



JAYAMUKHI EDUCATIONAL SOCIETY

JAYAMUKHI COLLEGE OF PHARMACY

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NARSAMPET, Dist. Warangal - 506 332, (T.S)

List of Publications

Title of paper	Author/s	Year of publication	Link to article/ paper/ abstract of the article
Synthesis and Evaluation of Some New Quinoline Based 1, 3, 4-Oxadiazoles as Potential Antimicrobial and Antimalarial Agents	Hemalatha Gadegoni <i>et al.</i>	2021	https://doi.org/10.31838/ijpr/2021.13.02.041
Electroencephalogram correlates the role of Ashwagandha in sleep and memory promoting effect	Mounika Basani <i>et al.</i>	2021	doi:10.5530/ijper.55.1.20
The molecular docking studies of zidovudine, lamivudine using molegro virtual docker on protease against of COVID-19	T Mahender <i>et al.</i>	2020	DOI : 10.20959/wjpps20207-16606
Assessment of neuropharmacological profile of ethanolic extract of Lawsonia inermis flowers	Syeda Nishat Fathima <i>et al.</i>	2020	https://doi.org/10.12723/mjs.55.4
Development of Ex-vivo evaluation of Topiramate mucoadhesive nanoparticles for intranasal delivery	Anil Goud Kandhula <i>et al.</i>	2020	https://doi.org/10.37285/ijpsn.2020.13.6.10
The analysis of neurologic manifestations with major electrolyte abnormalities	Shirisha Chinthoju <i>et al.</i>	2020	DOI: 10.5530/ijopp.13.2.24
Coconut oil as a therapeutic agent in medication induced contact dermatitis	Sai Karthik Dhondi <i>et al.</i>	2020	DOI: 10.5530/ijopp.13.4.60
The assessment of sleep quality and insomnia severity in cardiovascular diseases	Dhontha Chaitra , Sindgi Vasudeva Murthy <i>et al.</i>	2020	DOI: 10.5530/ijopp.13.4.55
Epidemiology of out of hospital cardiac arrests knowledge of cardiovascular disease and risk factors in a regional setting in India: The Warangal area out of hospital cardiac arrest registry (WACAR)	Srinivas Ramaka, Sindgi Vasudeva Murthy	2020	doi: 10.1016/j.ihj.2020.10.002
Impact of clinical pharmacist interventions and tele-monitoring on clinical outcomes of Type-2 Diabetes mellitus patients	Swetha Ramidi <i>et al.</i>	2020	DOI: 10.5530/ijopp.13.1.8
Non-invasive electroencephalography method development and validation using Carbamazepine	Mounika Basani, S Vasudeva Murthy <i>et al.</i>	2019	https://doi.org/10.22377/ajp.v13i04.3398
An observational study of out-of-hospital cardiac arrests reported in Indian print media	Ramaka S, Sindgi VM <i>et al.</i>	2019	DOI: 10.4103/JICC.JI CC_52_19





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Evaluation of oral acute toxicity of ethanolic extract of Rosa damascena petals as per OECD guidelines 423.	Syeda Nishat Fathima, S Vasudeva Murthy	2019	http://www.jetir.org/papers/JETIRBY06013.pdf
Assessment of oral acute toxicity of ethanolic extract of Gomphrena globosa flowers as per OECD guidelines 423	Syeda Nishat Fathima, S Vasudeva Murthy	2019	http://www.ijssr.org/pdf/82513.pdf
Cardioprotective effects to chronic administration of Gomphrena globosa flowers in isoproterenol induced myocardial infarction: Biochemical, histopathological and ultrastructural studies	Syeda Nishat Fathima, S Vasudeva Murthy	2019	https://doi.org/10.31838/ijpr/2019.11.02.071
Cardioprotective effects to chronic administration of Rosa damascena petals in isoproterenol induced myocardial infarction: Biochemical, histopathological and ultrastructural studies	Syeda Nishat Fathima, S Vasudeva Murthy	2019	DOI : https://dx.doi.org/10.13005/bpj/1744
Development of non-invasive electroencephalography technique in animal model	Vasudeva Murthy Sindgi <i>et al.</i>	2019	doi:10.5530/ijper.53.4s.157
Pharmacognostic study of Rosa damascena petals	Syeda Nishat Fathima, S Vasudeva Murthy	2019	https://doi.org/10.31024/ajpp.2019.5.4.18
Simultaneous estimation of doxofylline and sertraline tablet dosage from by using RP-HPLC	Kandhula SG, Tulasi AK	2019	DOI: http://dx.doi.org/10.22270/jddt.v9i1-s.2285
Quality healthcare services and its access in a village: A case study	Smitha T, S Vasudeva Murthy <i>et al.</i>	2018	https://doi.org/10.31024/ajpp.2018.4.3.21
Investigation of pharmacognostical and physical parameters of Gomphrena globosa flowers	Syeda Nishat Fathima, S Vasudeva Murthy	2018	https://innovation-journals.org/P%202.pdf
Assessment of diuretic and urinary electrolyte effects of ethanolic extract of flowers of Capparis decidua	G Hemalatha, Syeda Nishat Fathima	2018	https://innovation-journals.org/P%208.pdf
Pancolitis along with tuberculosis, vitamin D deficiency and iron deficiency anemia: Case report	Samcena Begum, Syeda Nishat Fathima	2018	https://innovation-journals.org/P%2011.pdf
Multiple Pyaemic abscess- An unusual presentation in neonate: case report	Syeda Nishat Fathima	2018	https://doi.org/10.31142/ijtsrd18389
Pharmacognostic assessment of Lawsonia inermis flowers	Syeda Nishat Fathima	2018	https://www.phytojournal.com/archives/2018/vol7issue6/PartAP/7-6-338-984.pdf
Formulation and characterization of paliperidone loaded mucoadhesive microemulsion for intranasal delivery	Tulasi Ashwin Kumar, Anil Goud Kandhula	2018	https://www.ijpbs.com/abstract.php?iid=1329



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Investigation of cerebroprotective effect of <i>Bixa orellana</i> on sodium nitrite induced hypoxic neurotoxicity	Syeda Nishat Fathima, K Lakshman Kumar	2018	DOI: https://doi.org/10.7439/ijpp.v8i1.4537
Current pharmacological status of cardioprotective plants against isoproterenol induced myocardial infarction	Syeda Nishat Fathima, S Vasudeva Murthy	2018	10.22159/ajpcr.2018.v11i4.24158
Evaluation of diuretic and urinary electrolyte effects of ethanolic extract of whole plant of <i>Gardenia gummifera</i>	Syeda Nishat Fathima	2017	DOI: 10.20959/wjpr201714-10020
Effect of ethanolic extract of <i>Mirabilis jalapa</i> roots against paracetamol induced hepatotoxicity	S Anusha, Syeda NF	2017	https://storage.googleapis.com/journal-uploads/ejbps/article_issue/volume_4_december_issue_12/1512042533.pdf
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Bioanalytical method validation of montelukast salt in human plasma using LC-MS/MS method	Veeragoni Anil Kumar, Vasudeva Murthy Sindgi, S	2016	https://www.scholarsresearchlibrary.com/articles/bioanalytical-method-validation-of-montelukast-salt-in-human-plasma-using-lcmsms-method.pdf

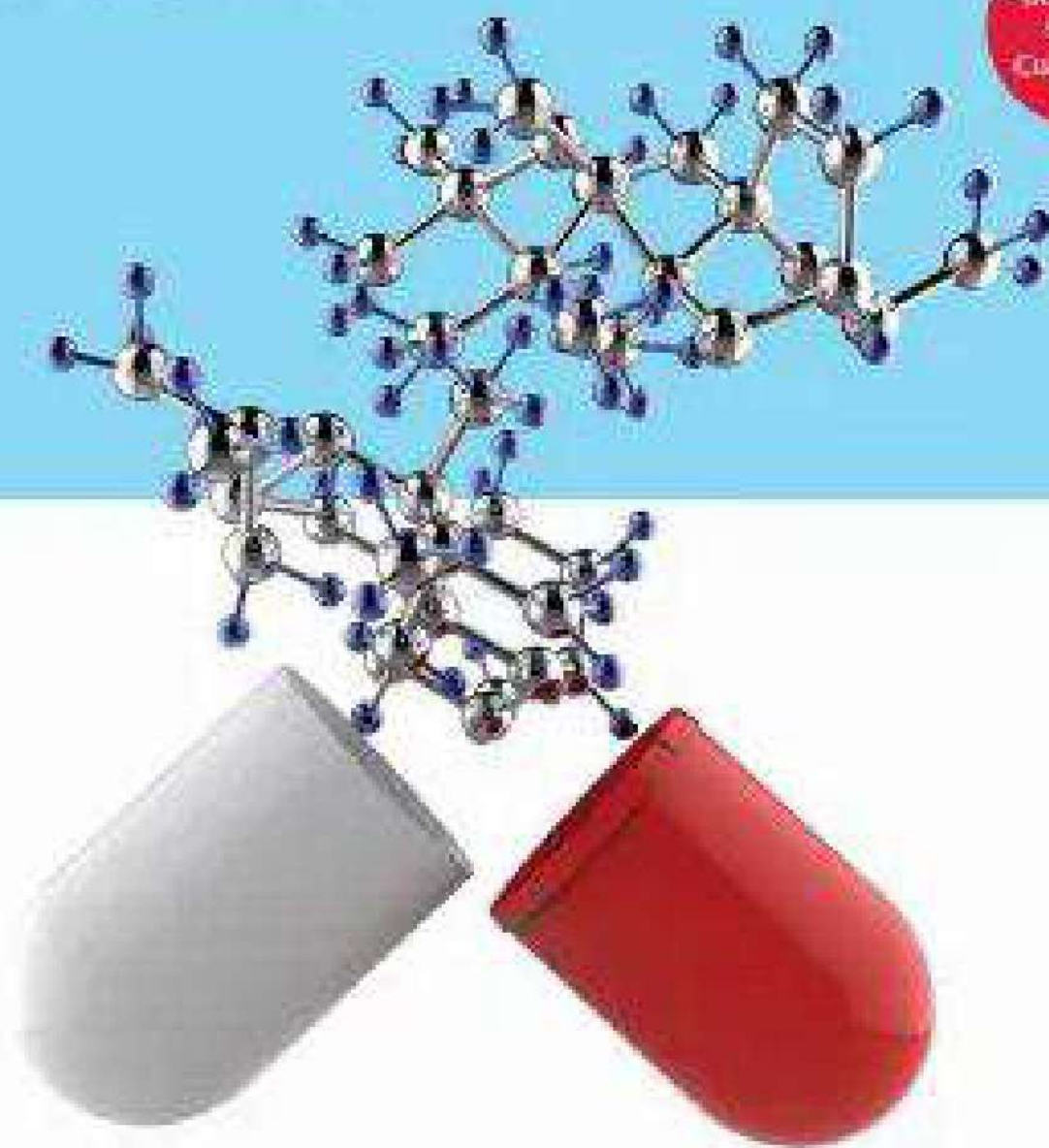



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Textbook of Pharmacology

Prasan R. Bhandari

Based on
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Curriculum



 Thieme

Chapter 71

Antimicrobial Stewardship

Vasudeva Murthy, T. Smitha, Asha B.

PS1-43 Rational use of antimicrobials including antimicrobial stewardship programs.

Learning Objectives

- The emergence of antibiotic resistance.
- Antimicrobial stewardship program.
- Antibiotic stewardship program activities in India.
- Hospital antibiotic stewardship programs.

ABO Modern medicine uses antibiotic treatment as one of the approaches to combat infections. A number of antibiotics were developed between 1930 and 1960, and hence this period is considered the "golden era" of antibiotics. The advent of antibiotics made fatal infections treatable. The prompt initiation of antimicrobials reduced the morbidity and mortality.

The Emergence of Antibiotic Resistance

The misuse and overuse of antibiotics have resulted in the emergence of antibiotic resistance. The emergence of antibiotic resistance reduces the effectiveness of the antibacterial agent due to mutant strain.

The broader term antibiotic resistance **ABO** encompasses resistance to drugs to treat infections due to various types of pathogens, including bacteria, viruses such as influenza and HIV, malaria-causing parasites, and fungi such as *Candida* spp. The failure to treat infections due to bacteria is a serious threat to public health. Antibiotic resistance is impairing the value of antibiotics, leading to the global crisis of therapeutic management. This is ascribed to the "expectation" of antibiotics, unavailability of newer antibiotics, and demanding regulatory requirements. Factors such as subtherapeutic utilization of antibiotics also led to drug resistance, adverse effects, and the economic burden associated with extended hospital stay. Prolonged clinical uses of antibiotics are predisposing factors for antibiotic resistance. It is essential to optimize the use of antibiotics in treating infections, preventing adverse effects caused by unnecessary use of antibiotics, and curbing resistance. The antimicrobial stewardship programs promoted regularization of antibiotic utilization

to prevent the emergence of microbial mutant strains **ABO**. This program is promoted by Infectious Diseases Society of America (IDSA), the Society for Healthcare Epidemiology of America (SHEA), and the American Society of Health-System Pharmacists (ASHP).

Antimicrobial Stewardship Program

The concept of stewardship involves the management of something, such as property, which is assigned to care. Antimicrobial stewardship program (AMSP) can be defined "as an organizational systemic health care strategy promoting appropriate use of antimicrobials through implementation of evidence-based interventions." According to the IDSA, antimicrobial stewardship covers "optimizing the indication, selection, dosing, route of administration and duration of antimicrobial therapy to maximize the clinical cure or prevention of infection, whilst limiting the collateral damage of antimicrobial use, including toxicity, the selection of pathogenic organisms and the emergence of resistance." This encourages an effective antibiotic prescription to improve the clinical outcomes. The main purpose of the antimicrobial stewardship includes making use of the antimicrobial agent in appropriate patient, appropriate indication, proper drug(s), proper administration of the dose, route, duration of treatment, use of antibiotics in appropriate combination, and its cost. The important constituents of antimicrobial stewardship include dedicated leadership, responsibility, pharmacy practice, diagnosis testing, and interventions for the better use of antibiotics. This part of the chapter deals with strategies for antibiotic prescription, formulary restriction, facility and infrastructure for antibiotic treatment along with tracking and reporting mechanism, conversion of intravenous (IV) antibiotics to oral dose, and consideration of pharmacokinetics and pharmacodynamics for drug dosage optimization.

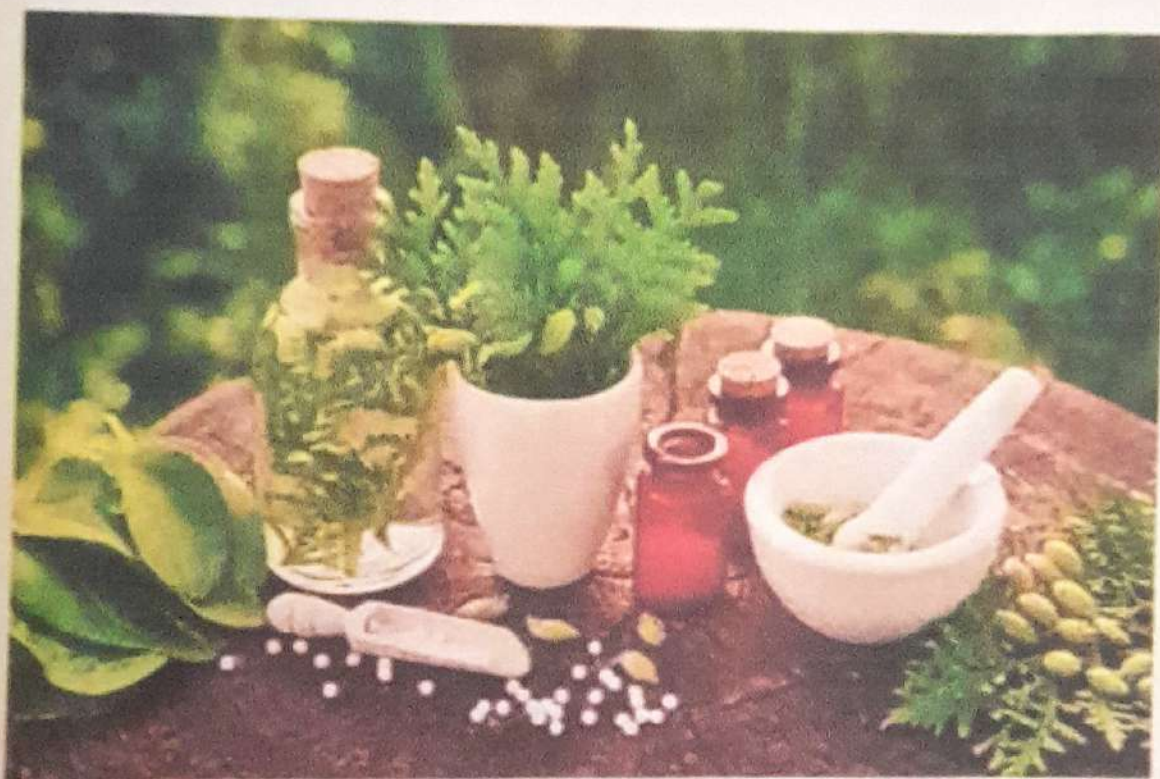
Antimicrobial resistance (AMR) results in complicated illness, with prescription interventions for antibiotic replacement. The severity sometimes demands physician consultations, and it may result in death caused by the infections. The most common types of AMR are observed in skin infections, urinary tract infection (UTI),





HERBAL MEDICINE

A BENIGN AND CONVENTIONAL MEDICAL SYSTEM



Dr. SURESH KUMAR AGARWAL Dr. ARUNA KUMARI NAKKELLA
Dr. SANDEEP ROUT

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Pharmacological activities of *Lawsonia Inermis*- A Review

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Article Info

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Abstract:

Lawsonia inermis Linn., is a perennial herbal medicinal plant belonging to Lythraceae family grown as an ornamental and dye plant thorough India having various vernacular names such as Mehndi in Hindi, Mehedi in Bengali, Rakigarbha in Sanskrit, Benjati in Odiya, Mailanchi in Malayalam, Muruthani in Tamil and Mayilanchi in Kannada. The plant is reported to contain Laxanthone, Lawsone, Lacoumarin, Scopoletin, Fraxetin, Esculetin, Isoplumbagin, Betulinic acid, Betulin, Hennadiol, Lupeol, two pentacyclic triterpenes and flavone glycosides. Due to the presence of chemical components the plant has been reported diverse pharmacological properties. The current review emphasizes on pharmacological properties this plant.

Keywords: *Lawsonia inermis*, pharmacological properties, review

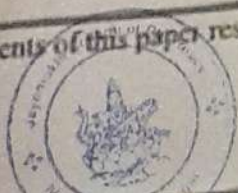
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Introduction

Regardless of current globalization and advancement in scientific research, still the traditional system of medicines is well-thought-out as a main health care approach in the resource-constrained health care settings. Currently, revitalization and renewed awareness on traditional/ contemporary medicinal plants have subsisted recognized among the scientific community to maintain good health and alleviate ailments and diseases. World Health Organization has deliberated medicinal plants as the plant in which one or additional of its tissues/ organs contains constituent which can be employed for therapeutic intentions, or they may act as the originators for semi-synthesis of chemo-pharmaceutical. Around 500 plants with therapeutic value are cited in ancient literature and about 800 plants are utilized in indigenous systems of medicine. India is a enormous repository of therapeutic plants that are utilized in conventional clinical treatments. The present review endeavours to overview up-to-date information on pharmacological properties of *Lawsonia inermis* [1-2]



Current Research and Trends in Medical Science and Technology

(Volume - 1)

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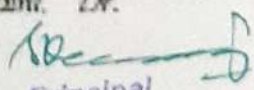
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Chapter - 1

An Update on Myocardial Infarction

Syeda Nishat Farhima

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Abstract

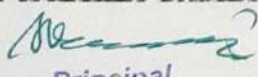
Myocardial infarction is described as a type of acute coronary syndrome caused by pathological event in the setting of myocardial ischemia with the marked cardiac insult and injury. The diagnosis is secured when there is a rise and/or fall of cardiac troponin levels along with supportive evidence in the form of typical symptoms, suggestive electrocardiographic changes, or imaging evidence of new loss of viable myocardium or new regional wall motion abnormality. The early rehabilitation for acute Myocardial infarction is directed towards reinstatement of perfusion as soon as possible to retrieve as much of the jeopardized myocardium as possible. This may be accomplished through medical or mechanical means, such as percutaneous coronary intervention, or coronary artery bypass graft surgery. The objectives of medical therapy for myocardial infarction are to decrease morbidity and to avert complications. The main targets of emergency department pharmacotherapy are rapid intravenous thrombolysis and/or rapid referral for percutaneous coronary intervention (PCI), optimization of oxygenation, reduction of cardiac workload, and pain control.

Keywords: Myocardial infarction; prognosis; cardiac biomarkers

Introduction

Myocardial infarction is particularly the utmost severe manifestation of coronary heart disease and it is a final outcome of either acute or chronic myocardial ischemia that results due to a mismatch in oxygen demand and oxygen supply. Myocardial infarction leads to myocardial injury or necrosis which is characterized by a rise in cardiac biomarkers, along with supporting clinical evidence conforming electrocardiogram changes, or imaging validation of new injury of viable myocardium or acute abnormality in regional wall motion ⁽¹⁾. The clinical manifestations of myocardial infarction include severe and sustained chest pain, often together with breathlessness, nausea, and sweating. Myocardial infarction causes ischemic attacks, angina,




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ORGANIC FARMING**DR.G.HEMALATHA**

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Organic farming can be defined as "an integrated farming system that strives for sustainability, the enrichment of soil fertility and biological diversity while, with rare exceptions, barring synthetic pesticides, antibiotics, synthetic fertilizers, genetically modified organisms, and growth hormones". It is an agricultural method which originated early in the 20th century in reaction to quickly altering farming practices. The concept of organic agriculture be developed in the early 1900s by Sir Albert Howard, F.H. King, and others who assumed that the use of animal manures (often made into compost), cover crops, crop rotation, and biologically based pest controls resulted in a improved farming system.

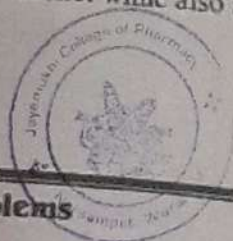


Organic farming is agriculture that makes healthy food, healthy soils, healthy plants, and healthy environments precedence, along with crop productivity. Organic farmers use biological fertilizer inputs and managing practices such as cover cropping and crop rotation to progress soil quality and build organic soil matter. By increasing the amount of organic matter in the soil, organic farmers enhance the soil's ability to take up water, plummeting the impacts of drought and flooding. Improving soil organic matter also helps it to absorb and store carbon and other nutrients require for growing healthy crops, which, in turn, are better able to stand firm insects and diseases.

Organic production systems do not use genetically tailored (GM) seed, synthetic pesticides or fertilizers. Some of the essential characteristics of organic systems include propose and implementation of an organic system plan that describes the practices used in producing crops and livestock products; a thorough recordkeeping system that tracks all products from the field to point of sale; and preservation of buffer zones to prevent inadvertent contamination by synthetic farm chemicals from neighboring conventional fields.

❖ REASONS OF ORGANIC FARMING ARE ENCOURAGED THESE DAYS:

It has proven to use a lesser amount of energy (on average, about 30 percent less), is beneficial to soil, water and local habitation, and is safer for the people who crop our food. Eat more seasonally by encouraging your local farmers market while also supporting a global organic economy year round.



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MULTIDISCIPLINARY SUBJECTS FOR RESEARCH

VI (VOL-2)

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COMMUNITY PHARMACY PUBLIC HEALTH

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A community pharmacy is a pharmacy that deals openly with people in the local area. It has responsibilities including counseling, compounding, checking and dispensing of prescription drugs to the patients with accuracy, care, and legality. A community pharmacy has suitable procurement, storage, supply and documentation of medicines. It is an important subdivision of the pharmacy profession and involves a registered pharmacist with the skills, education and capability to distribute the professional service to the community.

Community pharmacy, also called as retail pharmacy, is the most universal type of pharmacy that allows the public access to their medications and counsel about their health. Community pharmacy means anywhere under the undeviating supervision of a pharmacist where the practice of pharmacy occurs or where prescription orders are compounded and dispensed other than a hospital pharmacy or a limited-service pharmacy.

Each country's definition of community pharmacy differs, even though most define it as a type of health care facility that provides specific services or with a given mission about drugs. These activities may be summarized or listed comprehensively. For example, community pharmacies are defined in Spain as "private health establishments of public interest, subject to health planning [...] which must provide [a series of services]" (79: article 1). In Serbia the meaning is "a health care facility where pharmaceutical care is provided at prime level" (37: article 100(1)); in France it is "an institution in charge of the dispensing of medicines in addition to other products [mentioned in another article] as well as compounding" (26: article L5125-1).

❖ TYPES OF COMMUNITY PHARMACIES:

Independent pharmacies-These are independently owned, local pharmacies. A pharmacist (or a small group of pharmacists) owns the pharmacy. Decisions are made at the store level. More concentration and time is spent on customer service. The majority of compounding is done in these.

- **Chain pharmacies** -These are regional or national pharmacy chains. Corporations own and operate chain pharmacies. Decisions are taken at the corporate level. They dispense large quantities. Technicians and automation are profoundly used in chains. Examples comprise: Walmart, Walgreens, CVS and Kroger.
- **Mass merchandiser pharmacies**-These are regional or national, they could potentially offer noteworthy benefits to patients. The diversity of products sold by mass merchandiser stores affords patients a level of expediency unavailable at smaller retail pharmacies.
- **Food Store Pharmacies**- Regional or national food store chains with in-store pharmacies, include- Target, Vons, KMart, Costco, Walmart.

❖ TYPES OF PHARMACIES:

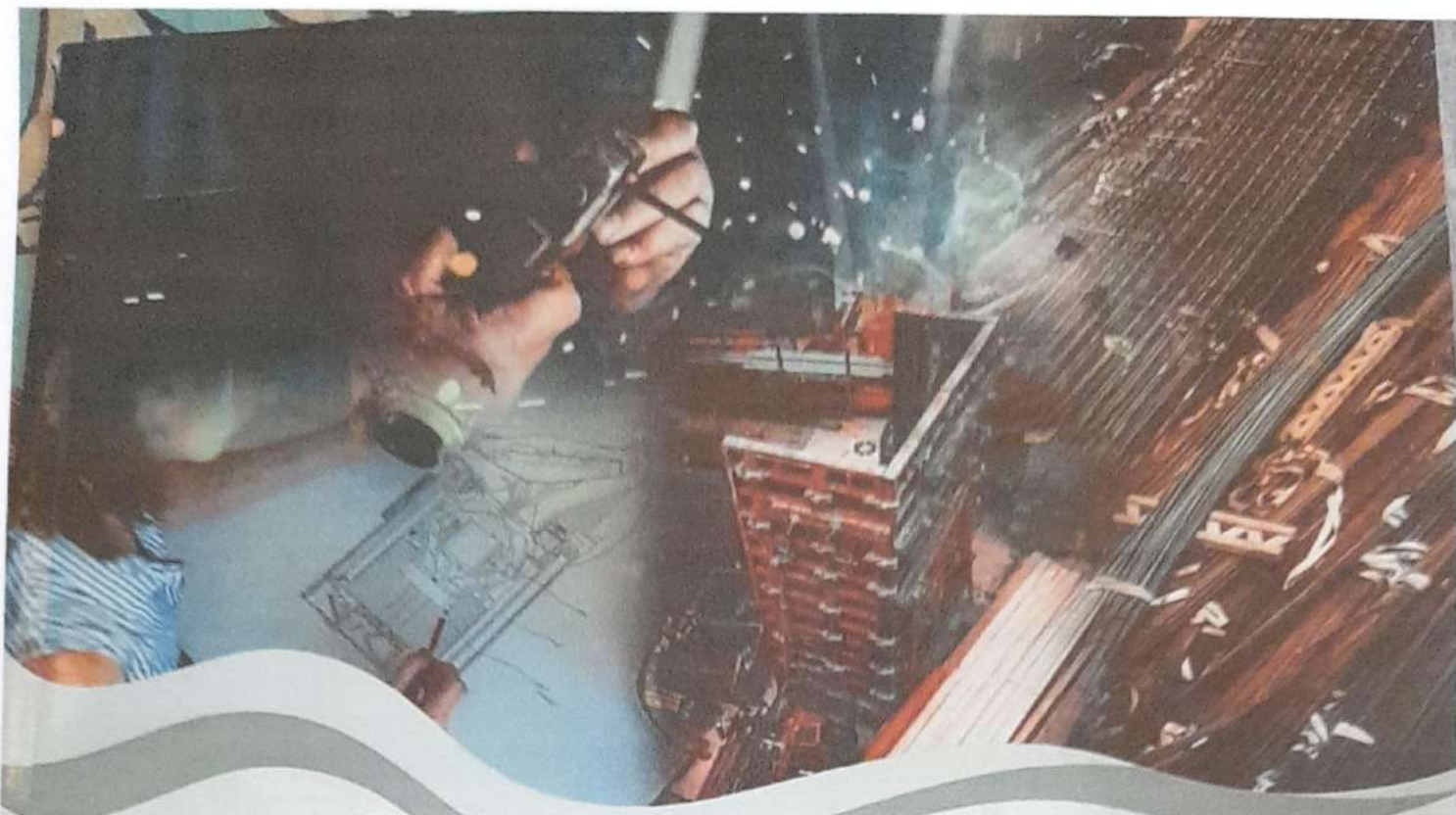
There are several different types of pharmacies, where a skilled pharmacist may work. This includes:

- Hospital pharmacy
- Community pharmacy
- Clinical pharmacy
- Industrial pharmacy



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MULTIDISCIPLINARY SUBJECTS FOR RESEARCH - X

VOLUME

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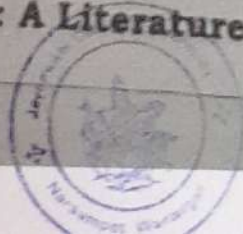
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FORENSIC PHARMACY



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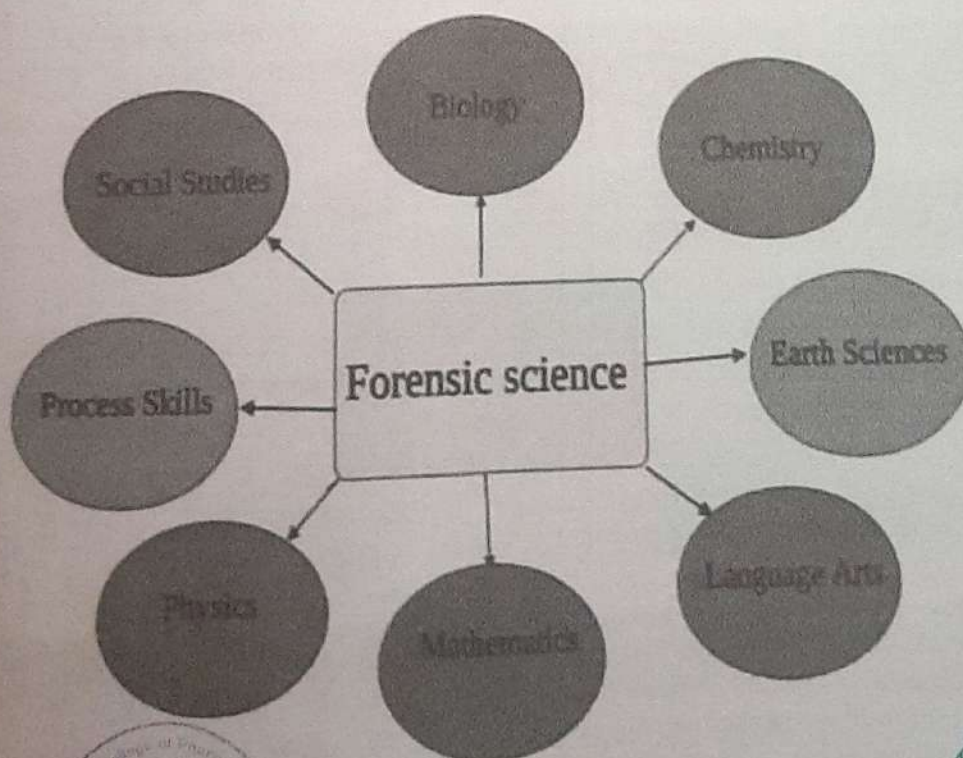
Forensic pharmacy is appliance of the sciences of drugs to legal issues. Forensic pharmacists employ in work relating to, the regulatory process, litigation and the criminal justice system. Forensic pharmacy overlies with many other forensic fields.

The word "forensic" taken from the Latin word "forensis" pertaining to a forum. In *ancient Rome* the forum was a market place where people assembled, not just to buy things, but also to manage all kinds of business, together with that of public affairs. The denotation of "forensic" later came to be limited to refer to the courts of law.

It is an extensive field. The domain of forensic pharmacy overlies with forensic medicine, forensic toxicology, forensic accounting, forensic psychology, fraud examination, forensic document examination, death investigation, forensic chemistry, forensic nursing, and calamity reconstruction. Issues relevant to forensic pharmacists include professional malpractice, drug diversion, impaired capacity, patient confidentiality, drug-induced violence, proper use of chemical restraints, adverse drug reactions (including drug interactions), drugged and drunk driving, medication errors, quackery, product tampering and health care fraud, and poisoning.

Forensic Pharmacy deals with the application of scientific acquaintance to legal problems and legal proceedings. For example, in forensic *Anthropology*, , forensic experts, forensic medicine, forensic dentistry etc.

The Branches of Forensic Science:



Branches of forensic science

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Vol. 3

Multidisciplinary Subjects for Research-III

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A SYSTEMATIC REVIEW ON PHYTOCHEMISTRY AND PHARMACOLOGICAL ACTIVITIES OF GOMPHRENA GLOBOSA

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ABSTRACT:

Gomphrena globosa, commonly known as globe amaranth or Bachelor Button in English, makhmali in Hindi, and vadamallin in Sanskrit, is an edible plant belonging to the family Amaranthaceae. The leaves and flowers are used traditionally for the management of oliguria, heat and respiratory hypertension, antimicrobial, antineoplastic, cough, diabetes, hypertension, kidney problems, haemorrhoids, cough, bronchitis, and other respiratory diseases, mainly as expectorant, reproductive problems as well as for its significant cytotoxic and cytogenic activity. The phytochemical studies showed the presence of phenolic compounds, kaempferol 3-O-(6-rhamnosyl) hexoside plus kaempferol-3-O-hexoside being the main compounds apart from this it also contains flavones and flavonoids glycoside, gomphrenin and betacyanins such as isogomphrenin III and gomphrenin III as major metabolites. *Gomphrena globosa* have been screened for pharmacological activities and reported to possess anticancer, antihypertensive, antimicrobial, central and peripheral analgesic, anti-inflammatory, hypoglycemic, antioxidant and cytotoxic activity. The present review focuses the chemical constituents, pharmacological properties and uses of this plant.

Keywords: *Gomphrena globosa*, pharmacological properties, chemical constituents

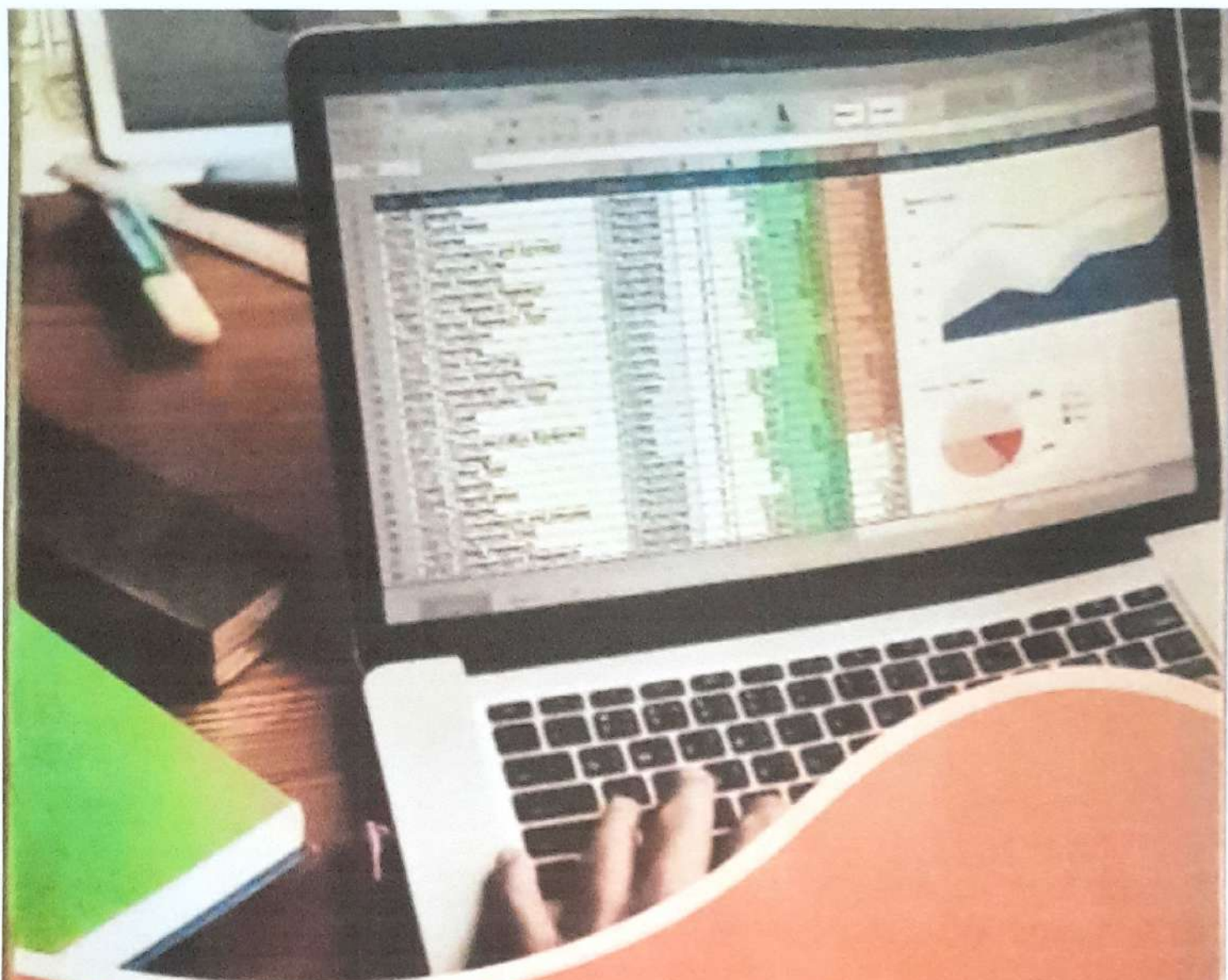
INTRODUCTION:

Regardless of current globalization and advancement in scientific research, still the traditional system of medicines is well-thought-out as a primary health care approach in the resource-constrained health care settings. Currently, revitalization and renewed awareness on traditional/ contemporary medicinal plants have been perceived among the scientific community to maintain good health and alleviate ailments and diseases [1]. World Health Organization has deliberated medicinal plants as the plant in which one or more of its tissues/ organs contains constituent which can be employed for therapeutic intentions, or they may act as the originators for semi-synthesis of chemo-pharmaceutical. About 500 plants with medicinal use are mentioned in ancient literature and around 800 plants have been used in indigenous systems of medicine. India is a vast repository of medicinal plants that are used in traditional medical treatments [2]. The present review endeavours to overview up-to-date information on chemical constituents, pharmacological properties and uses of *Gomphrena globosa*.

Taxonomy of *Gomphrena globosa*:

Domain	Eukaryota
Superkingdom	Cornicata
Kingdom	Plantae
Subkingdom	Tracheobionta
Infrakingdom	Streptophyta
Superphylum	Embryophyta
Phylum	Tracheophyta





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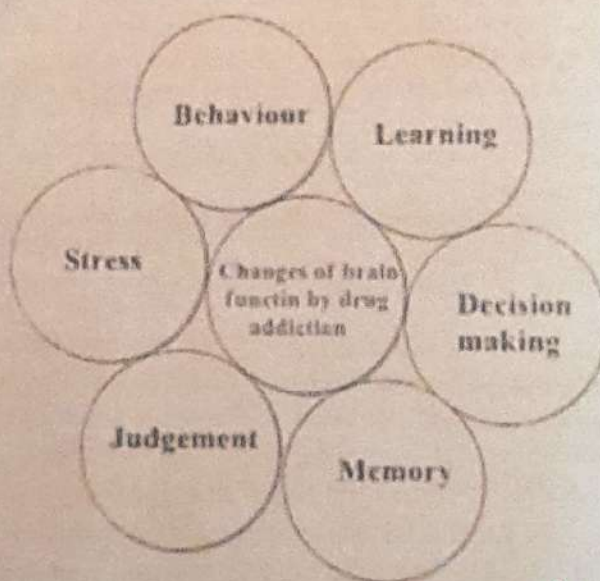
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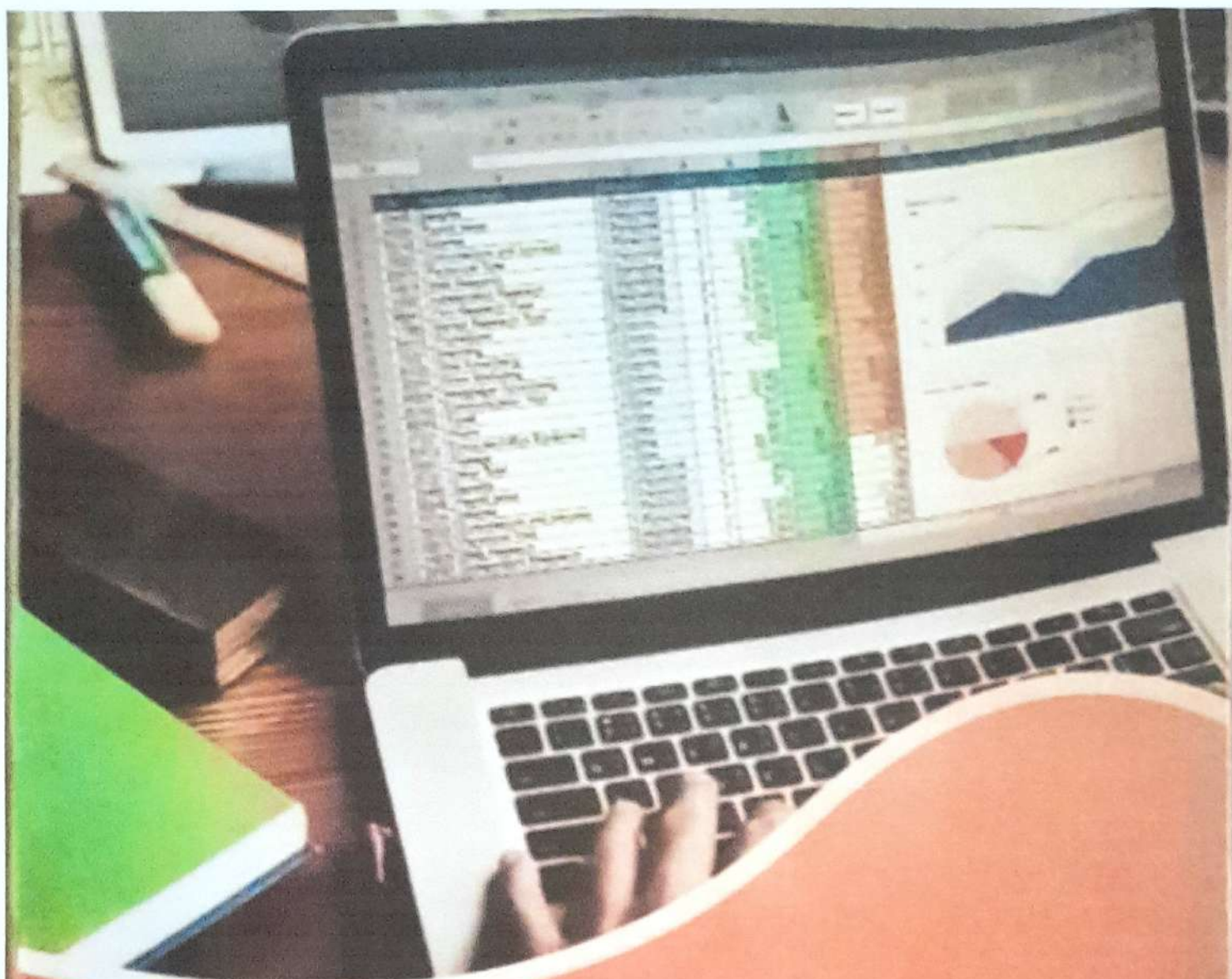
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Addiction is a chronic disease characterized by drug seeking and use that is obsessive, or difficult to control, despite detrimental consequences. The primary decision to take drugs is voluntary for most people, but frequent drug use can lead to brain changes that confront an addicted person's self-control and interfere with their ability to resist strong urges to take drugs. These brain changes can be overwhelming, which is why drug addiction is measured a "relapsing" disease—people in revival from drug use disorders are at augmented risk for returning to drug use even subsequent years of not taking the drug.

Drug Addiction is a psychological reliance and habit-forming of a person to particular substance which will not be in voluntary control. The person suffers from withdrawal when the person does not find the drug which may turn into fatal, although the preliminary decision to take drugs is voluntary for most people; the brain changes that occur over time defy an addicted person's self-discipline. Addiction is a lot similar to other diseases, such as heart disease. Both disrupt the normal, healthy execution of an organ in the body, both have serious destructive effects, and both are, in several cases, avoidable and treatable.

The changes in the brain when person taking the drugs: Most drugs control the brain's "reward circuit," causing ecstasy as well as flooding it with the chemical messenger dopamine. A properly functioning reward system motivates a person to reiterate behaviors required to thrive, such as eating and spending time with cherished ones. Surges of dopamine in the reward circuit cause the reinforcement of pleasant but destructive behaviors like taking drugs, leading people to repeat the conduct again and again. As a person continues to use drugs, the brain adapts by plummeting the ability of cells in the reward circuit to react to it. This reduces the high that the person feels compared to the high they felt when first taking the drug—an effect known as tolerance. They may take more of the drug to try and accomplish the same high. These brain adaptations frequently lead to the person becoming less and less able to derive contentment from other things they once enjoyed, like food, sex, or social behavior. Long-standing use causes changes in the brain chemical systems and circuits as well, affecting functions that comprise:





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Cancer or neoplasm is one of the most effected dreadful diseases in the world. It is characterized by uncontrolled or abnormal growth or proliferation of cells which form the tumor beside the tissue after that the cancer cells undergo proliferation individually forms primary tumor and lymphatic system, reaches to nearby organism and they divide to form metastasis (secondary). Neoplasm is a Greek word neo means new, plasm means formation (neo = new, plasm = formation). A group of diseases caused by many agents carcinogens, radiation. Global data estimated that 22.4 million peoples may effect and 13.2 million deaths occur by the year of 2030 due to the cancer.

CELL BIOLOGY OF CANCER

Our body made up of group of cells form tissue, organs hence the cell is fundamental unit of body. It performs many functions like digestion, excretion, locomotion, reproduction etc. The genes present inside the nucleus, it perform the functions of cell grow, development and division. When cells are damaged the genes instruct to cell to grow, divide. When the cell divide make exact two identical cells structurally, functionally, then the two cells divide in to four, then the four cells divide in to eight based on the requirement and all the damaged cells replaced by new cells in case of cancer cell. But in cancer cells have gene mutation. The gene mutation interfere with the instructions and get out of control, develops immature cells grow in to form tumor.

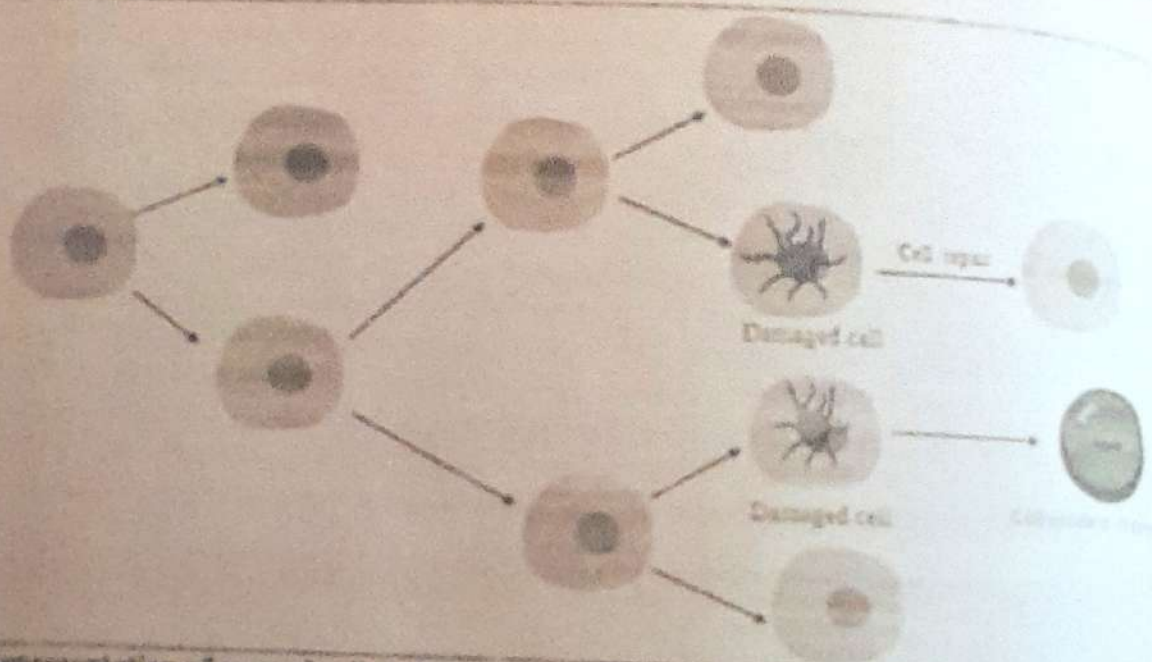


Fig. 1 Representation of normal cell division



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