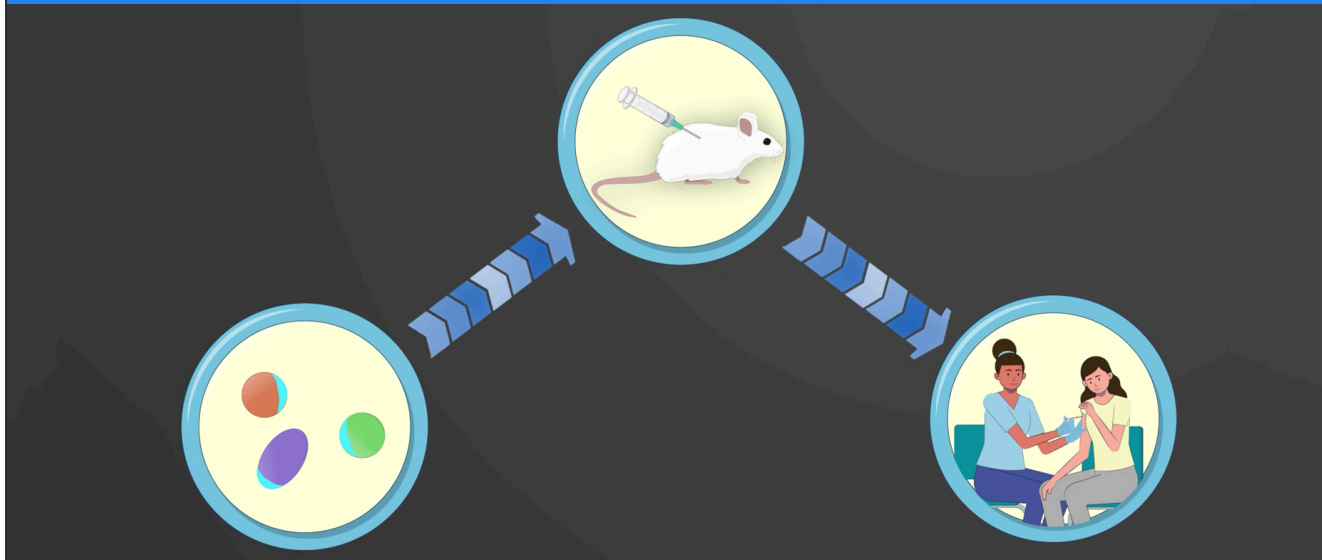


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PHARMACOLOGY



PHARMACOLOGY



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Topics



1200+

Lessons



171

Scientist-In-Action
Videos



Core Learning Objectives

Understand drug development, from preclinical studies to regulatory approval.

Master drug nomenclature, classification, and naming conventions.

Explain drug action at the molecular and cellular levels, including receptor interactions.

Evaluate individual drug response variability, differentiate prescription from nonprescription drugs, and assess adverse effects.

Describe drug processes, including absorption, distribution, metabolism, and excretion.

Grasp pharmacokinetic principles and their role in drug development and dosage regimen design.

01

JoVE Core: Anatomy & Physiology.

List of Chapters

- 1.1 Introduction To The Human Body
- 1.2 Diagnostic Imaging Techniques
- 1.3 Fundamentals Of Chemistry
- 1.4 Biochemistry Of The Cell
- 1.5 Cells And Their Components
- 1.6 Cell Membrane Structure And Functions
- 1.7 Essential Cellular Processes
- 1.8 Tissues Of The Human Body
- 1.9 The Integumentary System
- 1.10 Bone Tissue And The Skeletal System
- 1.11 The Axial Skeleton
- 1.12 The Appendicular Skeleton
- 1.13 The Joints
- 1.14 Muscle Tissue
- 1.15 The Muscular System
- 1.16 The Nervous System And Nervous Tissue
- 1.17 Anatomy Of The Central And Peripheral Nervous System
- 1.18 Functions Of The Central And Peripheral Nervous System
- 1.19 The Autonomic Nervous System
- 1.20 The Special Senses
- 1.21 The Endocrine System

02

JoVE Core: Organic Chemistry.

List of Chapters

- 2.1 Covalent Bonding And Structure
- 2.2 Thermodynamics And Chemical Kinetics
- 2.3 Alkanes And Cycloalkanes
- 2.4 Stereoisomerism
- 2.5 Acids And Bases
- 2.6 Nucleophilic Substitution And Elimination Reactions Of Alkyl Halides
- 2.7 Alkene Structure And Reactivity
- 2.8 Reactions Of Alkenes
- 2.9 Alkynes
- 2.10 Alcohols And Phenols
- 2.11 Ethers, Epoxides, Sulfides
- 2.12 Aldehydes And Ketones

- 2.13 Carboxylic Acids
- 2.14 Carboxylic Acid Derivatives
- 2.15 A-Carbon Chemistry: Enols, Enolates, And Enamines
- 2.16 Dienes, Conjugated Pi Systems, And Pericyclic Reactions
- 2.17 Aromatic Compounds
- 2.18 Reactions Of Aromatic Compounds
- 2.19 Amines
- 2.20 Radical Chemistry
- 2.21 Synthetic Polymers

03

JoVE Core: Pharmacokinetics and Pharmacodynamics

List of Chapters

- 3.1 Pharmacokinetics and Pharmacodynamics: Introduction
- 3.2 Biostatistics: Introduction
- 3.3 Pharmacokinetics: Drug Absorption
- 3.4 Pharmacokinetics: Drug Distribution and Protein Binding
- 3.5 Pharmacokinetics: Drug Biotransformation
- 3.6 Pharmacokinetics: Drug Excretion and Clearance
- 3.7 Pharmacokinetic Models
- 3.8 Nonlinear Pharmacokinetics

04

JoVE Core: Pharmacology

List of Chapters

- 4.1 General Pharmacological Principles
- 4.2 Adverse Drug Effects And Chemical Toxicity
- 4.3 Pharmacokinetics
- 4.4 Pharmacodynamics
- 4.5 Drugs Acting On Autonomic Nervous System: Cholinergic Agonists And Antagonists Agents
- 4.6 Drugs Acting On Autonomic Nervous System: Adrenergic Agonists And Antagonists Agents
- 4.7 Skeletal Muscle Relaxants
- 4.8 Local Anesthetics
- 4.9 Cardiovascular Drugs: Antihypertensive Drugs
- 4.10 Cardiovascular Drugs: Antiarrhythmic And Heart Failure Drugs
- 4.11 Cardiovascular Drugs: Anticoagulants And Antianginal Agents

- 4.12 Drug Abuse and Addiction
- 4.13 Drugs for Pain Management: Opioid Analgesics and General Anesthetics
- 4.14 Pharmacotherapy of Psychosis and Mania
- 4.15 Pharmacotherapy of Depression and Anxiety Disorders
- 4.16 Anxiolytics, Sedatives and Hypnotics
- 4.17 Pharmacotherapy of the Epilepsies
- 4.18 Introduction to Respiratory System Drugs
- 4.19 Lower Respiratory Disorders
- 4.20 Other Respiratory Disorders
- 4.21 Drugs for Peptic Ulcer Disease
- 4.22 Drugs Affecting Gastrointestinal Motility
- 4.23 Drugs for Chronic Bowel Disorders
- 4.24 Drugs for Nausea and Vomiting
- 4.25 Insulin and Hypoglycemic Drugs

05 Basic Biology.

List of Topics

- 5.1 General Laboratory Techniques
- 5.2 Lab Safety

06 Clinical Skills

List of Topics

- 6.1 Nursing Skills

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