



# PHARMA COMMUNIQUE

(An internal circulation of news, knowledge and professional updates)

of  
BLDEA'S SSM COLLEGE OF PHARMACY & RESEARCH CENTRE

NAAC Accreditation ('B' Grade with 2.40 CGPA score)

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## EDITOR'S NOTE

"We must suffer one of two things: the pain of discipline or the pain of regret and disappointment."  
– Jim Rohn (American Entrepreneur)

Discipline is the core principle attached to the lives of successful people around the world. It nurtures the mental integrity and capability to accomplish goals and objectives in our life. It is true that discipline cannot be achieved easily as it takes tremendous amount of time, patience and perseverance. One should not get discouraged in the middle of the game because the value it brings in his/her personal and professional life is inexpressible. It is understandable that every individual cannot instill the same level of discipline than anybody else in given period of time, but it is possible only when he/she is humble in acknowledging and following the passion carried by the ones who reached the tip of the mountain. We should not let the failures to define the potential that is encapsulated within us. I must say, failure is our real friend that teaches by exposing us to uncertainties in life.

Discipline kills laziness that hinders our inner strength and challenges us to keep up with the mixture of successes and failures. It guides effectively when we feel down and reminds the value of every passing minute. During the journey to ultimate discipline, there are many enemies like egoism or pessimism that invade our minds to demonize our practice of discipline-ruining all the efforts we put in. As I quoted it before, discipline is tougher than anything. You can observe the attitudes and behaviors of disciplined Olympic athletes who go through enormous hardships before flaunting the gold medals in their necks. If we take examples of many billionaires across the world, they incorporate discipline to continually achieve higher goals. Unfortunately, most of us focus merely on their luxurious and flamboyant lifestyles. They eat less, sleep limited and do not waste time in gossips or any other purposeless activities. We should try harder and harder to eliminate our comfort zones, because the addiction of comfort is mightier than alcohol and drugs. The lamentable thing today is that most of the younger generation is drowned in materialistic pleasures. The fact that only ones who are disciplined will surely contribute to their motherland and set an example for future generations is indisputable. Let's embrace the practice of discipline.



Dr. R B Kotnal

## INSTITUTE CREDENTIALS

## Journal Publications

1. Sandeep Chandakavate, VP Patil, Shivkumar H, Nanjappaiah, Prashant P presented a poster titled Evaluation of neuroprotective property of citrus pulp powder in scopolamine induced zebra fish induced amnesia
2. Suresh Gunaki E. N. Gaviraj C. V. Nagathan B. S. Hunasagi Sandeep Chandakavate Preparation of evaluation of polyherbal toothpaste International journal of recent advances in multidisciplinary topics volume 2, issue 7 July 2021 ISSN 2282-7839
3. Santosh Karajgi, C.C Patil, J. Venkatesh, Vijapur Vitthal et al Formulation and in vitro Evaluation of Matrix tablets containing Repaglinide Research Journal of Pharmacy and Technology 14(8); 4429 Aug 2021
4. Krishna D Assessment of knowledge, attitude and practice towards covid-19 among pharmacy students in south India during lockdown: a cross sectional study Journal of Xi'an Shiyou University, Natural Science Edition Aug 2021
5. Santosh Karajgi, Shivanad K, B Shivkumar SM Biradar et al Synthesis, Characterization of 2-Methylquinoxolinyll Thiazolidines for Antimicrobial activity European journal of Pharmaceutcal and medical research 8(9):624 Sept 2021
6. Karajgi SR, Somashekhar M, Pooja C, laxmi SD, Mhetre B, Prabhavati M, Kulkarni RV. Novel Validated Method for the Estimation of Capecitabine in Pharmaceutical Dosage forms by First Order Derivative Spectrophotometry Research Journal of Pharmacy and Technology. 2021; 14(10): 5238-5241.
7. *In-vivo, In-vitro* Analysis of Formulated Colon Targeted Ornidazole Matrix Tablet published in International Journal of Drug Delivery Technology, Vol. 11, issue 3, September (2021).

## Book / Chapter Publication

- **Books and Chapters in edited Volumes / Books published with ISBN**
  1. Applications of Hydrotropes for Aqueous Solubility: A Gateway to Green Nanotechnology, in the book entitled Nanotechnology: A Multidisciplinary Approach for Smart Materials Edited by Dr. Aruna Yadav and published by Immortal Publications Vijayawada with ISBN Number: 978-93-5426-405-4. (2021)
  2. World Health Organization guidelines and Standard Precautions for Waste Management, in the book entitled Health, Hygiene, Sanitation and Environment at Pandemic Times Edited by Dr. Aruna Yadav and published by Immortal Publications Vijayawada with ISBN Number: 978-93-5457-589-1. (2021)
  3. Infection prevention and control and Environmental services: WHO Guidelines, in the book entitled Covid 19 and India Edited by Dr. Dhiraj Singh and published by Adhyaya publishers New Delhi with ISBN Number: 978-93-91284-02-2. (2021)
  4. Pharmaceutical Pollution and Health Impacts, in the book entitled Global Environmental Justice: Policies and Implementations Edited by Dr. Arunakumari Nakkella and Dr. Surendra Kumar Yadav and Published by Bharti Publications New Delhi with ISBN Number: 978-93-90818-44-0. (2021)
  5. Student Attitude and Teaching Tips, in the book entitled Emerging Trends in Indian Education Edited by Sugandh Kumar and Lohans Kumar Kalyani and Published by A.R. Publishers and Distributors Delhi and Ayodhya with ISBN Number: 978-81-953578-0-2. (2021)

## Conference Presentation

- **Faculty participation in conference/Seminars/workshops/QIP/FDP etc**
  1. All the staff members attended national webinar on "Importance of professional training and readiness for successful industrial placement

- “organized by BLDEA'S SSM COP,RC Vijayapura on 24<sup>th</sup> July 2021
2. All the staff members attended International webinar on “discovery and development of a new drug “organized by dept of Pharmacognosy and IQAC,BLDEA's SSM COP&RC on 10<sup>th</sup> July2021
  3. All staff members attended one day AICTE sponsored conference (online) entitled “Recent developments in Pharmacology” organized by Dept of Pharmacology BLDEA's SSM College of Pharmacy and Research Centre, Vijayapur-586103, Karnataka, on 13.11.2021.
  4. Dr.S M Metri Delivered a guest lecture on “Molecular Descriptors in QSAR Studies” at Chalapati institute of pharmaceutical sciences Guntur on 30<sup>th</sup> August 2021.
  5. Dr.Sunanda Nandikol, Hasti Kenia attended AICTE sponsored two days National e-conference on “IPR AWARENESS IN INDIA”orgained by Acharya and BM Reddy College of Pharmacy Bengaluru on 9-10<sup>th</sup> Aug 2021
  6. Dr.SM Metri Delivered a guest lecture at Chalapati institute of pharmaceutical sciences Guntur on “Molecular Descriptors in QSAR Studies” on 30 th August 2021, 102 students were Participated.
  7. Dr.Santosh Karajgi attended Three days STTP on Outcome based teaching, Assessments and Evaluation, jointly organized by NBN Sinhagad School of Engineering and Inponds Inc. USA from 02.08.2021 to 04.08.2021
  8. Dr.Santosh Karajgi attended One week E FDP on An overview of revised guidelines for NAAC Accreditation framework in Higher Education Institutes, organized by Anand Vihar College for Women, Bhopal, from 16.09.2021 to 24.09.2021
  9. Dr.Santosh Karajgi attended Five days AICTE-ATL E FDP on Redesigning Pedagogy:

Educating for Innovation and Fostering for Society, organized by Girijananda Institute of Pharmaceutical Science Guwahati, from 25.10.2021 to 29.10.2022

10. Dr.S.M.Biradar invited as guest lecture resource person on topics “Hospital Pharmacist duties and responsibilities” training to the pharmacist working at Govt hospital on 28<sup>th</sup> Dec 2021.
11. Shridevi K and Hasti Kenia presented e-paper in AICTE Sponsored national conference on ‘Recent development in pharmacology’ on 13 th November, 2021.

### VIEWPOINT

#### Pharmacy Practice Amendment 2021: Key Points & Impact

Sumanyu J K, PharmD Intern

On 30th June of 2021, the Pharmacy Council of India, with the approval of the Central Government amended the Pharmacy Practice Regulations 2015. The amendments were done in Appendix III and especially under the heading “Work Relationships”. The primary objective of this article is to discuss the key points in the amendment following the secondary objective of how it impacts the current chaotic situation of graduated clinical pharmacists. The constant fight of placing the clinical pharmacists as a part of inpatient healthcare settings in order to establish a rational drug prescribing system across the country is fruitful now. The amendment will pioneer a new era for struggling clinical pharmacists who were dreaming to provide pharmaceutical care services in a real sense. The major hindering factor for the implementation of clinical pharmacy services was lack of support and integrity including some misconceptions about the role of clinical pharmacists. This led clinical pharmacists to divert towards other sectors of the pharmacy like research and academics, defocusing from the core purpose of the practice.

**Key Points:**

1) Amendments in the duty of Drug Information Pharmacist (Appendix III, 7A)

The duties and responsibilities of drug information pharmacist are upgraded.

Providing information and advice about drug-related problems, dosage and medication storage to patients, physicians, dentists, and other healthcare professionals.

Creating online educational resources for patients namely viz. tip sheets, pamphlets, and newsletters that cover the aspects like optimal drug use, general health, and selected clinical questions.

Educating healthcare professionals, pharmacy students, and residents about safe and effective medication use, policies, and processes, including development of resources to effectively communicate information.

Participating in quality improvement research programs and drug cost analysis.

Contributing to biomedical literature and provide peer review to other contributors.

2) Inserting Position, Title and Job Responsibilities: Clinical Pharmacists (Appendix III, 7B)

The Pharmacy Practice Regulations 2015 included five job titles: Pharmacist, Senior Pharmacist, Chief Pharmacist, Community Pharmacist and Drug Information Pharmacist. The revised amendment inserted the job title 'clinical pharmacist' within a hospital, which specifically focuses on the practice of pharmacists in inpatient healthcare settings.

Brief duties and responsibilities include:

Providing optimal pharmaceutical care services to promote health, wellness and disease prevention by collaborating with physicians and other healthcare professionals:

- a) Monitoring all the drug-related problems: Drug interactions, adverse drug reactions, medication error, medication discrepancies etc.
- b) Checking compliance of all the clinic procedures, medication process and manage proper communications with physicians and patients.
- c) Regular evaluation, assessment and intervention: therapeutic review, safety monitoring, cost-effectiveness, appropriate dosage and usage including the promotion rational drug prescribing patterns.
- d) Departmental activities: Record maintenance, quality improvement procedures, designing medical protocols, drug information resources, designing drug utilization patterns, recover all the clinical data, attend pharmacy and therapeutic committee meetings and patient associated meetings, participation in drug information service-related projects and supporting all the clinical programs.

**Major Impact:**

a) Boosting professional confidence:

The new amendment creates a doorway for upcoming clinical pharmacists and enhances professional confidence to work as a healthcare provider and contribute to the Indian healthcare system. The appropriate implementation of this regulation will resolve the problematic employment uncertainty across the nation.

b) Optimizing pharmaceutical care services:

The clinical pharmacists play a pivotal role in resolving the clinical issues relating to drug usage across the country. For instance, the concern for inappropriate and over usage of antibiotics during the COVID-19 pandemic was raising and the placement of clinical pharmacists in hospitals could prevent the problematic antibiotic resistance and misuse. The drug

**PvPI Drug Safety Alerts**

The preliminary analysis of ADRs from the PvPI database reveals that the following drugs are associated with the risks is given below.

S. No	Month	Suspected Drug	Indication	Adverse Reaction
1	July 2021	Etoricoxib	For the treatment of pain, swelling and inflammatory conditions due to arthritis	Acute Generalized Exanthematous Pustulosis (AGEP)
2		Torsemide	For the treatment of edema associated congestive heart failure and hypertension	DRESS syndrome
3		Quetiapine and Valproic Acid reaction	<p>Quetiapine: For the management of the manifestation of psychotic disorders (schizophrenia) and as an additional indication for “acute manic episode with bipolar disorder”.</p> <p>Valproic Acid: As a monotherapy and adjunctive therapy in the treatment of patients with complex partial seizures that occur either in isolation or in association with other types of seizure. As monotherapy or adjunctive therapy in the treatment of patients with complex partial seizure and manic episodes associated with bipolar disorder.</p>	Neuropsychiatric Adverse Events (Depressed level of consciousness/ Coma and Disorientation)

expertise of clinical pharmacists is influential in promoting health and wellness throughout the nation.

c) Building employee recognition:

The role of the clinical pharmacists is unpopular within the public sector and mostly referred as just “pharmacists” thereby limiting to dispensing and production of drugs. The recognition of any profession depends upon its value, exposure and stability. Following the implementation of prescribed regulations, the clinical pharmacists get exposed to the mainstream of healthcare settings.

d) Contribution to primary healthcare system:

Research studies about the quality of healthcare provided by the primary healthcare centers (PHC) are shortcoming in India. Despite the fact, the available primary data indicates the mediocre quality in PHCs established in village and smaller cities. The inappropriateness is most probably caused by the informal healthcare providers who are under-trained/untrained in providing optimal services. Recruitment of clinical pharmacists as primary healthcare providers could improve the health and wellness across smaller cities and villages by preventing the misuse of drugs.

e) Enhancing the scope of Pharm.D degree:

The extensive employment of Pharm.D graduates throughout the nation positively impacts the scope of the Pharm.D course. The enhanced scope significantly increases the worth of lectures and professors who are struggling to bring the clinical pharmacists into healthcare platform. Contextually, it further influences the recruitment of clinical pharmacists in academics.

The implementation of this regulation and development of required infrastructure may take some more time. As the Martin Luther King said, “We must accept finite disappointment, but never lose infinite hope”.

4	August 2021	Sofosbuvir	In combination with other medicinal products for the treatment of chronic hepatitis C in adults	Steven-Johnson syndrome
5	November 2021	Diclofenac	For the treatment of rheumatoid arthritis, osteoarthritis, ankylosing spondylitis, gout, pain post-operative pain following dental surgery, migraine attack and postoperative inflammation in patients who have undergone cataract operation	Skin pigmentation
6	December 2021	Remdesivir	Broad spectrum antiviral medication. Restricted emergency use for treatment of patients with severe COVID-19	Sinus Bradycardia

**Drug Information**

IVERMECTIN	
Mechanism of Action	The mechanism of ivermectin in the treatment of rosacea lesions is unknown. Ivermectin, a semisynthetic, anthelmintic agent, is active against many nematodes at various stages in the life cycle. Ivermectin is active against the tissue microfilariae of <i>Onchocerca volvulus</i> , but not against the adult form. Ivermectin is also active against <i>Strongyloides stercoralis</i> , but only in the intestinal stages. Ivermectin binds selectively and with high affinity to glutamate-gated chloride ion channels in invertebrate muscle and nerve cells of the microfilaria. This binding causes an increase in the permeability of the cell membrane to chloride ions and results in hyperpolarization of the cell, leading to paralysis and death of the parasite. Ivermectin also is believed to act as an agonist of the neurotransmitter gamma-aminobutyric acid (GABA), thereby disrupting GABA-mediated central nervous system (CNS) neurotransmission

Indications	<ul style="list-style-type: none"> <li>• Adjunctive therapy for the treatment of peptic ulcer</li> <li>• In case of children (3 to 16 years of age) - reduces saliva and drooling</li> <li>• In anesthesia (all ages)</li> </ul>
Drug class	Anthelmintic Avermectin
Absorption	Tmax, Oral: approximately 4 hours; Topical cream, 10 hours Bioavailability, Oral: proportional to dose Effects of food: approximate 2.5-fold increase in bioavailability
Distribution	Protein binding, plasma protein: more than 99% Vd: 46.8 L
Protein binding	Hepatic: primarily via CYP3A4, and lesser extent CYP2D6, and CYP2E1 Substrate of CYP3A4.
Half life	18 hours (oral); 6.5 days (topical)
Elimination	Fecal: extensive over approximately 12 days Renal: less than 1% unchanged
Adverse effects	(1.1%), Peripheral edema (3.2%), Tachycardia (3.5%) Dermatologic:Edema of face (1.2%), Pruritus (2.8%), Urticaria (0.9%) Musculoskeletal:Myalgia (0.4%) Neurologic:Dizziness (2.8%), Headache (0.2%)
Contraindications	Hypersensitivity to oral ivermectin or any other component of the product Specific contraindications have not been determined for topical ivermectin
References	<ol style="list-style-type: none"> <li>1. Initial US Approval: 1975 (Reference ID: 4289958)</li> <li>2. <a href="https://www.statpearls.com/">https://www.statpearls.com/</a></li> <li>3. Medscape, Micromedex</li> </ol>

**KUDOS**

**Collaborative Patents Published by  
Dr.SR.Karajgi Prof Head  
Dept of Quality Assurance**

Sl.	Title of the Patent Published	Date of Publication
1	Dioscoria Villosa Extract based Herbal composition for wound healing and its preparation method thereof.	06.08.2021
2	Colpomenia Sinuosa based Biosynthesized Nanoparticle composition for Diabetes.	01.10.2021
3	Colpomenia Sinuosa based Biosynthesized Nanoparticle composition for Anti Tumor Activity.	01.10.2021
4	Vaccine for Leptospirosis and Preparation method for the same.	05.11.2021

**Articles Reviewed: (Publon Journals) by  
Dr.SR.Karajgi Prof Head Dept of Quality Assurance**

Sl.	Name of the Journal	Article	Month
1	RGUHS Journal of Pharmaceutical Sciences	A NEW RP-HPLC METHOD FOR DETERMINATION OF ROFLUMILAST IN BULK AND PHARMACEUTICAL DOSAGE FORMS	July 2021
2	Journal of Pharmaceutical Research International	A Cross Sectional Study to Assess the Status of Hemoglobin and Other Blood Indices among Pregnant Women Attending Tertiary care Hospital of Vadodara	July 2021

3	Uttar Pradesh Journal of Zoology	COVID-19 comparable with SARS and MERS coronavirus	August 2021
4.	European Journal of Medical Plants	Phytochemical characterization and in vitro effect on the activity of intestinal disaccharidases of extracts produced from different <i>Maytenus ilicifolia</i> matrices	August 2021
5	Asian Journal of Advanced Research and Reports	Knowledge and practices on risk factors and prevention of varicose vein among operation room nurses of the selected hospitals.	August 2021
6	Journal of Pharmaceutical Research International	Knowledge Management System in Pharmaceutical Healthcare sector: a Conceptual Research	September 2021
7	Journal of Advances in Medicine and Medical Research	Adherence and Medication Adherence Rating Scale (MARS)	November 2021
8	Uttar Pradesh Journal of Zoology	Anti-cancer activity of <i>Ganoderma lucidum</i> mycelium alcoholic extract against Breast cancer cells	November 2021
9	Journal of Pharmaceutical Research International	A Review on Phytoconstituents of Brahmi and their Relation to Improve Nervous System	December 2021

**Role of Wheatgrass in Thalassemia Patients**

Rhea, Vasundhara Jaiswal, PharmD

Thalassemia is a genetic disorder in blood that occurs due to abnormal formation or absence of globin peptide chains of haemoglobin. There are mainly  $\alpha$ -globin chains and  $\beta$ -globin chains that remain in haemoglobin. Defected globin chains are unable to form functional red blood cells; as a result, the patients with thalassemia suffer from a severe lack of red blood cells as well as available oxygen. The main causes of globin genes disturbance are due to genetic alterations, mainly point mutations.

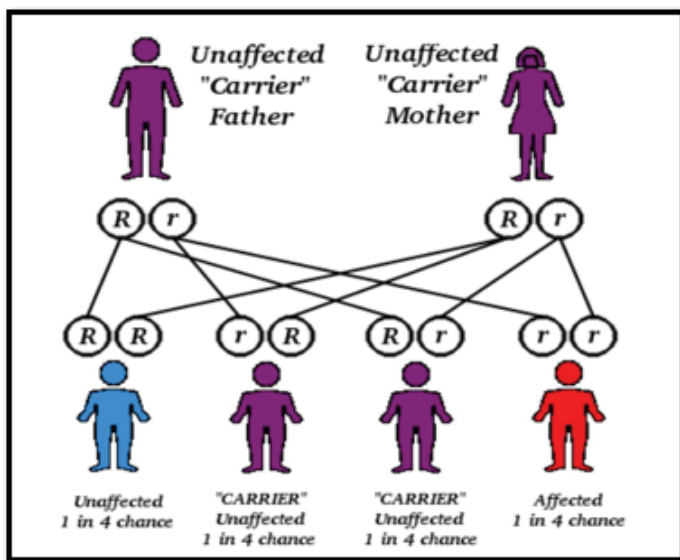


Image Courtesy: CARES Foundation

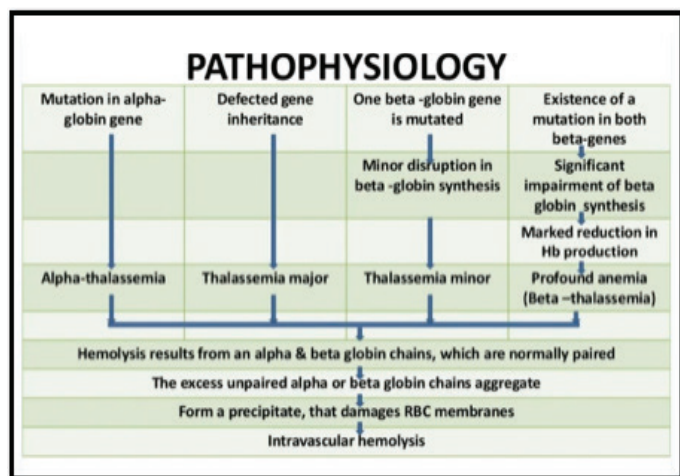


Image Courtesy: Abhishek Yadav (Uploaded on Slideshare)

**Epidemic zone of thalassemia -**

The prevalent area of this disorder is known as Thalassaemic Belt. Iran is a high prevalent zone of thalassemia. Alpha thalassemia is commonly found in South Asia and in the Southern part of China. However, Beta thalassemia is widely spread in the world commonly found in the Mediterranean Sea area, the Middle East, mainly the Indian subcontinent, Russia and the Northern part of China.

**Role of Wheatgrass in Thalassemia patients-**

The herbal medications to improve blood profile with better outcomes are some of the alternatives and one of them is wheatgrass. Wheatgrass contains high amounts of chlorophyll, vitamins, minerals, amino acids, dietary fibre, and biologically active compounds, and is mostly consumed as fresh juice or tablets. Preclinical and clinical studies have reported that wheatgrass juice and tablets are effective in treating myelodysplastic syndrome, thalassemia major and haematological disease related to breast cancer. Furthermore, wheatgrass has diverse biological activities, such as anti-oxidative, and hepato-protective activities. Wheatgrass juice is the juice extracted from the pulp of wheatgrass and has been used as a general-purpose health tonic for several years.

Wheatgrass extract is taken into account as an adjuvant in thalassemia although research during this area is in its infancy. The postulated mechanism of wheatgrass extract is the rapid absorption of chlorophyll and action at the cellular level within the bone marrow, assisting in heme production. Recently, in the murine model, the iron chelator property of wheatgrass extract and its purified compound, mugeinic acid, has been proved. The use of the wheatgrass within the treatment of the iron overloaded disorder could even be justified due to the antioxidative property of methyl pheophorbide, a compound isolated from wheatgrass. Marwaha demonstrated the effect of



wheatgrass in chronically transfused children. Wheatgrass is used within the sort of readymade dehydrated powder converted into tablets, with the objective of improving patient compliance.

Therefore, treatment with wheatgrass tablets maintains serum ferritin levels and increases HbF levels in thalassaemic children receiving chronic blood transfusions. However, there is no reduction in the frequency and blood transfusion requirement. Wheatgrass tablets also improve the QOL of children with thalassemia. A longer study with a larger number of patients would be required to confirm the usefulness of wheatgrass therapy in patients with transfusion-dependent anaemia.

#### Other treatments of thalassemia-

1. Blood transfusion therapy.
2. Bone marrow transplantation (BMT)
3. Hydroxyurea therapy
4. Gene therapy

## INSTITUTE CHRONICLE

### Children Day Celebration 2021

November 14 2021 is celebrated as Children's Day also known as Bal Divas, to pay tribute to India's first Prime Minister Pandit Jawaharlal Nehru on his birth anniversary. BLDEA's SSM College of Pharmacy Principal, staff members and students celebrated Children's Day, offered Tribute to Chacha Nehru and also Professor, Head Dr.H.Shivkumar briefed the significance of celebrating children's day to all the students programme was co-ordinated by Dr.Sunanda Nandikol Assistant Professor Pharmacy Practice



### Dr. A P J Abdul Kalam Birthday Anniversary 2021



On the eve of Dr. Abdul Kalam ji Birthday on 15<sup>th</sup> Oct 2021, we celebrated his b'day anniversary at college premises and around 100 students and 30 teaching and non-teaching staff members were present for the occasion. The event observed the contribution of Dr. Kalam sir vision in nation building and his persona in igniting and inspiring young minds to carry the ethos and principles of constitution to serve people and contribute to the society, to uplift poor and destitute and the sufferings of people through advancement of science and technology. The program was co-ordinated by Mrs. Ashwini G, Assistant Professor, Dept of Pharmaceutics.

### Field Visit Report- Water management and Irrigation Project Kadadadoddi



The institute organizes Excursion/ Field Visit on 30<sup>th</sup> November 2021 was visit was panned at Vijayapur Distinct Water management and Irrigation Project Kadadadoddi and behind area of Bhutanal Lake hoisted by Former irrigation minister Dr M B Patil

He planted more than 1 lakh trees and provided water supply through drip irrigation method. His works as the Irrigation Minister of Karnataka gave a new lease of life of various stalled irrigation projects across Karnataka. Further they have earned him different tags, "Waterman of Karnataka", "Aadhunika Bhagiratha" etc. As the irrigation minister, he worked on the problem of inter-state river water disputes. More than 100 students from B Pharma and Pharm D courses and eighth teaching and nonteaching staff attended the program. Dr. Somasheker Metre, Mr. Prashant Jorapur NSS Unit organized on the eve of Azadi ka Amrit Mahotsav Program.

### NSS Day Celebration



NSS unit of BLDEA's SSM College of Pharmacy and Research Centre Vijayapur Celebrated

NSS Day on 24<sup>th</sup> September 2021 on same day Voluntary Blood Donation camp was organized in association with Lions Blood Bank Vijayapur , more than 25 students voluntarily donated the blood . Dr. H Shivakumar explained importance of blood donation in health care system Dr R B Kotnal Principal spoke about collection and storage of blood Mr. Prashant N Jorapur NSS Programme officer co-ordinated the event .



On the eve of "National Voluntary Blood Donation Day" BLDEA'S SSM College of Pharmacy and Research Centre in Association with BLDEU Shri B M Patil Medical

Blood donation camp was organized in the college. More than 30 students and some of the staff members voluntarily donated the blood. Dr Shivakumar Hugar department of pharmacology addressed the occasion mentioning the importance of blood donation and explained about the myths associated with it. Dr R B Kotnal addressed the occasion and thanked all the students and staff members who donated blood voluntarily at the end of the event.

### International Girl Child Day



A Guest lecture on "International Girl Child Day" was organised by women empowerment committee on 08/12/2021 with the theme "Digital Generation: Our Generation". The guest lecture focused on spreading the awareness on importance of girl child, usage of digital media and resources for girl child. Dr. Ashwini. Yarnal, Associate Professor and Coordinator for Student Activity Committee, A. S. Patil College of Commerce (MBA Program), Vijayapur was invited as guest. 75 students had

attended this guest lecture, the programme was co-ordinators were A Guest lecture on “International Girl Child Day” was organised by Women Empowerment Committee on 08/12/2021 with the theme “Digital Generation: Our Generation”. The guest lecture focused on spreading the awareness on importance of girl child, usage of digital media and resources for girl child. Dr. Ashwini. Yarnal, Associate Professor and Coordinator for Student Activity Committee, A. S. Patil College of Commerce (MBA Program), Vijayapur was invited as guest. 75 students had attended this guest lecture

**Swachh Bharat Abhiyan**



NSS unit of BLDEA's SSM College of Pharmacy and Research Centre Vijayapur Celebrated Mahatma Gandhi ji and Lal Bahaddur Shastri Jayanthi followed by Swachh Bharat Abhiyan Dr. H Shivakumar spoke about Mahatma Gandhi and his ideologies Dr. Shridharkumar spoke about Lal Bahaddur Shastri his honesty and his tough stand during 1965 war Dr R B Kotnal gave remarks on both leaders , achievements , the campus was cleaned by all staff members and students . Mr. Prashant N Jorapur NSS Programme officer co-ordinated the event .

**World Pharmacist's Day Celebration**

**ವಿಶ್ವ ಔಷಧ ತಜ್ಞರ ದಿನಾಚರಣೆ**

• ದೇಶದಾದ್ಯಂತ ಉದಯೋದಯಿಸುತ್ತಿರುವ ಔಷಧಿ ಕ್ಷೇತ್ರದ ಪ್ರಗತಿಯನ್ನು ಹಾಗೂ ಭವಿಷ್ಯದ ಸಾಧನಗಳನ್ನು ಕುರಿತು ಸಂವಿಧಾನದ ಅಡಿಯಲ್ಲಿ ನಡೆಯುವ ವಿಶ್ವ ಔಷಧಿ ತಜ್ಞರ ದಿನಾಚರಣೆ ಪ್ರತಿವರ್ಷವೂ ನಡೆಯುತ್ತದೆ. ಈ ಸಂದರ್ಭದಲ್ಲಿ ವಿಶ್ವದಾದ್ಯಂತ ಉದಯೋದಯಿಸುತ್ತಿರುವ ಔಷಧಿ ಕ್ಷೇತ್ರದ ಪ್ರಗತಿಯನ್ನು ಹಾಗೂ ಭವಿಷ್ಯದ ಸಾಧನಗಳನ್ನು ಕುರಿತು ಸಂವಿಧಾನದ ಅಡಿಯಲ್ಲಿ ನಡೆಯುವ ವಿಶ್ವ ಔಷಧಿ ತಜ್ಞರ ದಿನಾಚರಣೆ ಪ್ರತಿವರ್ಷವೂ ನಡೆಯುತ್ತದೆ.



ವಿಶ್ವ ಔಷಧಿ ತಜ್ಞರ ದಿನಾಚರಣೆ ಪ್ರತಿವರ್ಷವೂ ನಡೆಯುತ್ತದೆ. ಈ ಸಂದರ್ಭದಲ್ಲಿ ವಿಶ್ವದಾದ್ಯಂತ ಉದಯೋದಯಿಸುತ್ತಿರುವ ಔಷಧಿ ಕ್ಷೇತ್ರದ ಪ್ರಗತಿಯನ್ನು ಹಾಗೂ ಭವಿಷ್ಯದ ಸಾಧನಗಳನ್ನು ಕುರಿತು ಸಂವಿಧಾನದ ಅಡಿಯಲ್ಲಿ ನಡೆಯುವ ವಿಶ್ವ ಔಷಧಿ ತಜ್ಞರ ದಿನಾಚರಣೆ ಪ್ರತಿವರ್ಷವೂ ನಡೆಯುತ್ತದೆ.

**ARCHIVES VAULT  
History of Pharmacy**



**The First Apothecary Shops**

The Arabs separated the arts of apothecary and physician, establishing in Bagdad late in the eighth century the first privately owned drug stores. They preserved much of the Greco-Roman wisdom, added to it, developing with the aid of their natural resources syrups, confections, conserves, distilled waters and alcoholic liquids. The apothecary is examining logs of sandalwood offered by a traveling merchant, while children indulge their taste for sweets with stalks of sugar cane. When the Moslems swept across Africa, Spain and southern France, they carried with them a new pattern of Pharmacy which Western Europe soon assimilated. [Ref: “Great Moments in Pharmacy” by George A Bender Paintings by Robert A. Thom. Copyright ©Parke, Davis & Company 1965, Library of Congress Catalog Number: 65-26825]

**STUDENT DIARY**

**Advances and Utility of Artificial Intelligence (AI) in Healthcare**

Sumanyu J K, PharmD Intern

A persistent advancement in technology is benefiting humankind enormously by facilitating the process of complicated works in order to reduce the efforts. Likewise, the evolution of artificial intelligence (AI) is favoring humans with its comprehensive services. It saves the running time and aids its utilization in an effective manner to set up and achieve the objectives. The term AI was coined by John McCarthy in 1956. Initially, the programs were produced to make

computers to solve the algebra, logical theorems and speak English. It progressed uphill in the 1980s after the production of expert systems that emulated the knowledge and analytical skills of humans in problem solving techniques. AI started to interfere in the logistics, data mining, medical diagnosis and other areas during the 1990s and early stage of the 21st century. In the recent years, AI has proven its significance and efficacy in many sectors i.e. healthcare, automotive industries, art, mathematics, photography etcetera. This article is an attempt to emphasize the advances of AI in healthcare and its possible ways of utility in clinical pharmacy.

### Advances of AI: Healthcare

The major goal of artificial intelligence in the field of healthcare is to mimic the human cognitive capabilities and assist in the complex clinical decision making processes. Some of the noteworthy examples include,

- The 'Da Vinci robot surgical system' was designed and manufactured by a American company called 'Intuitive', which was approved by the FDA in the year 2000. This robotic system (classified as physical AI) was outstandingly successful in delivering the minimally invasive surgical procedures in gynecology, urology, thoracic and general surgery. It was utilized in an estimated 200,000 surgeries in 2012, most commonly for hysterectomy and prostatic removal.
- Currently, there are more than 800 drugs available in chemotherapy and thousands of biomedical research papers are being published every day with the aim of enhancing the effectiveness of therapy and identifying the possibilities of various strategies in oncology. Therefore, it is difficult and time consuming process for physicians to extract the relevant information from a huge network of data when approaching the emergency cases and customizing the therapy according to the needs of individual patients of cancer. Microsoft, a multinational company of technology is working on an AI project called 'Hanover' which enables the machines to read

the enormous data of biomedical research papers published in oncology and identify the optimal treatment options available linking it to clinical information provided by the physicians about individual patients. This can be a ground-breaking advance in the sector of oncology.

- A team of surgeons from the University of Florida developed a mathematical approach called 'parabolic personalized dosing (PPD)'. It is based on algebraic equations which relate the trough level of tacrolimus (an immunosuppressant drug) and required tacrolimus concentration in liver transplant patients. During the course of the treatment, the equation interprets the response of the patients and produces a 2- dimensional parabola that indicates the accurate subsequent amount of the drug to be administered to achieve the desired concentration.
- Recently, a drug molecule was created by a British startup 'Exscientia' and Japanese pharmaceutical firm 'Sumitomo Dainippon Pharma' using AI. The new molecule will be further studied in a series of clinical trials. It is being called as a key milestone in the history of drug discovery.
- Scientists with Massachusetts Institute of Technology created a machine learning computer model which will be utilized to identify new antibiotics. They trained the model on about 2,500 molecules, including about 1,700 FDA-approved drugs and a set of 800 natural products with diverse structures and a wide range of bioactivities. This will be a breakthrough in the field of pharmacy. It enhances the knowledge about the spectrum of antibiotics and their resistance patterns.

### AI Utility in Clinical Pharmacy:

Clinical pharmacists face various challenges routinely when approaching drug and disease related complexities. The important sections of clinical pharmacy where AI can be effectively utilized are as follows,

## WISDOM PEARLS

**a) Drug Information:**

The huge network of drug information is a forever growing aspect. It can become difficult for pharmacists to derive intended information in the desired amount of time. Therefore, the role of AI can be impactful in providing the most favorable drug information in intended time. One of the best examples about initial modes of AI is the IBM powered 'Micromedex' which consists of a feature called 'Watson Artificial Intelligence' which provides quick and valid answers for customized questions.

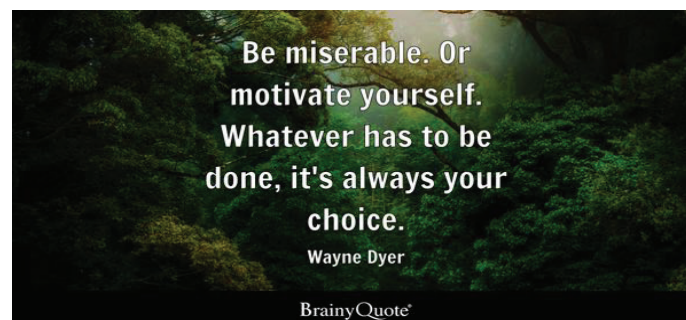
**b) Therapeutic Intervention:**

Oftentimes, the clinical situations are way different or contrasting than depicted in medical or therapeutic texts and are challenging to human cognitive capability. AI can lend a helping hand in those situations in providing the numerous options for choosing the optimal drug therapy in order to achieve the desired outcomes. It will productively assist the clinical pharmacists and physicians in decision making processes.

**c) Laboratory Investigations:**

Laboratory data is the primary basis for diagnosis. In certain situations, the laboratory data can present imprecise information attributable to both human and machine errors. The values or inference can be false positive or false negative leading to erroneous diagnosing. AI is capable of eliminating the errors by performing effective searching through a wide network of extensive research studies and facilitating the primary diagnostic procedure in hospitals.

Many enthusiastic biomedical researchers and computer scientists are collaborating to find out the newer possibilities of AI in healthcare. It can be strongly predicted that the next 20 years will be the golden years for artificial intelligence. Moreover, when approaching the newer possibilities in the field of AI, the researchers must consider the fact that the AI shall be utilized for only assisting humans rather than hegemonizing the human cognitive capabilities.



## PHOTO FEATURES

## International Yoga Day 2021





Children's Day 2021

Girl child Day 2021



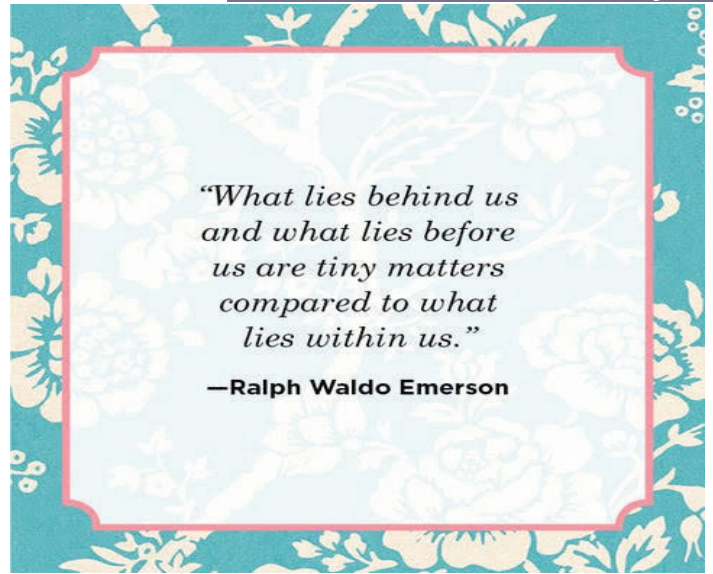
Swachh Bharat Abhiyan 2021

NSS Day celebration 2021





Vijayapura, Karnataka, India  
 BLDE PHARMACY COLLEGE, Ashram Rd, near BLDE Hospital,  
 Bangaramma Sajjan Campus, Vijayapura, Karnataka 586103, India  
 Lat 16.844984°  
 Long 75.710407°  
 01/10/21 10:18 AM



*“What lies behind us  
 and what lies before  
 us are tiny matters  
 compared to what  
 lies within us.”*

—Ralph Waldo Emerson

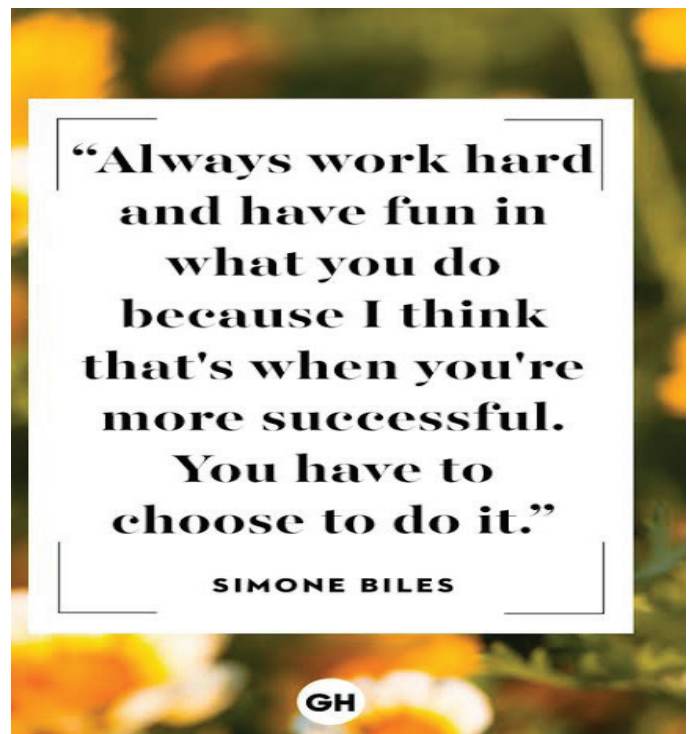


Excursion/ Field Visit



“  
**Keep your face  
 always toward the  
 sunshine - and  
 shadows will fall  
 behind you.**

WALT WHITMAN



**“Always work hard  
 and have fun in  
 what you do  
 because I think  
 that's when you're  
 more successful.  
 You have to  
 choose to do it.”**

SIMONE BILES



## IV. Master of Pharmacy (M. Pharm)

Course duration: 2 years

Eligibility: Pass in B. Pharm with 55% marks.

- Pharmaceutics
- Pharmaceutical Chemistry
- Pharmacology
- Pharmacognosy
- Pharmacy Practice
- Pharmaceutical Technology
- Quality Assurance

### V. Ph.D Programme

- Pharmaceutics
- Pharmaceutical Chemistry
- Pharmacognosy

### Features

- Highly qualified and experienced teaching staff
- Well-ventilated classrooms with modern audio-visual teaching aid
- Sophisticated laboratories with modern instruments/equipment
- Museum exhibiting past and present developments in pharmacy
- Dhanvantri garden with about 100 medicinal herbs/shrubs
- Scientific society, a forum for regular interaction with eminent personalities to discuss current trends in Pharmacy
- Well furnished hostels for boys & girls
- Library & e-library, Recreation center
- Bank Loans
- State-level Ranks - 4
- Research Grants - 1.32 Crore
- Wi-Fi Campus
- Attached Hospital within campus
- Concession in fees for meritorious students of Vijayapur Dist.
- Swimming track within campus
- Fee waiver for students of Vijayapur District who secure CET ranking below 2500 conducted by KEA. 10% of total seats will be reserved for all courses of Pharmacy in this category
- Pharm. D Interns will be paid stipend of Rs. 8000 per month
- Academic Excellence Award will be conferred for class toppers



### Library

Library has a huge collection of books, journals and CDs. The cyber center, which is also a part of the college, helps students to familiarize with internet & HELINET usage.

### Placement Cell

All efforts are made to place our students in reputed companies, thus assuring them a secured and bright future. Over the last 5 years, our students have been placed in several reputed multi-national and Indian companies such as Ranbaxy, Astra, Pfizer, Torrent, FDC, Cipla, Himalaya, etc. Several of our students are employed in corporate hospitals too.

### Prospects

The pharmaceutical industry in India is growing at a rapid pace, as a result of spurt in the number of hospitals, nursing homes and pharmaceutical companies. It indicates the increasing scope in this sector. A course in Pharmacy definitely offers reasonably good career opportunities by way of job opportunities in the job market and scope for self employment. The job opportunities for pharmacy graduates in India and in International level are as follows:

1. Pharmaceutical Industry: R&D, F&D, production, quality control, quality assurance or marketing of new drugs for clinical use (medical representatives).
2. Basis for Higher Education: M. Pharm or Ph.D holders can engage in research work like developing new drug molecules in pharmaceutical industry and analyzing them for application.
3. Government Departments: Drug control administration as a Drug Inspector or Government Analyst and Hospital Pharmacist in Armed Forces, Railways and Primary Health Care Centers. Pharmacists also have job opportunities in the Department of Health and Family Welfare, Pest Control Division of Agriculture, Department of National Defence, Provincial Research Councils and the Provincial Departments of Agriculture or Environment
4. University: Teaching and Research.
5. A career abroad: Hospital and clinical pharmacist, QA & QC scientist, regulatory expert, academics, production officer, etc.
6. Consulting Services: Pharmacy graduates can work as consultants for industry and academic centers.
7. Self employment: A diploma or degree holder in Pharmacy, after registering with the State Pharmacy Council, can set-up and run a pharmacy or chemists & druggists shop (retail as well as wholesale).
8. Clinical Research: Worldwide opportunity in contract research organisations.



### Salary Potential

Approximate earnings per month of the newly employed Pharmacy graduates.

- Along with contributory provident fund, D.A., insurance, medical reimbursement, and other allowances and benefits as per government rules, average salary of a Pharmacist is around Rs 20,000.
- Research scientists: Rs. 50,000 - 60,000
- Medical representatives: Rs. 20,000 - 25,000 + incentives
- Manufacturing Pharmacists: Rs. 20,000 +
- Hospital Pharmacists: Rs. 20,000 - 25,000
- Government jobs: Rs. 20,000 onwards
- Academicians: Rs. 40,000 onwards



### BLDE Association's Shri Sanganabasava Mahaswamiji COLLEGE OF PHARMACY & RESEARCH CENTRE

BLDE University Campus, Solapur Road, Vijayapura-586 103 | Ph: 08352-264004  
bldeascop@yahoo.com | www.bldeaparmacy.ac.in

For Admissions call Principal @ 09448947496/Vice-Principal 9845619296



BLDE Association's Shri Sanganabasava Mahaswamiji COLLEGE OF PHARMACY & RESEARCH CENTRE

Build a lucrative career in the fast growing PHARMA industry



### The Bijapur Liberal District Education Association

The Bijapur Liberal District Education Association (BLDEA) was founded in the year 1910 with the objective of imparting quality education. BLDEA currently runs 75 educational institutions and is thereby making a significant contribution to India's development. Since inception, the association has been working with a deep sense of commitment to bring about multi-lateral development in a wider section of population through an extensive network of educational institutions. BLDEA's College of Pharmacy, established in the year 1982 to cater to the needs of pharmacy education, is known for quality education.

BLDEA's SSM College of Pharmacy College and Research Center

### Vision

To provide quality Pharmaceutical Education, Practice & Research with global standards and to meet health care needs of backward region of North Karnataka.



Admissions Open

### Mission

To empower graduates in application based knowledge with high degree of professional integrity and ethics.

### Courses offered

- I. **Diploma in Pharmacy (D. Pharm)**  
Course duration: 2 years  
Eligibility: Pass in 10+2 or any equivalent examination of any other approved Board, with Science as major subjects (PCM or PCB).
- II. **Bachelor of Pharmacy (B. Pharm)**  
a) **Admission to 1st year B. Pharm**  
Course duration: 4 years  
Eligibility: Pass in PUC in Karnataka or any equivalent examination of any other approved Board, with minimum 40% marks in any combination PCM/PCB/PCMB.  
(In case of SC/ST & Group-A the minimum requirement is 35%).



### COURSES OFFERED

#### b) Admission to direct 11nd year B. Pharm

Pass in D. Pharm examination conducted by BEA Bangalore, or any authority approved by the Pharmacy Council of India.

#### III. Doctor of Pharmacy (Pharm. D.)

##### a) Admission to Doctor of Pharmacy (Pharm. D.)

Course duration: 6 years  
Eligibility: Pass in 10+2 or D. Pharm Examination.

##### b) Post Baccalaureate (Pharm. D.)

Course duration: 3 years  
Eligibility: Pass in B. Pharm Examination.

### Scope for Pharm. D

#### A candidate who completes Pharm. D...

- Can find a job in the clinical sector
- Can play an active role in heading a hospital's pharmacy set-up
- Gets job opportunities in industries that deal with clinical trials
- Can register as a pharmacist all over the world
- Can find placement in Pharmacovigilance Sector and
- Is eligible to appear for NAPLEX in US and can become a registered pharmacist even in other countries.

# PHARMA COMMUNIQUÉ

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