OPJS UNIVERSITY SCHOOL OF PHARMACY



DEFINITION OF PHARMACY

1. Pharmacy: Derived from the Greek word Pharmakon means medicine or drug.

2. Pharmacy: Is the art and science of preparing, dispensing and proper utilization of medications and the provision of drug-related information to the the public.

DEFINITION OF DRUG

According to the FDA (Food and Drug Administration), Drug is a substance intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease.







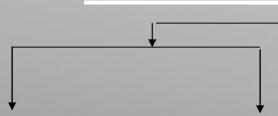
- ► The material may be:
- Natural in origin (plant-animalminerals).
- 2. Synthetic drugs like aspirin.
- 3. Semi synthetic like ampicillines.







PHARMACY PROFESSION



Innovating new Drugs

Screening for effect and safety

Analysis

Formulation

In process quality control

Production

Final quality control

Distribution

Patient services

Direct Activities

- Hospital Pharmacy
- Clinical Pharmacy
- Community Pharmacy

Drug Services

Indirect activities

- Drug promotion
- Family planning program
- Dehydration treatment program
- Bio chemical analysis- National Screening
- Microbiological analysis Preventive Measures
- Immunological analysis For epidemic diseases

PHARMACIST CAREER

- 1. Community pharmacist
- 2. Hospital pharmacist
- 3. Clinical pharmacist
- 4. Industrial pharmacist
- 5. Medical representative pharmacist
- 6. Academic (research) pharmacist

AIMS OF MODERN PHARMACEUTICAL EDUCATION

Provide scientific background

Provide professional skills andknowledge

Provide business training

Provide broad general education



REAL PHARMACY PRACTICAL CLASSES PROVIDES KNOWLEDGE OF

- Basic Laboratory skills
- Handling of apparatus
- Handling of chemicals
- Handling of biological compounds
- Safety measures
- Documentations

Nature of practical classes in pharmacy

- Evaluation of drugs
- Compounding of drugs
- 3. Extraction of drugs from natural source
- 4. Titrations
- 5. Synthesizing new drugs
- 6. Evaluation of biological properties
- 7. Manufacturing formulations
- 8. Packing of drugs
- 9. Stability studies
- 10. Health and safety measures



LIST OF PHARMACY PRACTICAL'S AND LABORATORIES

- 1 Pharmaceutics
- 2. Pharmacognosy
- 3. Pharmaceutical chemistry
- 4. Biochemistry
- 5. Anatomy physiology
- 6. Pharmacology & toxicology
- 7. Pharmaceutical Analysis
- 8. Pharmaceutical biotechnology
- 9. Clinical Pharmacy



SOP LABORATORY OF PHARMACEUTICS



Learnings in Pharmaceutics laboratory

▶ Compounding of formulations such as

Solutions

Syrups

Ointment

Cream

Tablet etc.

- ► Evaluation of formulations to ensure quality
- Stability studies to ensure safety
- Development of new formulations



SOP Laboratory of Pharmaceutical Chemistry



Learnings in Pharmaceutical chemistry laboratory

 Study of chemical agents in view to ensure quality and efficacy such as

Assay (%purity of drugs)

Purities and impurities

Qualitative studies

Quantitative studies



SOP laboratory of Pharmacognsoy



Learnings in Pharmacognosy laboratory

- Study of herbal drugs in view of
 - **Identification of herbs by**
 - morphological studies
 - macroscopic & microscopic studies
 - phytochemical studies
- Extraction methods
- Isolation techniques
- Preparation of herbal formulations



SOP laboratory of Anatomy physiology



Learnings in Anatomy Physiology Laboratory

- Study of body organs
- Study of functions of body organs
- Study of vital signs

Pulse rate

Heart rate

BP

Body temperature

Respiratory rate

Counting of blood elements



SOP laboratory of Pharmaceutical Analysis



Learnings in Pharmaceutical Analysis laboratory

 Analysis of chemical agents in view of establishing its chemical nature such as

Assay (%purity of drugs)

Standardization (HPLC & HPTLC)

Structural analysis (UV, IR, NMR & MASS)

SOP laboratory of Pharmaceutical Biotechnology



Learnings in Pharmaceutical Biotechnology laboratory

- ► Invitro studies such as
 - Nitric oxide scavenging activity

 DPPH radical scavenging activity

 Hydrogen peroxide scavenging activity
- Cytotoxic studies of cancer cells
- Microbial assays

SOP laboratory of Pharmacology & toxicology



Learnings in Pharmacology and toxicology laboratory

► *Invivo* studies

Bio assays using animals and isolated organs

Analgesic

Antipyretic

Anti-inflammatory

Anticancer

Antiulcer etc

- **▶** Developing new animal models
- ► Toxicological studies



SOP of Pharmacy Practice



Learnings in Pharmacy practice

- Compounding of drugs
- Dispensing of drugs
- Labeling of drugs
- > Learning expiry details
- Clean and organize the working area.
- > Maintenance of stock registers and documents
- Proper recording of the drugs (inventory control)

JOB OPPORTUNITES

Central government opportunities

➤ Pharmacist in railway, harbor, army & health services

State government opportunities

- Drug inspector
- > Forensic scientist
- ➤ Lecturer / Professor in Government Colleges
- Pharmacist in Government hospitals

JOB OPPORTUNIES

Pharmaceutical Industries

- Manufacturing pharmacist
- Quality control & quality assurance
- R&D scientist
- Pharmacist in formulation development
- Production Pharmacist

JOB OPPORTUNITIES

Marketing

- Medical Representatives
- Medical Sales Executives
- Areas business manager

Self employment

- Medical wholesaler
- Medical retailer
- Own industry (small & large scale)

JOB OPPORTUNITIES

Foreign employments

- Pharmacist in Government and Private hospitals
- Pharmacy teachers in Government and PrivateUniversities
- Marketing professionals

JOB OPPORTUNITIES

Other opportunities

- Lecturer / Assistant/Associate Professor in private Colleges
- Medical Coding & Billing
- Medical Transcriptionist
- Medicinal Plant Cultivator
- Medicinal Plant Raw Material Trader

HIGHER STUDIES

- ➤ M.Pharm in Pharmaceutics, Pharmaceutical Chemistry,

 Pharmacognsoy, Pharmacology, Pharmaceutical analysis, Pharmacy

 Practice, Biotechnology, Pharmacognosy and Phytochemistry,

 Industrial pharmacy etc.,
- > Pharm.D.
- ➤ PG Diploma in Hospital administration
- ➤ MBA in Hospital Management
- ➤ M.Sc. in Fermentation, Forensic & Bio-informatic sciences
- Master of Business Administration
- Doctor of Philosophy (Ph.D)

Thank you

PHARMACY DEPARTMENT...

From
OPJS UNIVERSITY
SCHOOL OF PHARMACY &