, solvents, etc.) besides the active drug, to make them more convenient to use.



# Pharmacokinetics

- Greek: *Kinesis* - movement
- What the body does to the drug.
- This refers to **movement of the drug** in and alteration of the drug by the body; includes absorption, distribution, binding/ localization/ storage, biotransformation and excretion of the drug.
- ADME (Absorption, Distribution, Metabolism and Excretion)

# Pharmacodynamics

- Greek: *Dynamics* - power
- What the drug does to the body.
- This includes **physiological** and **biochemical effects of drugs** and their **mechanism of action** at organ system/subcellular/macromolecular levels.



Thank You