



# KMCH COLLEGE OF PHARMACY

Approved by PCI, New Delhi.

Affiliated to The Tamil Nadu Dr. M.G.R. Medical University, Chennai.

Kovai Estate, Kalapatti Road, Coimbatore - 641 048.



**2022 - 2023**

## VISION

- To nurture world class pharmaceutical professionals and researchers.

## MISSION

- To provide and continuously upgrade the infrastructure, state-of-the-art technology and training for the students and faculty.
- To encourage high quality research in drug discovery in collaboration with industries. To implement modern pedagogical methods in class room and laboratories for improving teaching and learning process.
- To inculcate and maintain national and international level of excellence in under graduate, post graduate and research program.

## MAGAZINE COMMITTEE MEMBERS 2022 – 2023

Chairman

**Dr. Nalla G Palaniswami**

Managing Trustee

**Dr. Thavamani D Palaniswami**

Ex-officio Members

**DR. O. T. Buvaneswaran**

**DR. M. Natesan**

Patron

**DR. A. Rajasekaran**

**DR. K. Suresh Kumar**

Staff Advisors

**DR. K. K. Sivakumar**

**Mrs. G. Sathya Pooja**



*Despabilado*

An Era for Pharma Future

## STUDENT EDITORIAL COMMITTEE MEMBERS

Chief Editor

**Ms. Sabitha. S**

Co-Editor

**Mr. Yakeshwaran. S**

Designers

**Abirami. K**  
**Dhanus. C. T. R**

Co-ordinators

**Mr. Naresh Kumar. S,**  
**Mr. Rahul Pranav. K**

English Editor

**Mr. Salman Ahamed. S. H**

Tamil Editor

**Ms. Mukil. M**

Artistry Editor

**Ms. Srinandhini. G**

## STUDENT MEMBERS

- |                              |                     |                          |                     |
|------------------------------|---------------------|--------------------------|---------------------|
| 1. Mr. Dibesh. S             | – B. Pharm IV year  | 16. Ms. Aishwarya. G     | – Pharm. D II year  |
| 2. Mr. Murali. S             | – B. Pharm IV year  | 17. Mr. Sudesh. S        | – Pharm. D II year  |
| 3. Mr. Jahan. R              | – B. Pharm IV year  | 18. Ms. Janani Shree. G  | – Pharm. D III year |
| 4. Ms. Sakti sri. R          | – B. Pharm III year | 19. Mr. Sudhesh. R       | – Pharm. D III year |
| 5. Mr. Hariharan. N          | – B. Pharm III year | 20. Ms. Thoorana Sri. J  | – Pharm. D IV year  |
| 6. Ms. Jenisha Banu. M       | – B. Pharm III year | 21. Mr. Vignesh. V Nair  | – Pharm. D IV year  |
| 7. Mr. Stalin. A             | – B. Pharm III year | 22. Ms. Mowfiya. N       | – Pharm. D V year   |
| 8. Mr. Giridharan. M         | – B. Pharm II year  | 23. Mr. Samcil Rayner. C | – Pharm. D V year   |
| 9. Ms. Arunthathi. S         | – B. Pharm II year  | 24. Ms. Kanishma. R. M   | – M.Pharm II year   |
| 10. Mr. Sarvesh Anand. P. V  | – B. Pharm I year   | 25. Ms. Kavya shree. S   | – M.Pharm II year   |
| 11. Ms. Mohammada Rashida. A | – B. Pharm I year   | 26. Ms. Monisha. V. P    | – D. Pharm II year  |
| 12. Ms. Janani. N            | – Pharm. D I year   | 27. Mr. Anbukumar. M     | – D. Pharm II year  |
| 13. Mr. Suganth. G. S        | – Pharm. D I year   | 28. Ms. Bharathi. R      | – D.Pharm I year    |
| 14. Mr. Jack Winfred. G      | – Pharm. D I year   | 29. Mr. Harish. G        | – D.Pharm I year    |
| 15. Ms. Annie Sherlyn. R     | – Pharm. D II year  |                          |                     |

## *From the Chairman*



It is a matter of great pride and satisfaction to know that the KMCH COLLEGE OF PHARMACY magazine committee has put their best efforts to bring out the College magazine "DESPABILADO"- for the academic year 2022-2023.

College Magazine is the most powerful platform of the students where they can spotlight their talents as well as their creativity in their respective field which may be benefited to all.

I whole-heartedly congratulate the editorial members on their successful endeavour to bring out the magazine.

**Dr. Nalla G Palaniswami**

Chairman,  
Kovai Medical Center & Hospital,  
Coimbatore.





## *From the Managing Trustee*



I am very glad to note that the KMCH College of Pharmacy is bringing out the magazine "DESPABILADO" for the academic year 2022-2023.

College magazine is an eloquent expression of the progress and outstanding achievements that a institution has to its credit. I congratulate the principal and the faculty members for their achievements in curricular, co-curricular and extracurricular activities I hope this magazine, will mirror the creative and innovative ideas of both the teachers and the students. On this occasion

I convey my best wishes to staff and students of the institution for this educational endeavour.

Dr. Thavamani D Palaniswami

**Dr. Thavamani D Palaniswami**

Managing Trustee,  
Dr. N.G.P. Research and Educational Trust,  
Coimbatore.



## *From the CEO*



I am glad to know that KMCH COLLEGE OF PHARMACY is bringing out the College Magazine **"DESPABILADO"- for the year 2022-2023**. The college magazine is a forum which could aptly be used for recording events, fond memories and creative writing by the faculty members and students. I am sure that this magazine will be informative and resourceful. Congratulations to the editorial team for their determined efforts in bringing out this magazine.

*O. T. Buvaneswaran*

**DR. O.T. Buvaneswaran**

Chief Executive Officer,  
Dr. N.G.P. Research and Educational Trust,  
Coimbatore.





## *From the Principal*



It is indeed a great privilege for me to write a message for our college magazine "DESPABILADO".

Education is not an act of acquiring knowledge but learning a skill to lead life and forming one's personality. Students of our institution excelled in every initiative that we undertook and they stood together with us in providing quality education. This magazine provided a platform for the young budding pharmacists to discover, develop and to draw out the dormant talents and to express their thoughts, creativity and ideas.

I congratulate the convener and the committee members for their successful efforts to bring out the magazine for the academic year 2022-23.

*A. Rajasekaran*

**DR. A. Rajasekaran**

Principal  
KMCH College of Pharmacy,  
Coimbatore.



## *From the Staff Advisor's Desk*



"Teamwork is the ability to work together toward a common vision. The ability to direct individual accomplishments toward organizational objectives. It is the fuel that allows common people to attain uncommon results"- Andrew Carnegie

In view of this fact, we are delighted to disclose the magazine **"DESPABILADO"- for the year 2022-2023**. Students are great virtue to the College as much as College is to them, and must grab all the opportunities provided, to get a sound education and should also remember to uphold values at all times and at all costs. Education focuses not only being active in the curriculum but also to explore the knowledge and improve the leadership. "As we look ahead into the next century, leaders will be those who empower others". Students proved their strengths in the roots of self-motivation, self-confidence and the thirst to succeed in life. We congratulate the team of students for their tireless efforts. May all our students soar high in uncharted skies and bring glory to the world and their profession with the wings of education. It shows that technical minds are no less when it comes to creative writing and expressing their philosophical and technical minds. It has been a wonderful experience to work with the editorial team and to see the creations taking shape. Cheers to the Despabiladors in bringing out this marvellous magazine

With regards  
Magazine Staff Advisors

**Mrs. G. Sathya Pooja**  
Lecturer

**DR. K.K. Sivakumar**  
Associate Professor



# From the Editor's Desk...



The Editors Board of KMCHCOP is proudly presenting the seventh edition of the college annual magazine "PHLUZIR-DESPABILADO: An Era for Pharma Future."

I'm so delighted to release the seventh edition of the magazine, with its distinctive epic features, It's a platform to explore the latest trends, stories, and insights into the future pharma field, I believe our team has worked tirelessly to curate the content to inform, inspire, and entertain.

I hope this edition will captivate your interest and leave you with valuable takeaways, and I would like to express my gratitude and appreciation for the incredible effort and dedication that each one has poured into making our magazine a resounding success.

This magazine has profoundly contributed to my personal and leadership development; it has taught me the responsibilities of coordinating a diverse team, managing deadlines, and a transforming journey in understanding the dynamics of teamwork.

I would like to thank our principal Dr. Rajasekaran. A., M.pharm., Ph.D., for his tireless, unwavering support and encouragement.

I want to thank our advisor and well-wisher, Dr. Sivakumar. K. K., M.Pharm., Ph.D., who made this journey impeccable. Your wisdom, experience, invaluable guidance, and dedication have been the guiding force behind our efforts. As we move forward, we will carry the high standards of integrity and professionalism that you have instilled in us.

This magazine stands as a testament to creativity, dedication, and unity. Thank you to all who made this possible.

A decorative background featuring several colorful butterflies in shades of pink, orange, and blue, set against a dark, textured background.

*Sabitha S.*

Sincerely,  
**Sabitha. S.,**  
IV B. Pharm



## *From cover page and front page Designers...*



KMCH College of Pharmacy releasing the Seventh edition of college magazine "PHULZIR-DESPABILADO" for the academic year of 2022-2023 to showcase the dormant talent of the students.

The image of the cover page depicts the "ARTIFICIAL INTELLIGENCE" that shows the significance of drug discovery, editing genes, simulation, scribing, pharmacovigilance, bioinformatics, logic programming, artificial neural networks, diagnostics and optical character recognition.

This magazine have newer emphasis on curriculum, educational outcomes, guidance on structuring and assessing assignments for the future development of Pharma.

Truly

**Abirami. K.,**

**Dhanus. C.T.R.**



# DESPABILADO – AN ERA FOR PHARMA FUTURE

**The theme of this year magazine for 2022–2023 is “DESPABILADO: AN ERA FOR PHARMA FUTURE”.**

Artificial Intelligence (machine intelligence) is a stream of science related to machine learning and the exhibition of human-like knowledge. Nowadays, AI is a fundamental part of many research and technical fields. In the 1980s, expert systems were first developed and employed to assist pharmacists in data collection and storage for clinical pharmacy. The use of these technologies improves decision-making, optimizes innovation, and improves the effectiveness of research and clinical trials.

## **DESPABILADO – an acronym, stands for, D: Drug discovery**

A competitive and expensive business made easiest using software as a bioanalytical tool, such as short hairpin RNA (shRNA) screening and deep sequencing. Huge data is made available to discover possible targets and their actions, prognostic for determining pharmacokinetic and pharmacodynamic properties of new chemical entities.

## **E: Editing genes**

Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR), especially the CRISPR-Cas9 system for gene editing, revolutionized our ability to edit DNA cost-effectively and precisely. Besides these, we also have TALENs and ZFNs to contribute to the gene editing process.

## **S: Simulation, Scribing**

An epoch-making tool, Simulation-Based Medical Education (SBME), is extensively used in various medical fields for acquiring technical knowledge to train in basic life support.

Medical scribing is an evolving paraprofessional field that assists the physician by documenting health reports, drug interactions, and other relevant data from the beginning of treatment until the end.

## **PA- Pharmacovigilance**

AI plays a significant role in pharmacovigilance, enhancing the detection, assessment, and management of adverse drug reactions and other safety concerns

associated with pharmaceutical products. Some AIs used in pharmacovigilance are automated signal detection, data mining, predictive analysis, automated case triage, etc.

### **BI: Bioinformatics**

Bioinformatics is the application of computational techniques and algorithms to analyze and interpret biological and medical data, such as DNA sequences, protein structures, and genomic information. It plays a crucial role in understanding and advancing various aspects of medicine and healthcare, including genomics, personalized medicine, and drug discovery.

### **L-Logic programming**

Logic programming is a computer programming paradigm that is based on formal logic and can be applied in various domains, including pharmaceuticals, helping to automate complex processes, analyze large data sets, and make data-driven decisions that lead to more effective drug development, improved patient safety, and enhanced pharmaceutical operations.

### **A: Artificial neural networks**

Artificial neural networks (ANN) are a fundamental tool in AI and machine learning. These are computational models inspired by the structure and function of the human brain, specifically the interconnected network of neurons. ANN consists of artificial neurons organized in network topology.

### **D- Diagnostics**

AI shows significant advancements in the field of diagnostics, particularly in healthcare. AI-powered diagnostic systems have the potential to improve accuracy, efficiency, and speed in various diagnostic processes, like medical imaging, rapid disease detection, and clinical decision support, reducing diagnostic errors.

### **O-Optical character recognition**

Optical character recognition (OCR) is a technology used to convert printed or handwritten text, images, or symbols into machine-readable text. OCR systems are designed to recognize characters, letters, numbers, and symbols in a variety of formats, such as printed documents, scanned images, or photographs. By leveraging OCR technology, pharmacists can improve accuracy, reduce errors, and enhance patient safety.





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# *Academic Excellence*

for the year 2022-2023







## D. PHARM - 2023 EXAMINATION

### D.PHARM - I YEAR



First Mark  
**Dharunya. A**  
77.20%



Second Mark  
**Lakshmitha. R**  
76.80%



Third Mark  
**Anbukumar. M**  
76.40%

### D.PHARM - II YEAR



First Mark  
**Vimala. R**  
79.85%



Second Mark  
**Ananciya Christy. A**  
79.23%



Third Mark  
**Harini. A**  
78.19%

## B. PHARM - 2022- 2023 EXAMINATION

### B. Pharm - I Year (First Semester)



First Mark  
**Arunthathi. S**  
SGPA - 9.51



First Mark  
**Pavithra. P**  
SGPA - 9.51



Second Mark  
**Jamuna. B**  
SGPA - 9.34

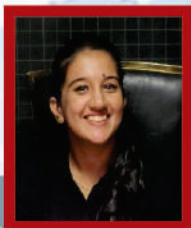


Third Mark  
**Harithra. S.P**  
SGPA - 9.14



## B. PHARM - 2022 - 2023 EXAMINATION

### B.Pharm - II Year (Second Semester)



First Mark  
**Sakti Sri. R**  
SGPA - 9.58



Second Mark  
**Aarthi. J**  
SGPA - 9.24



Second Mark  
**Aravind. R**  
SGPA - 9.24



Second Mark  
**Harshini. N**  
SGPA - 9.24



Second Mark  
**Imran Ussan. M**  
SGPA - 9.24



Third Mark  
**Nandhini. M**  
SGPA - 9.20

### B. Pharm - II Year (Third Semester)



Third Mark  
**Nandhini. M**  
SGPA - 9.58



Second Mark  
**Aravind. R**  
SGPA - 9.16



## B. PHARM - 2022 - 2023 EXAMINATION

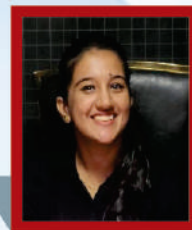
### B. Pharm - II Year (Third Semester)



Third Mark  
**Imran Ussan. M**  
SGPA - 9.08



Third Mark  
**Hariharan. N**  
SGPA - 9.08



Third Mark  
**Sakti Sri. R**  
SGPA - 9.08

### B.Pharm III Year (Fifth Semester)



First Mark  
**Fathima Neha. H**  
SGPA - 9.38



Second Mark  
**Bharathi. P**  
SGPA - 9.30



Third Mark  
**Sabitha. S**  
SGPA - 9.23



Third Mark  
**Vishnupriya. B**  
SGPA - 9.23

### B.Pharm III Year (Sixth Semester)



First Mark  
**Sneha. M**  
SGPA - 9.13



Second Mark  
**Mukil. M**  
SGPA - 9.06



Third Mark  
**Abinaya. C**  
SGPA - 9.00



Third Mark  
**Vishnupriya. B**  
SGPA - 9.00



## B. PHARM - 2022 - 2023 EXAMINATION

### B. Pharm - IV Year (Seventh Semester)



First Mark  
**Naveen kumar. S**  
SGPA - 9.33



First Mark  
**Vaishnavi. D**  
SGPA - 9.33



Second Mark  
**Divya. M**  
SGPA - 9.25



Third Mark  
**Janani. S**  
SGPA - 8.91



Third Mark  
**Praveena. S**  
SGPA - 8.91



Third Mark  
**Indrasakti. S**  
SGPA - 8.91



Third Mark  
**Vidya. U. L**  
SGPA - 8.91

### B. Pharm - IV Year (Eight Semester)



First Mark  
**Indrasakti. S**  
SGPA - 9.09



Second Mark  
**Vidya. U.L**  
SGPA - 8.90

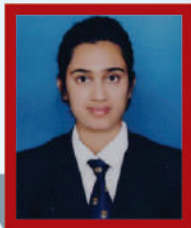


Second Mark  
**Divya. M**  
SGPA - 8.54



## PHARM.D - (2021 - 2022)

### Pharm.D - I Year



First Mark  
**Annie Sherlyn. R.**  
88.6%



Second Mark  
**Miruthula. U. V.**  
87%



Third Mark  
**Nikila. U**  
83.5%

### Pharm.D - II Year



First Mark  
**Swetha. S**  
81%



Second Mark  
**Kavya. S**  
80.4%



Third Mark  
**Snegha. D**  
79%

### Pharm.D - III Year



First Mark  
**Nila. P**  
80.2%



Second Mark  
**Meenu Sreerajan**  
79.8%



Third Mark  
**Seema Bhagam. M. R**  
79.5%



## PHARM.D - (2021 - 2022)

### Pharm.D - IV Year



First Mark  
**Flencinecia Basil Raj**  
84.4%



Second Mark  
**Abdul Kadhar**  
83.4%



Third Mark  
**Kevin Jhon**  
83.3%

### Pharm.D - V Year



First Mark  
**Karthik M**  
84.2%



Second Mark  
**Ardhra Jiju**  
78.8%



Third Mark  
**Jaishwanth V M**  
78.4%

### Pharm.D - IV Year PB



First Mark  
**Ayisha. M**  
80.58%



Second Mark  
**Sneka. M**  
80.42%



Third Mark  
**Safrin Fathima. S**  
78.25%



## PHARM.D - (2021 - 2022)

### Pharm.D - V Year PB



First Mark

**Yookanithya. D**

76%



Second Mark

**Sivashankar. S**

75.2%



Second Mark

**Tamilarasan. J. M**

75.2%



Third Mark

**Mahendra Prasath S**

74.8%

## M.PHARM (2022 EXAMINATION)

### M. PHARM - I YEAR (1<sup>ST</sup> SEM)

### Department of Pharmaceutical Analysis



First Mark

**Logesh Kumar. S**

SGPA - 8.76



Second Mark

**Kamali. C**

SGPA - 8.69



Third Mark

**Sajin Arokia Raj**

SGPA - 8.52

### Department of Pharmaceutics



First Mark

**Neethu. K. C**

SGPA - 9.38



Second Mark

**Ragul. S**

SGPA - 8.67



Third Mark

**Swarna Mallika. K**

SGPA - 8.38



Third Mark

**Kaviya. G**

SGPA - 8.38



## M.PHARM (2022 EXAMINATION)

### M. PHARM - I YEAR (1<sup>ST</sup> SEM)

#### Department of Pharmacology



First Mark  
**Mohana priya**  
SGPA - 8.61



First Mark  
**Hariharan**  
SGPA - 8.61



Second Mark  
**Srinithi. N**  
SGPA - 8.38



Third Mark  
**Dhanalakshmi**  
SGPA - 8.30

#### Department of Pharmacy Practice



First Mark  
**Janani. A**  
SGPA - 8.61



Second Mark  
**Heba Hanan asharaf**  
SGPA - 8.61



Second Mark  
**Mohammed Nihas**  
SGPA - 7.84



Third Mark  
**Ragunathan. M**  
SGPA - 7.76

### M. PHARM - I YEAR (2<sup>ND</sup> SEM)

#### Department of Pharmaceutical Analysis



First Mark  
**Kaviya Shree. S**  
SGPA - 9.00



Second Mark  
**Logesh Kumar. S**  
SGPA - 8.38



Third Mark  
**Rego Amal.A**  
SGPA - 8.07



Third Mark  
**Oviyaa. J**  
SGPA - 8.07



## M.PHARM (2022 EXAMINATION)

### M. PHARM - I YEAR (2<sup>ND</sup> SEM)

#### Department of Pharmaceutics



First Mark  
**Neethu.K. C**  
SGPA - 9.07



First Mark  
**Priyadharshan. S**  
SGPA - 9.07



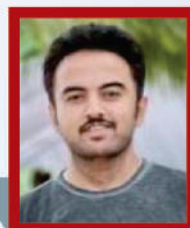
Second Mark  
**Ragul.S**  
SGPA - 8.92



Third Mark  
**Adarsh S**  
SGPA - 8.76



Third Mark  
**Kanishma. R.M**  
SGPA - 8.76



Third Mark  
**Vignesh. R**  
SGPA - 8.76

#### Department of Pharmacology



First Mark  
**Mohana priya**  
SGPA - 9.07



Second Mark  
**Lokesh**  
SGPA - 8.67



Third Mark  
**Dhanalakshimi**  
SGPA - 8.61



## M.PHARM (2022 EXAMINATION)

### M. PHARM - I YEAR (2<sup>ND</sup> SEM)

#### Department of Pharmacy Practice



First Mark  
**Janani. A**  
SGPA - 9.07



First Mark  
**Heba Hanan asharaf**  
SGPA - 8.69



Second Mark  
**Ragunathan. M**  
SGPA - 7.84

### M. PHARM - II YEAR (3<sup>RD</sup> SEM)

#### Department of Pharmaceutical Analysis



First Mark  
**Gowtham A**  
SGPA - 9.61



Second Mark  
**Vignesh S**  
SGPA - 9.61

#### Department of Pharmacology



First Mark  
**Shanmuganathan.D. K.**  
SGPA - 10.00



First Mark  
**Vanitha. N**  
SGPA - 10.00



Second Mark  
**Sneha.K.K**  
SGPA - 9.80



## M.PHARM (2022 EXAMINATION)

### M. PHARM - II YEAR (3<sup>RD</sup> SEM)

#### Department of Pharmacy Practice



First Mark  
**Yuvashri. K**  
SGPA - 9.80



Second Mark  
**Prabavathi. P**  
SGPA - 9.71

#### Department of Pharmaceutics



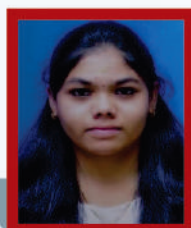
First Mark  
**Vinesha. R**  
SGPA - 9.85



Second Mark  
**Ardhra Krishna P. V**  
SGPA - 9.66



Second Mark  
**Rajeshwari. V**  
SGPA - 9.66



Third Mark  
**Keerthana.R**  
SGPA - 9.00



Third Mark  
**Pradeepa.R**  
SGPA - 9.00



Third Mark  
**Rajaguru B**  
SGPA - 9.00



## M.PHARM (2022 EXAMINATION)

### M. PHARM - II YEAR (4<sup>TH</sup> SEM)

#### Department of Pharmaceutical Analysis



First Mark  
**Gowtham A**  
SGPA - 10.00



Second Mark  
**Vignesh S**  
SGPA - 9.20

#### Department of Pharmacology



First Mark  
**Shanumuganadhan. D. K**  
SGPA - 10.00



Second Mark  
**Vanitha. N**  
SGPA - 10.00



Second Mark  
**Chandrasekar. V**  
SGPA - 9.95



Second Mark  
**Sneha. K. K**  
SGPA - 9.95



Third Mark  
**Vinoth Kumar. R**  
SGPA - 9.15



## M.PHARM (2022 EXAMINATION)

### M. PHARM - II YEAR (4<sup>TH</sup> SEM)

#### Department of Pharmacy Practice



First Mark  
**Yuvashri. K**  
SGPA - 10.00



Second Mark  
**Prabavathi. P**  
SGPA - 9.71

#### Department of Pharmaceutics



First Mark  
**Ardra Krishna. P. V**  
SGPA - 10.00



First Mark  
**Manoranjan**  
SGPA - 10.00



First Mark  
**Rajeshwari. V**  
SGPA - 10.00



First Mark  
**Vinesha. R**  
SGPA - 10.00



Second Mark  
**Mahashwetha. S. S**  
SGPA - 9.80



Second Mark  
**Sona. M**  
SGPA - 9.80



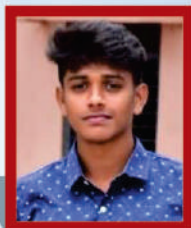
Third Mark  
**Keerthana. R.**  
SGPA - 9.20



## M. PHARM (2023 EXAMINATION)

### M. PHARM - I YEAR (1<sup>ST</sup> SEM)

#### Department of Pharmaceutical Analysis



First Mark  
**Santhosh. A**  
SGPA - 8.38



Second Mark  
**Poovarasu. P**  
SGPA - 7.69

#### Department of Pharmacology



First Mark  
**Nandhini Devi. M**  
SGPA - 8.61



Second Mark  
**Bhoopathy Raja. R**  
SGPA - 8.23



Third Mark  
**Yazhl mozhli. S**  
SGPA - 7.92



Third Mark  
**Monisha. P. M**  
SGPA - 7.92

#### Department of Pharmaceutics



First Mark  
**Lavanyaa. E**  
SGPA - 8.36



Second Mark  
**Kovarthanan. M**  
SGPA - 8.23



Third Mark  
**Pradeep. M**  
SGPA - 8.07



மொஹ்மொலை





## அம்மா

அம்மா என்பவள்,  
அகிலத்தை அடக்கி,  
உதிரத்தை பாலாக்கி,  
நேசத்தை ஊனாக்கி,  
பாசத்தை பண் பாக்கி,  
தன் அறிவை நூலாக்கி,  
கண்ணீரை மணியாக்கி,  
அதை எனக்கு அணிவித்து அழகுப்படுத்தி,  
என்னை மகனாய் பெற்றெடுத்து,  
என்னை இன்ப துன்பங்களில் கை கொடுத்து  
என்னை வளம் பெற செய்தவளே !



**சின்னசாமி. பெ**  
பி.பார்ம்  
மூன்றாம் ஆண்டு

அன்பிலார் எல்லாம் துமக்குரியர் அன்புடையார்  
என்பும் உரியர் ரிதர்க்கு

## சகோதரன்

உன் வரவுக்காக ஏங்கிய நாள் உன் பிறந்தநாள்,  
அன்று எனக்கு பேராநந்தம்  
அக்கா என்னும் ஸ்தானம்  
அக்கா என்னும் பொறுப்பு  
இவை அனைத்தும் என் மனதில்  
இவை அனைத்தும் இருக்க கணக்கில்லா சண்டைகள்  
சண்டைகளுக்காக வரும் சமாதானங்கள்  
உன்னுடன் இருக்கும் அம்மாவின் ஆதரவு  
இருந்தும் மாறாத நம் உறவு  
ஒரு கட்டத்தில் அனைத்தும் குறைந்தன  
சண்டைகள், விளையாட்டுகள், அரட்டைகள்  
உன்னுள் உணர்ச்சிகள் இல்லை என்று தோன்ற வைத்த ஒரு நாள்  
இவை அனைத்தும் உடைந்து, உன் கண்கள் நீர்க்குளமாயின  
நீ என்னை திருமண கோலத்தில் கண்டபோது  
என்னை அக்கா என்று அழைத்த நாள்!!!  
என்னை பிரியப் போகிற ஏக்கத்துடன், சூழ்நிலைகள் நம்மை பிரித்தாலும், ஒரே உதிரத்தில்  
தோன்றிய நம் உறவிற்கு என்றும் பிரிவு கிடையாது.



**முகில். ம**  
பி.பார்ம்  
நான்காம் ஆண்டு



## தோழியின் விழிகள்

அக்கண்களை கண்டேன், சிறகடித்தேன்  
உன் கருவிழியில் என் மனம் தொலைத்தேன்

கதவு அருகே கண்ட உன் விழி!  
கவிதையாய் மாறியது..

இருநாறு விழிகள் இருப்பினும்  
உன் இரு விழிகளைத் தேடினேன்

உன் கண்களால் என்னை சிறையிட  
உன் காதலை நான் சுவாசித்தேன்

கடல் சூழ்ந்த இவ்வுலகம் அழிந்தாலும்  
என்றும் மறையாத உன் பார்வை!!!



**ஸ்ரீநந்தினி. கோ**

பி.பார்ம்

நான்காம் ஆண்டு

தெய்வத்தான் ஆகா தெனினும் முயற்சிதன்  
மெய்வகுத்தக் கூலி தரும்

## முதல் ரசிகை

ஆயிரம் நட்சத்திரங்கள் வானில் இருந்தும்  
வெண்ணிலவில் மையமிடும் முகம்

பார்த்த ஆயிரம் கண்களிலும் தொலைந்து  
வீழத் தோன்றும் விழிகள்

கடிகார முட்கள் கூட நகர மறுக்கிறது

காணாத நேரங்களில் தொலைவில்

தெரிகையிலே என்னை தொலைத்தேனே

இது என்றும் முடிவில்லாத தொடர்கதையாய் தொடர நினைத்தேனே

சிறு புன்னகையுடன் அனைத்தும் ரசித்தேனே

முதல் ரசிகையாய்!!!



**அனுபிருந்தா. கு**

பி.பார்ம்

நான்காம் ஆண்டு



## தந்தை பிரிவு

தந்தை பிரிவு

பெண் பிள்ளை பிறந்ததும்

பேரின்பம் அடைந்தாய்!

பேர் ஏதும் வைக்காமலே

பேதையாய் நின்றாய்!

ஒட்டு மொத்த அன்பையும் ஒரே பெண்ணிடம் வைத்தாய்

ஒட்டம் ஏதும் இல்லாமல் ஓய்வின்றி உழைத்தாய்

ஓய்வு பெறவோ ஒட்டுமொத்தமாய் பிரிந்தாய்

அன்று அறிந்தும் அறியாமலும்

உன் அன்பை அலட்சியம் செய்தேன்.

இன்று ஒரு நிமிடம் உன் அன்பு கிடைக்காதா என்று ஏங்குகிறேன்..



**ஆயிஷா ஷிபானா பினி**

பி.பார்ம்

மூன்றாம் ஆண்டு

**ஒடிக்கம் விழுப்பந் தரலான் ஒடிக்கம்**

**உயிரினும் ஒப்பப் படும்**

## பரதக்கலை

நளினத்தை நடை கொண்ட நளினியாய்

நடனத்தை நளினியில் ஏற்றும் நங்கையாய் !

நாழிகையில் நாற்றிசையும் விளக்கச் செய்யும் நாயகியாய்

கண்ணும் கதை பேசும்

காரிகையால் கருத்தோடு

கலை நயத்தையும் கண்முன்னே கொண்டு வருவது

நம் பரதக் கலையே!



**சுருதி. சூ**

பார்ம்.டி

இரண்டாம் ஆண்டு



## உணவுட்டும் விவசாயத்திற்கு உயிருட்டுவோம்

வானம் விடும் கண்ணீருக்காக மண்ணின் நண்பன்  
ஏர்பிடித்துக் காத்துக்கொண்டிருக்கிறான்!  
பசியை போக்கும் தெய்வம் தாய் என்றால்-  
உழவு செய்து அன்னம் படைப்பவனும் கடவுள் தான்!  
உயிரின் ஆதாரம் விவசாயமே!  
உழைப்பிற்கேற்ற ஊதியம் இல்லை,  
எனினும் விதைக்க மறுப்பதில்லை!  
மண்ணை கடவுளாக, விவசாயத்தை  
உயிராக நினைப்பவன் விவசாயி!  
சேற்றை மிதித்து சோற்றை கொடுப்பவன்-விவசாயி!  
உழவில்லையேல் உணவில்லை  
பயிருக்கு உயிருட்டும் உழவனுக்கு சமர்ப்பணம்



**சுகப்பிரியா. சோ**

பார்ம்.டி  
இரண்டாம் ஆண்டு

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அகழ்லாறைத் தாங்கும் நிலம்போலத் தம்மை  
கீகழ்லார்ப் பெறுத்தல் தலை

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## அப்துல் கலாம்

படகோட்டியின் மகனாய் பிறந்து  
பட்டப்படிப்பில் படிப்படியாய் உயர்ந்து  
பாரத நாட்டின் குடியரசு தலைவராய் திகழ்ந்து  
பார் போற்றும் தமிழ் மண்ணின் மைந்தரே!  
நிச்சயம் விடியும் அது உன்னால் மட்டுமே முடியும்  
என்ற பொன்வரிகளை, என்னை போன்றவர்களுக்கு  
எடுத்துரைத்தவரே!  
அறிவியலின் அற்புதமே அதிசயத்தின் தியாகமே  
அகிலத்தை பேச்சாலும் அறிவாலும் ஈர்த்தவரே!  
வாய்ப்புக்காக காத்திராமல்  
வாய்ப்பை ஏற்படுத்திக் கொண்டவரே!  
இந்தியாவின் ஏவுகணை நாயகனே !  
இஸ்ரோவின் இனிய இதயமே !  
படிக்கலாம் உழைக்கலாம் முயற்சிக்கலாம் சாதிக்கலாம்  
நீயும் ஆகலாம் அப்துல் கலாம்  
ஏழையாய் பிறந்தவர் எளிமையாய் வாழ்ந்தவர் !  
தமிழுக்கு பெருமை சேர்த்தவர் !  
தமிழனாய் தமிழ் நாட்டிற்கும் பெருமை சேர்த்தவர் !  
கவிதையின் உச்சம் கம்பர்  
கலையின் உச்சம் பரதம்  
பாசத்தின் உச்சம் தாய்  
பணிவின் உச்சம் கலாம்  
சிந்திக்க தெரிந்தும் வாழ்வில் துன்பங்களை சந்திக்க தெரிந்தும்  
சோதனைகளையும் இன்னல்களையும் கவலைகளையும்  
சாதனை படிக்கட்டுகளாய் மாற்றியவர் !  
2020 இல் வல்லரசு நாடாக இந்தியா உருவாகும் என்றவரே !  
தங்களின் கனவு நிச்சயம்  
தரணியின் உண்மையான லட்சியமாக மாறும் என்ற நம்பிக்கையுடன்...



**பாரதி.பொ**

பி.பார்ம்  
நான்காம் ஆண்டு

ஒழுக்கம் உழைப்பைத் தரலாம் ஒழுக்கம்  
உயிரினும் ஒப்பப் படுக



## நிலா

இருள்வானில் மலரும்  
ஒற்றை வெள்ளிமலரே  
எட்டாக்கனியே உள்ளங்கையில்  
ஏந்திட ஆசையே...  
தேய்பிறையென தேயும்  
தேவதையே...  
தனிமையில் இனிமையாய்  
தாலாட்டுபவளே...  
என்னுடன் நடைப்போட்டிடும்  
வளர்மதியே...  
நான் வர்ணித்த உவமை  
நீயே...



**கல்பணா.பி**

பி.பார்ம்  
மூன்றாம் ஆண்டு

நீர்க்கின்று அமையாது உலகெனின் யார்யார்க்கும்  
உலக்கின்று அமையாது ஒழுக்கு

## ஆசிரியர்

ஆசிரிய பெருந்தகைகளே  
எங்கள் கிறுக்கலான  
ஆச்சரிய குறிக்கலாகிய அறிவு கோவில்களே!  
எங்கள் பெயர் பலகைக்கு  
கௌரவம் சேர்க்கும் கடும்பலகை கடவுள்களே!  
புண்ணியங்கள் சேர்ந்த உங்கள் கண்ணியங்கள் வாழ்க!  
வகுப்பறைக்குள் கேட்கும் உங்கள் தொகுப்புரைகள் வாழ்க!  
வரம்புகள் மீரா உங்கள் பிரம்படிகள் வாழ்க!  
நரைத்தாலும் நடுங்கா உங்கள் நாவன்மை வாழ்க!



**பாரதி. எஸ்**

பார்ம்.டி  
இரண்டாம் ஆண்டு



## என் முதல் எதிரி

அவள் என் எதிரி  
ஆம் அவள் என் முதல் எதிரி!!

பள்ளி காலத்தில் பார்த்து கொண்டாலே  
கண்களினால் கத்தி வீச்சு சண்டைதான்!

காலம் கடந்து சண்டை சமாதானம் அடைய  
நட்பென்னும் மழை பெய்தது

நட்பென்னும் அம்மழையில் முழுவதுமாய் நனைவதற்குள்  
மற்றுமொரு சண்டை..

எதிரி என்பவள் தோழி ஆனாலும்  
ஏனோ சண்டை மட்டும் ஓயவில்லை!!

யார் மீது யார் அதிக அன்பு வைத்திருக்கிறோம் என்பதில்  
இருவரது இறுதி பயணம் முடிந்தாலும்  
இவ்வுலகம் உள்ளவரை நம் நட்பு மறையாது என்பதில் ஐயமில்லை!!



**திபேஷ். ச**

பி.பார்ம்  
நான்காம் ஆண்டு

ருன்றி ஞாப்பது ருன்றாறு ருன்றல்லது  
அன்றே ஞாப்பது ருன்று

## அளவின் மதிப்பு

எத்தகைய பிடித்த இனிப்பும்  
ஒரு அளவிற்கு மீறினால் தெகட்டிவிடும், அதுபோலவே  
எப்பொழுது நீ ஒருவர் மீது  
அளவிற்கு மீறி அன்பு வைக்கிறாயோ,  
நீயும் ஒருநாள் நிச்சயம் தெகட்டிவிடுவாய்  
அன்பாக இருப்பினும் சரி,  
ஆருயிர் இனிப்பாக இருந்தாலும் சரி  
அளவோடு இருக்கும் போதே  
அதற்கான மதிப்பு நீடிக்கிறது..



**முரளி. செ**

பி.பார்ம்  
நான்காம் ஆண்டு



## அக்கா தம்பி பாசம் !

தொப்புள்கொடி உறவே !  
தூரமிருக்கும் உயிரே !  
உடன் பிறந்தோம் இருந்தும்  
உடனிருக்க முடியவில்லை  
சில சமயங்களில் !  
அக்கா என்று அழைத்தாய்  
அன்றொரு காலத்தில் !  
அதட்டி அழைக்கிறாய்  
இப்போதெல்லாம் !  
எனக்கு ஒன்றெனில்  
எனக்கு முன் வருவாயே !  
என்னுடன் பிறந்த  
எந்தன் சரிபாதியே !  
நீயே எந்தன் உயிர்பாதியே !  
என்றும் இருப்போம்  
உயிரின் ஒருபாதியாக !  
எந்தன் சமபங்கே !  
உதிரத்தின் சாயலே !  
தம்பியென பிறந்து  
தலைமேல் என்னை தாங்கிப் பிடிக்கும்  
தங்கமகன் இவனுக்கு !  
என் அன்பார்ந்த பாசத்தினை  
கவிதையாக சமர்ப்பிக்கிறேன் !



**சுகந்த். கா. ச**

பாரம் .டி  
முதலாம் ஆண்டு

எண்ணியார் எண்ணம் கீழ்ப்பர் கிடனறிந்து

னுன்னியார் னுன்னிச் செயின்



## ஜன்னல் இருக்கை

என்னதான் இருக்கிறது உன்னிடம் அப்படி..  
சிறியவர் முதல் பெரியவர் வரை உனைத் தேடுகிறார்கள்  
என் பயணம் மேலும் அழகாகிறது உன்னால்  
உன் வழியே உலகத்தை பார்த்தேன்  
சில இன்பங்கள் பல துன்பங்கள்  
எல்லாம் ஒரே நேரத்தில் காண்கிறேன் உன் வழியில்  
உங்களுக்கு பிடித்த காட்சி என்றாலும்,  
உங்களை துன்பப் படுத்தினால், ஜன்னல் கதவை மூடிவிடுங்கள்  
பயணம் மேலும் அழகாகும்



**காயத்ரி**

பி.பார்ம்  
இரண்டாம் ஆண்டு

அன்போடு இயைந்த உழக்கென்ப ஆருயிர்க்கு  
என்போடு இயைந்த நொடர்பு

## அம்மா என்னும் அற்புதமே...

ஆதாமின் முதல் மகளோ இவள்..  
அழகின் மறுபிறவியோ இவள்...!  
ஆழ்கடலில் பெற்றெடுத்த முத்துகளோ இவள்..  
அடக்கத்தின் ஆச்சரியமோ இவள்..  
அம்மா என்ற வார்த்தையை கேட்க  
மறு பிறவியை எடுத்தவளோ இவள்!  
அன்று அமுமுன்னே அமுதளித்தவளும் இவளோ !  
ஆளறிய உலகினை அறிமுகம் செய்தவளும் இவளோ  
ஆராரிரோ என்ற தாலாட்டினை கண்டறிந்தவளும் இவள் தானோ  
அப்பா என்ற மறுஉலகை பரிசளித்தவளும் இவள் தானோ  
அன்னையின் பாதத்தில் சொர்க்கம் உள்ளது என்பதற்கு  
எடுத்துக்காட்டும் இவள் தானோ!



**ஆயிஷா ஷிபானா பிவி**

பி.பார்ம்  
மூன்றாம் ஆண்டு





*Letteratura*





## What it actually feels like...

"I wake up every day, hoping to be asleep the whole day  
Food didn't feel essential, rather felt a burden taking it  
I wasn't only scared but also too tired of everything, everyday  
The guilt of being lazy, but no urge to be productive  
I need people, but socializing is a difficult task now  
I want to be alone, but scared of feeling lonely  
It's in my head and also in my body  
That I have to survive, in a body struggling to survive with a mind longing to die  
Not only the mental sickness until it gave that physical heart ache..."



**BANU SRI. B**  
B. PHARM  
SECOND YEAR

Yeah, I'm talking about "depression," which is the least bothered yet most trolled subject among us today. Isn't it sad to be called "THE MOST DEPRESSED GENERATION"? Isn't it surprising to see that the suicide rate among Indian youth is higher than anywhere else in the world? This is a call for us to prioritize our mental health. Even now, it's not too late to revive again. Specialized apps, mental health digital tools, helplines, and NGOs are here to help us come out and open up. It isn't a shame to be 'not okay'; after all, we are all humans, and it's okay to be not okay.



## Do you know the Action?

**Paracetamol**, a healing grace

Ease our woes with its gentle embrace.

Aches and pains it mend,

As a trusted healer and faithful friend.

**Amoxicillin**, an antibiotic's grace

In the world of medicine, you hold your place.

From throat to ear and from skin to bone

You combat invaders, and you're widely known.

**Disprin**, a tablet small and white

In moments of pain, you shine so bright.

Fighting the throbbing discomfort's toll

Disprin, you soothe the restless soul.

**Cetirizine**, you're a shield against the sneeze

In the world of allergies, you put our minds at ease.

With antihistamine magic, you take your stand

Reliving the itch on pollen-filled land.

You're a tiny guardian, a healer's delight

Restoring wellness, day and night.



**PRIYADHARSHINI. M**

**B. PHARM**

**FIRST YEAR**



## The dose of compassion:

In a world where magic often goes unseen,  
A tale of medicines, a powerful sheen  
No thought is given to where they come from.  
The silent heroes, a beat of the drum.

Doctors and hospitals, in the spotlight's gleam,  
Yet in the pharmacy, a quiet dream  
During the pandemic, a question took flight.  
Who are the heroes in the drugstore's light?

Pharmacists, the wizards, the unsung king,  
In the pharmacy's magic, they spread their wings.  
A room of wonders, tools in array,  
Turning illness into health, day by day.

The market booms, the demand is high,  
For the magic tools that touch the sky.  
A pharmacist's role, like a guiding star,  
Turning patients into what they were.

Dose by dose, in compassion's frame,  
In the form of drugs, they play a game.  
Turning the world of illness around,  
Into a healthy society where hope is found.

So, here's to the pharmacist, the unsung dove,  
A hero in a white coat, spreading love.  
In the pharmacy's magic, a silent potion,  
A dose of compassion is a healing notion.



**KAAVIYA. J**  
PHARM. D  
FIRST YEAR



## VOYAGE OF DREAMS: A SAILING SHIP'S ODYSSEY"

In a sea of dreams, a ship sets sail,  
Its canvas wings catch the whispered gale.  
Wooden hull cutting through the endless blue,  
A voyage of wonder for a curious crew.

Hasts reaching high, like giants in the sky,  
Guided by stars as the night draws high.  
salt kissed car, waves dancing below,  
A maritime journey, a tale to bestow.

Sailor's brave, their hearts underrated,  
Facing challenges, their spirits stirred.  
Charting courses on the ocean vast.  
Each wave a chapter, a story to outlast.

Anchors away, on a quest profound.  
Discovering lands were mysteries about.  
The Creaking timbers, a sailor's song,  
Echoes of the sea where legends belong.

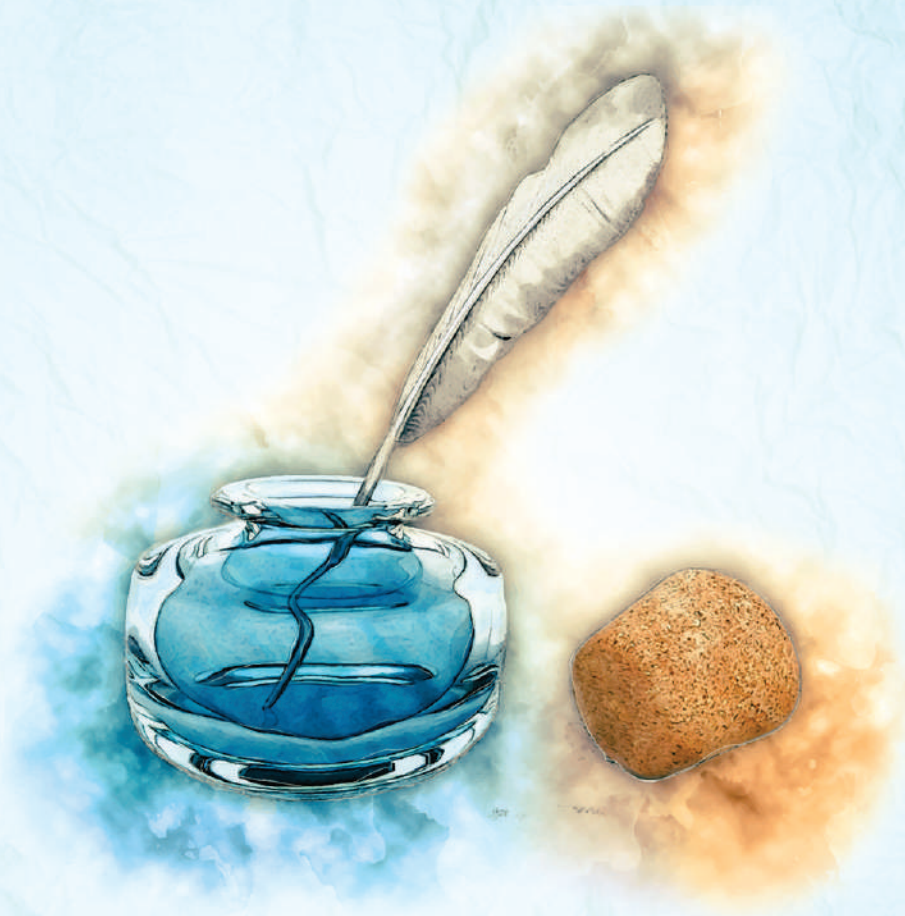
Through Storms, and calms, a resilient stride,  
A ship's silhouette on the horizon, wide.  
Sailing towards the horizon's embrace,  
A maritime ballet in nature's grace.

So, young minds, let your imaginations soar,  
On the wings of tales from the ocean floor,  
For in every ship, a lesson unfurls,  
A symphony of courage seafaring  
Words .....!



**ASHIKA FAIROSE. M**

**B. PHARM  
FOURTH YEAR**



*Stenography*





## WHAT'S NEXT? SCOPE OF PHARMACY!!!

Pharmacy has a wide job opening, and hence we could say that the pharmacy profession is great; hence, its scope can be easily given by the mnemonic "PHARMACY IS GREAT."

**P**armacovigilance officer

**H**ospital pharmacist

**A**nalytical chemist

**R**egulatory Affairs Specialist

**M**edicinal research (RND)

**A**cademic Pharmacist (Teacher)

**C**linical Pharmacist

**Y**akult manufacturing (in QC of probiotic drink)

**I**ndustrial pharmacist (QA, QC, RND)

**S**ales representative of drug and drug-related products

**G**overnment health policy analyst

**R**etail pharmacist

**E**nvironment health and safety officer

**A**mbulatory care pharmacist

**T**oxicologist in pharmaceutical



**PRIYADHARSHINI. M**

**B. PHARM  
FIRST YEAR**



## ADR REPORTING



**SUDESH SIVAKUMAR**  
PHARM. D - SECOND YEAR

- MAN:** Good afternoon. I recently started taking a new medication, and I've been experiencing some unusual side effects. I think I should report this as an adverse drug reaction (ADR). Can you guide me on how to do that?
- PHARMACIST:** Of course, I can help you with that. First, I'm sorry to hear about the side effects you're experiencing. It's important to report ADRs so that they can be properly documented and assessed. You can report it to the national pharmacovigilance authority or the pharmaceutical company that makes the medication.
- MAN:** How do I contact the national pharmacovigilance authority?
- PHARMACIST:** You can usually find the contact information on their website or by calling your local health department. They will guide you through the reporting process. Alternatively, you can also report it to the pharmaceutical company. They often have a dedicated phone number or website for ADR reporting.
- MAN:** Should I provide specific details about my symptoms and the medication?
- PHARMACIST:** Yes, it's crucial to provide as much information as possible. Include details about your symptoms, when they started, the name of the medication, its dose, and how long you've been taking it. Any other medications or supplements you're taking should also be mentioned.
- MAN:** Will my personal information be kept confidential?
- PHARMACIST:** Yes, your personal information is typically kept confidential during the reporting process. The focus is on gathering information about the medication and its potential side effects.
- MAN:** Thank you for your help. I'll make sure to report this ADR to help improve medication safety.
- PHARMACIST:** You're welcome. Reporting ADRs is a key step in ensuring the safety of medications for everyone. If you have any more questions or need assistance, feel free to ask.



**GIRIDHARAN. M**  
B. PHARM - SECOND YEAR

# CREATINE SUPPLEMENTATION

Creatine is a popular and widely researched dietary supplement known for its performance-enhancing properties. Primarily stored in muscles. Creatine plays a crucial role in the rapid production of adenosine triphosphate (ATP), the energy currency of cells.

## FACTS

- Creatine is only effective for explosive, high-intensity activities (such as lifting, jumping, and sprinting).
- Creatine can prevent heart failure and muscular dystrophy.

## SETBACK

### **Kidney disease:**

Creatine might make kidney disease worse in people who already have kidney disease.

### **Parkinson disease:**

Caffeine and creatine taken together may make symptoms of Parkinson disease worse.

### **Rhabdomyolysis:**

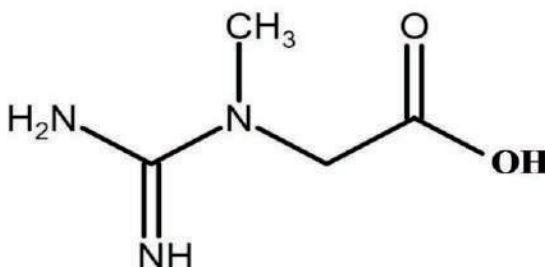
A breakdown of muscle tissue that releases a damaging protein into the blood.

## HOWTOUSE?

- Creatine is likely safe for most people. Doses up to 25 grams daily for up to 14 days have been safe to use.
- Lower doses of up to 4-5 grams daily for up to 18 months have also been safe to use.
- Creatine is possibly safe when taken long-term. Doses of up to 10 grams daily for up to 5 years have been safe to use.

## PRECAUTION

- Make sure you are not allergic by reading the ingredients before ingesting them. Before beginning any medication, make sure your doctor is aware of any past medical conditions. Kidney, liver, and diabetes diseases should be especially noted.





# NAILS

## A TOOL FOR DIAGNOSIS



**SRIRAM. R**

PHARM. D - FIRST YEAR

Nail changes can sometimes provide valuable information for diagnosing certain diseases or underlying health conditions. While they may not be the primary method of diagnosis, they can be important clues for healthcare professionals.

**The following examples demonstrate how the colour of nails can be utilized in the diagnosis of various diseases:**

1. **Pink or flesh-coloured nails:** This is the natural colour of healthy nails. The pinkish hue comes from the underlying blood vessels and tissue. Well-oxygenated blood gives the nails a healthy pink appearance.
2. **White Nails:** White nails can result from several causes:
  - Leukonychia:** Small white spots on the nails can occur due to minor trauma or nail injuries.
  - Terry's Nails:** When most of the nail turns white, it can indicate underlying health issues like liver disease, congestive heart failure, or diabetes.
3. **Yellow Nails:** Yellowing of the nails is often due to external factors like smoking, frequent nail polish use, or fungal infections. It can also be a sign of underlying health issues, such as respiratory conditions or psoriasis.
4. **Blue or Cyanotic Nails:** Blue or bluish nails can be a sign of poor circulation or oxygen deficiency in the blood. Conditions like respiratory problems, heart disease, or exposure to cold temperatures can cause cyanosis, leading to blue nails.
5. **Brown or Discoloured Nails:** Brown or dark discolouration can result from fungal infections, nicotine staining (from smoking), or external factors like nail polish. In some cases, it can be a sign of underlying medical conditions, such as melanoma.
6. **Black Nails:** Black nails can occur due to injuries or trauma, such as crushing your finger, dropping a heavy object on it, or repetitive pressure (as in long-distance



running). This colouration is often due to blood pooling underneath the nail (subungual hematoma).

7. **Green Nails:** Green discolouration is usually caused by fungal infections. Certain types of nail fungi can produce a green pigment.
8. **Purple or Red Nails:** Nail bed injuries or trauma can cause the nails to turn purple or red temporarily. It may also be seen in certain medical conditions or due to medications.
9. **Brittle or White Spotted Nails:** Brittle, weak nails with white spots can be caused by a range of factors, including nutritional deficiencies, injury, or fungal infections.

**These are some examples of how nails can play a role in diagnosing diseases based on texture:**

1. **Nail Clubbing:** Clubbing of the nails, where the nails curve around the fingertips and the nail base becomes enlarged, can be associated with various lung and heart diseases, such as chronic obstructive pulmonary disease (COPD) and congenital heart defects.
2. **Pitting:** The presence of small depressions or pits on the nails can be associated with psoriasis or inflammatory arthritis.
3. **Beau's Lines:** Horizontal ridges or grooves across the nails, known as Beau's lines, can occur after a severe illness, injury, or during chemotherapy. They can provide a timeline of when the stressor occurred.

Remember that nail colour changes are not always indicative of underlying health problems. Many factors, both internal and external, can affect nail colour. However, if you notice persistent and significant changes in your nails' colour or texture, it is advisable to consult a healthcare professional for a thorough evaluation.



# GOODBYES ARE UNDERRATED - A FAREWELL LETTER FROM A DEAD FATHER TO HIS DAUGHTER



**RAGHAVEE. S. S**  
PHARM. D - SECOND YEAR

Dear Kannama,

I wish you didn't have to read this letter at any point in your life, but God had better plans. If you're reading this, then I hope things did not end well.

I'm sorry I won't be there beside you to spend your next birthday as we planned. There are a million things I wish I could say to you. And at this point, this is probably the only way I can do that. I know you're strong enough to take on responsibilities and lead our family in the most perfect ways.

I want to start by saying thank you. You're the best daughter any father could ask for. I'm so proud of you, Kanna. I'm proud of your efforts, your focus, and how you never give up. I'm proud that you're trying every day to get up and get things done.

You're my special girl; you know that, right? You're unique. No one can smile the way you do. A smile on your face has always brought a smile to mine. The way your eyes light up when you see me was the only reason I never gave up on life. You and your mom made my life complete. I feel devastated to leave you all alone in this awful world.

Trust me, I would do anything to spend just one more day with you both. But my time has come.

This is how things happen; all you can do is face it boldly and accept it strongly. I know it's difficult to be the best version of yourself all the time with all the responsibilities I left in your head. But perhaps life isn't about being perfect. You don't have to always be in a good mood; if you ever feel like slipping away, you know who you should reach out to. Your mom loves you more than I do. I agree that at times she isn't your best company, but she's the only person who does anything for you selflessly. When the world turns upside down, run into her arms, and everything will make sense.



Remember this in your life always. This took me an exceedingly long time to realize that not everything in life is meant to be a beautiful story. Not every person we meet, feel something deep with, and move on with is meant to make a home within us, but that will forever be in your heart.

Sometimes, people come into our lives to teach us how to love, and sometimes, people come into our lives to teach us how not to love, how not to settle, and how not to shrink ourselves ever again.

Yes, sometimes people leave, but that's okay because their lessons always stay, and that is what matters. That is what remains.

I don't want to end this letter. Goodbyes are so underrated and make it even harder at times, as the action of leaving is so permanent, and yet that person still occupies so much of the space within your chest.

They say that, at some point, you just learn to let go. I strongly disagree with that point. You can never let go of any person; you just start living your life without their presence. And one day even you'll start living without me around, without hearing my voice. Won't you, Kanna? I can see your tears running down your cheeks, and all I wish now is to wipe that off with my hands.

You know Appa loves you more than anything. Don't be mad that I didn't stay back till you graduated, to see you earn your first salary, or until my biggest wish was to see you build up a perfect future family. I wish I could stop time so that I could stay with you and your amma for just a while longer, but as I told you, things don't work that way.

It's ok. Everything is okay. Everything will be fine. Take good care of your mom. Her world just revolves around us. Tell her I loved her then; I love her now. Always did. Always will.

Goodbye, Until I see you and your mom on the other side!

**-Yours most beloved, Appa.**



## IS IT TRUE THAT PERIOD BLOOD CAN CURE ALZHEIMER'S DISEASE?



**SARVESH ANAND. P. V**  
B. PHARM - FIRST YEAR

Yes, you heard it right! To all the female readers, you can become the future of modern medicine. Stem cell therapy and research are promising, giving us new hope in treating diseases like diabetes and other deadliest diseases like Alzheimer's. Here we are using stem cells to generate the type of healthy tissue that we want (since they tend to convert into any cell based on the environment provided) and through which we achieve regenerative medicine. However, since embryonic stem cells are used in this process and often lead to ethical issues, the use of mesenchymal stem cells harvested from adults can resolve this issue.

Unlike embryonic stem cells, which have a wide range of plasticity, mesenchymal stem cells have a short spectrum and can convert into cells of bone, muscle, blood vessels, nerves, and even liver cells. It also had the issue that these cells can be harvested only through massive operations like bone marrow donations and liposuction in adults. Later, it became known that period blood also has these cells, which were discovered through 2007 research, and now scientists have made a trial on using these mesenchymal cells from period blood to treat Alzheimer's. In a 2018 study, scientists extracted mesenchymal cells from period blood, induced these cells to generate neurons believing that they would convert, and later injected them into the brains of rats affected by Alzheimer's disease. Researchers found out that this treatment corrected learning and memory deficits and removed plaque from the brains of these rats. In addition, research on treating diabetes and liver issues in rats using period mesenchymal cells gave positive results, where these mesenchymal stem cells were found to reach the pancreas and liver and start to convert and proliferate into liver and pancreatic cells and generate insulin in mice. Research is going on to treat infertility and wound healing with period mesenchymal cells. So, in the future, ladies, your period blood can save lives and create a revolution in treating these deadliest diseases.



## ANTI AGEING RETINOIDS AND COLLAGEN BUILDERS



**SALVIA PLACID. S**  
**B. PHARM - FIRST YEAR**

The desire for youthful-looking skin has been around since ancient times, but today there is a modern-day obsession with maintaining it. This has led to the popular practice of using a day/night skincare routine, which typically includes retinoids, salicylic acid, collagen boosters, vitamin E, vitamin C serum, and other products. These skincare products are launched in the form of lotions, creams, serums, day/night creams, cleansers, face washes, and supplements. Collagen is a vital component of skin found in extracellular basement membranes, which separate epithelial cells from endothelial cells. These collagens are made up of proline, lysine, glycine, vitamin C, and vitamin E. Due to ageing, the collagen content of the skin gets reduced, which leads to wrinkles. To avoid these wrinkles, collagen builders and retinol are used. Retinols are a form of vitamin A that is absorbed as retinoic acid when applied to the skin, which slows down the natural collagen breakdown process. These retinols can be used only with doctor's consultation. Collagen-building supplements improve the skin's elasticity and maintain hydration levels. Prolonged supplementation also shows an increase in the body's ability to synthesize proteins like fibrillin and elastin, which are responsible for holding up skin structure.



# METFORMIN: ROLE IN DIABETES MELLITUS PATIENTS



**THIRUMANGAI. M**  
B. PHARM - FIRST YEAR

Metformin is a drug most widely prescribed on hypoglycaemic agents. Its main mechanism includes the reduction of appetite intestinal carbohydrate absorption, and inhibition of hepatic gluconeogenesis.

## INDUCED VITAMIN B12 DEFICIENCY

The mechanism behind this remains unclear, due to either alteration in small bowel motility, resulting in bacterial overgrowth and subsequent B12 Deficiency or by directly decreasing vitamin B12 absorption.

## PATIENT WITH OBESITY

Metformin is first-line therapy; diabetes rises with increasing body weight. Abnormal fat causes fat cells to release 'pro-inflammatory' chemicals, which can make the body less sensitive to insulin and lead to dysfunction of insulin.

## PARADIGM SHIFT IN CARDIOVASCULAR DISEASE MANAGEMENT

Type 2 diabetes mellitus is an independent risk factor for CAD development. Therefore, tight blood glucose control is critical to limit the mortality and morbidity from CVD in T2DM. It has been reported to reduce major cardiovascular disease in type 2 diabetes mellitus patients.



## DERCUM'S DISEASE

Dercum's disease is a rare disorder characterized by multiple, painful growths of fatty tissues (lipomas) that may appear all over the body. It is also known as adiposis dolorosa. People with this disease have many painful fatty lumps that grow just below their skin. They show up most often on the torso (trunk), upper arm, and upper legs. The symptoms of this disease vary from person to person. However, almost all people with this disease have painful lipomas that grow slowly.

It causes weakness and severe pain as they press on the nearby nerves. Other symptoms are weight gain, fatigue, depression, easy bruising, headaches, irritability, rapid heart rate, shortness of breath, trouble sleeping, joint aches and constipation. The cause of this disease is not clear yet. Some experts think that it may come from the mutated fat gene that is passed down in families. Others think that it is an autoimmune disorder, which is a condition that causes your immune system to mistakenly attack healthy tissue and some believe it is a metabolic problem related to not being able to properly break down the fat. Men can get Dercum's, but women who are obese, middle-aged or have gone through menopause are 20 times more likely to be diagnosed. It mostly shows up between the ages of 45 and 60. Children rarely get this disease. There is no cure yet, but some treatments can ease the symptoms. There is no specific test to check for the disease. Instead, the doctors will ask for the symptoms and do a thorough physical exam. Ultrasound and magnetic resonance imaging can play a role in the diagnosis of this disease. The doctors may classify it based on the size and location of your lipomas. These classifications include:

- Nodular- large lipomas, usually around your arms, back, abdomen, or thighs.
- Diffuse- small lipomas that are widespread.
- Mixed- a combination of both large and small lipomas.

These include endocrine disorders and lipoedema (a build-up of fat in the lower half of the body). Treatment methods include:

- Surgery- surgical excision of fatty tissue deposits around joints (liposuction) has been used in some cases. Liposuction may temporarily relieve symptoms although recurrences often develop.
- Medication- the medications used in this treatment are traditional analgesics, lidocaine, methotrexate and infliximab, interferon alpha-2b and corticosteroids.
- Alternative treatment- Cyclic Variations in Adaptive Conditioning (CVAC) is a method of touch-free cyclic hypobaric pneumatic compression for the treatment of tissue oedema and therefore oedema-associated pain.



**SAMIYUKTHA. S**  
**B. PHARM - FIRST YEAR**



## FROM COURTS TO CHAMPIONSHIPS: MY JOURNEY AS A THROW BALL CHAMPION



**MIRUTHULA. U. V**  
PHARM. D - SECOND YEAR

Myself Miruthula Vijayakumar, and I am currently studying PharmD Second Year. I am a sports enthusiast who has participated in a variety of games, including volleyball, throw ball, football, Kho-Kho, and more, since I was 12 years old. My sports coach, Mr Muthukumar, included me in games because of my height, which allowed me to participate in various sports where taller individuals often have advantages, such as volleyball and throw ball. While I enjoy playing all games, volleyball holds a special place in my heart. I had the opportunity to participate in numerous district-level and zonal-level matches. It's not that I win prizes in everything, but my coach had immense confidence in my abilities. I didn't limit myself to just one sport; I embraced the challenge of playing them all, and my coach tailored my training accordingly.

Despite my gratitude, expressing it through an article seems inadequate. My father, along with my coach, and my mother's support has been unwavering. My mother, in particular, worries a lot regarding the occasional injuries and fractures I've endured due to sports. I was selected for a national-level competition in 10<sup>th</sup> grade, a moment of immense pride, but I couldn't participate due to my board exams. Instead, my younger sister represented our family at the national throw-ball competition in Chandigarh. The regret lingers. I wish I could have been there. That experience marked a turning point in my life. After completing my board exams, I enrolled in a boarding school where sports activities were limited. Nevertheless, I persisted. playing volleyball with my own volleyball. My dreams of becoming an athlete seemed dashed, but unexpectedly in college, I found the determination to continue pursuing my passion.

As a student at KMCH College of Pharmacy, I have earned numerous state-level certificates and medals in throw ball. In 2022, I entered my first throw ball competition as a student at KMCH College of Pharmacy, competing in matches hosted by United College of Pharmacy. On July 12, 2022, our team won two matches, and the finals were scheduled for July 13, 2022, against JKKN College of Pharmacy. Following our victory in the finals, we



were awarded the winning trophy. Additionally, participants from my college excelled in various other events, earning recognition as both winners and runners-up. We were elated to secure the overall championship trophy. Our college principal organized a valedictory program, and pictures of us receiving the trophies were published in newspapers.

In the same year, the Tamil Nadu Throw Ball Association and the Thoothukudi District Throw Ball Association jointly organized the 20th Senior State Throw Ball Championship for men and women, held from October 3rd to October 5th at Kamak Matriculation Higher Secondary School in Ettaiyapuram, Thoothukudi district. Students from various institutions were selected to participate in the tournament on behalf of the Throw Ball Association of Coimbatore District. I was selected for the women's throw-ball association.

In the same year, there was another state-level intercollege competition hosted by Excel College of Pharmacy, but we were eliminated in the semi-finals. However, as they say, every setback paves the way for a comeback. Fast forward to July 2023, and the United College of Pharmacy organized yet another state-level competition, featuring the participation of 45 colleges and over 2100 students. During this event, we competed in four matches, with the crucial semi-final match against SNS College of Pharmacy ending in our favour. On the same day, we played the finals against Vellalar College of Pharmacy, and victory was ours, earning us a trophy. Additionally, participants from my college excelled in various other events, receiving both winners and runners-up trophies. For the second time, we secured the overall championship trophy, a truly ecstatic moment. We proudly displayed the trophies to our college trustee and took a picture with her, and that became a source of immense pride for me, motivating me to aim higher.

Beyond the game, my life as a throwball champion has been a roller coaster of emotions, but I wouldn't have it any other way. It's not just about the victories; it's about the lesson, the friendship, and the indomitable spirit that sports have instilled in me. Through this story, I aim to convey the profound impact that sports can have on one's life, teaching us about teamwork, perseverance, and the joy of pursuing our passions.

This is not a conclusion; it's a beginning for more adventures to come."



## OPTIONS OF THERAPEUTICS AND NOVEL DELIVERY SYSTEMS OF DRUGS FOR THE TREATMENT OF MELANOMA



**KIRUTHIGA. S**

B. PHARM - FIRST YEAR

Melanoma is one of the most severe cancerous diseases. The cells employ multiple signalling pathways, such as ERK, HGF/c-MET, WNT, and COX-2 to cause cell proliferation, survival, and metastasis. Treatment of melanoma, including surgery, chemotherapy, immunotherapy, radiation, and targeted therapy, is based on 4 major or 11 sub-stages of the disease. Fourteen drugs, including dacarbazine, interferon A-2b, interleukin-12, ipilimumab, peginterferon A-2b, vemurafenib, trametinib, talimogene, laherparepvec, cobimetinib, pembrolizumab, dabrafenib, binimetinib, encorafenib, and nivolumab have been approved by the FDA for the treatment of melanoma. All of them are in conventional dosage forms of injection solutions, suspensions, oral tablets, or capsules. Major drawbacks of the treatment are the side effects of the drugs and patients' compliance with them. These are consequences of high doses and long-term treatments for the diseases. Currently, more than 350 NCI-registered clinical trials are being carried out to treat advanced and/or metastatic melanoma using novel treatment methods, such as immune cell therapy, cancer vaccines, and new therapeutic targets. In addition, novel delivery systems using biomaterials of the approved drugs have been developed attempting to increase drug delivery, targeting, stability, and bioavailability, thus liposomes have been emerging as advanced delivery systems, which can improve drug stability and systemic circulation time.



## AI MAKES LIFE EASIER: My Perspective on AI



**SHARVESH. S**

**B. PHARM - SECOND YEAR**

Artificial Intelligence (AI) has the potential to bring about transformative changes in various fields. It can enhance efficiency, accuracy, and convenience in our daily lives. From healthcare diagnostics and autonomous vehicles to personalized recommendations, AI-driven solutions have the power to make our world smarter and more connected.

AI can aid in climate modelling, drug discovery, and disaster response, offering innovative solutions to some of humanity's most pressing problems. AI is not a dangerous technology. Machines can't act on their own. It is in the hands of the programmers. Because they create the program for the AI and are responsible for the consequences. The Knowledge and commands are programmed, and they act according to them. It can be dangerous, when the programmer programs it wrongly like illegal hacking of information, etc. So, it is based on the programmer and not the AI technology.

In the end, AI is not just a technology; it's a tool that can shape the world. The choices we make today will determine the kind of future we create with this powerful tool in our hands.



# EVERYTHING YOU NEED TO KNOW ABOUT HPV INFECTION



**SARVESH ANAND. P. V**  
**B. PHARM - FIRST YEAR**

The Human Papilloma Virus is a common virus that targets different parts of our body. Most of them are harmless, but some can become deadlier to our bodies becoming the TV show female villain with the big bindi on her forehead against our superhero cells. All cells in our body have a set of genes called tumor suppressor genes which produce proteins that regulate cell repair and the cell cycle. Among them, P53 tumour suppressor protein and RB (retinoblastoma protein) play a vital role in this operation. P53 is like a saviour that checks the cell to see if there is any abnormality, and if it finds any, it stops the entire cell division process and enables cell repair. If the cell has fixed the issue, then it is allowed to proceed with the upcoming consecutive process. If not, it is induced to undergo cell death. RB protein, on the other hand, prevents DNA replication when an error is recognized in the DNA and prevents it from stepping into other phases of the cell cycle. It can also induce cell destruction if the cell is not able to recover.

HPV is quite common, and most of them are harmless except for some, including type 16 and type 18, which are found to cause cervical and throat cancer in major cases. The virus enters the body via injured skin, and when it approaches a stem cell in that region, it injects its DNA and uses the cell to replicate. While this process is going on, these viruses have evolved to hide from the immune system and the defence mechanisms of the cells. These viruses deactivate P53 and RB proteins by producing proteins like E6 and E7 which bind to P53 and RB, making the cell inactive and weak, enabling these viruses to proliferate. In addition, they activate telomerase and induce the cell to maintain telomere (the last part of DNA in a chromosome that decides whether to do cell division). As a result, the cell undergoes numerous cell divisions.

Hence, it is important to take the HPV vaccine to prevent diseases like cervical cancer. In addition, research is going on to give mRNA vaccines like the one given for COVID-19 to adults who have not received the HPV vaccine.



# DONANEMAB



**RUDHRA VEENA. T**  
B. PHARM - THIRD YEAR

DONANEMAB is a biological drug, which is also known by the name "N3pG" a monoclonal antibody that targets the beta-amyloid protein produced in Alzheimer patients. The drug has shown a positive result in its first trial. Eli Lilly and Co. developed the drug.

BETA AMYLOID PROTEIN is a large membrane protein that plays a vital role in neural growth and repair, it comprises 42 amino acid peptides. In Alzheimer's, the deposition of beta-amyloid protein destroys memory and other important brain functions.

The drug DONANEMAB (an immunotherapy drug) in its phase 3 results in the clearing out of beta-amyloid plaques. The drug binds with the plaque proteins; as a result, microglial cells start removing them. At 18 months, it reduces the cognitive decline by 35% of patients who were given the drug. The drug is yet to be approved by FDA at the end of 2023. It can be administered intravenously. The drug is very different from lecanemab as it targets amyloid and begins to form fibres, yet both drugs slow down the disease. Donanemab can be used in the early stages of Alzheimer's.

**SIDE EFFECTS:** The drug was seen to cause swelling and micro bleeding in the brain in some patients.



## SMALL TOWN GIRL

The small town of Coonoor, nestled in the lap of the Nilgiri Hills, was once the unassuming backdrop of my life's narrative. It's a place where time ambles along at its own pace, where the scent of tea leaves mingles with the morning mist, and where the echoes of my childhood still resonate. Growing up in Coonoor was a privilege I didn't fully appreciate until later in life. The town's streets, lined with colonial-era homes and vibrant gardens, were my playgrounds.



**ANNIE SHERLYN. R**  
**PHARM.D - SECOND YEAR**

I roamed them holding my parents' hands, learning about life's simplest joys from their gentle guidance. As the years passed, the town's quiet charm transformed into a canvas for my teenage adventures. I held my friends' shoulders, bonds that felt unbreakable. In Coonoor, the phrase "kind and decent" wasn't just a saying; it was a way of life ingrained in us by our tight-knit community.

The town had a certain magic about it, especially at night. Long romantic walks amidst the tea plantations became a rite of passage, where we'd ponder the mysteries of the universe. Night rides through winding roads carried an air of happiness. House get-togethers were our rites of passage, resonating with music and laughter that filled the night.

Coonoor's serene nights offered solace as we navigated the rollercoaster of teenage emotions. Its skies bore witness to it all. They held our wild spirits, dreams, and memories, both joyous and bittersweet.

Now, as I look back, I realize that Coonoor wasn't just a place on a map; it was an essential part of my identity. It shaped my values, my friendships, and my understanding of the world. It was a cocoon where I metamorphosed from a wide-eyed child to a young adult, ready to spread my wings.

Coonoor, with its timeless beauty and warm community, will forever be my home. It's a town that taught me the beauty of simplicity, the value of kindness, and the enduring power of memories. Though I may have ventured far from my small-town roots, I carry the spirit of Coonoor with me, a small-town girl forever shaped by its grace.

# *Artistry*







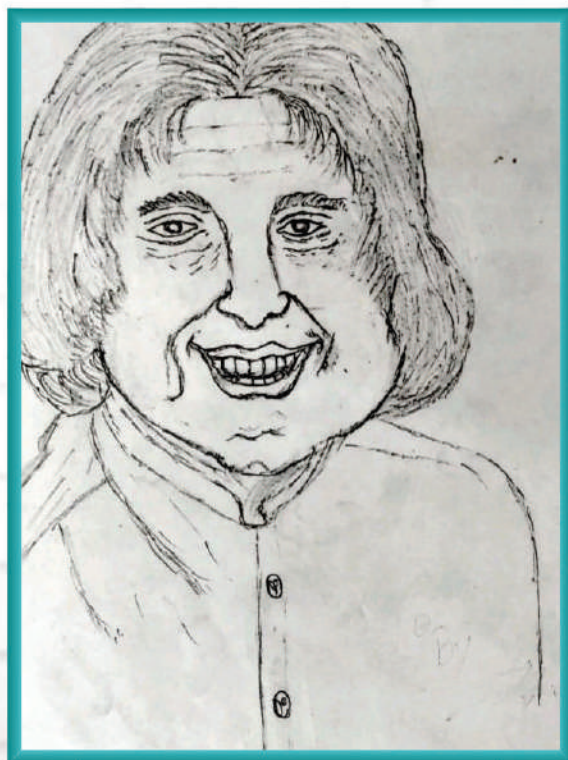
**Eswaran. P**  
B. Pharm  
4<sup>th</sup> Year





**Srinandhini. G**

B. Pharm  
4<sup>th</sup> Year



**Murali. S**

B. Pharm  
4<sup>th</sup> Year





**Eaknath. S**  
Pharm.D  
2<sup>nd</sup> Year



**Srinandhini. G**  
B. Pharm  
4<sup>th</sup> Year

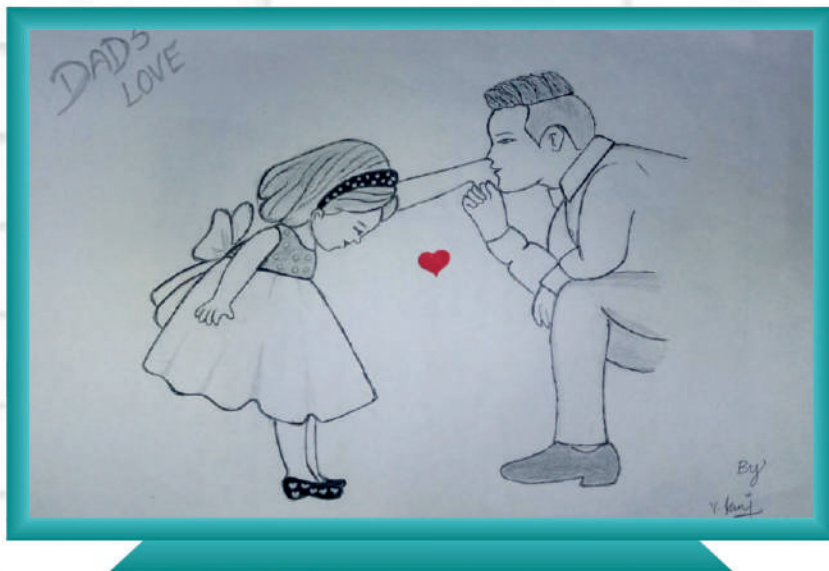


**Karthick Raja. R**  
B. Pharm  
4<sup>th</sup> Year



**Kathiravan. B**  
B. Pharm  
3<sup>rd</sup> Year

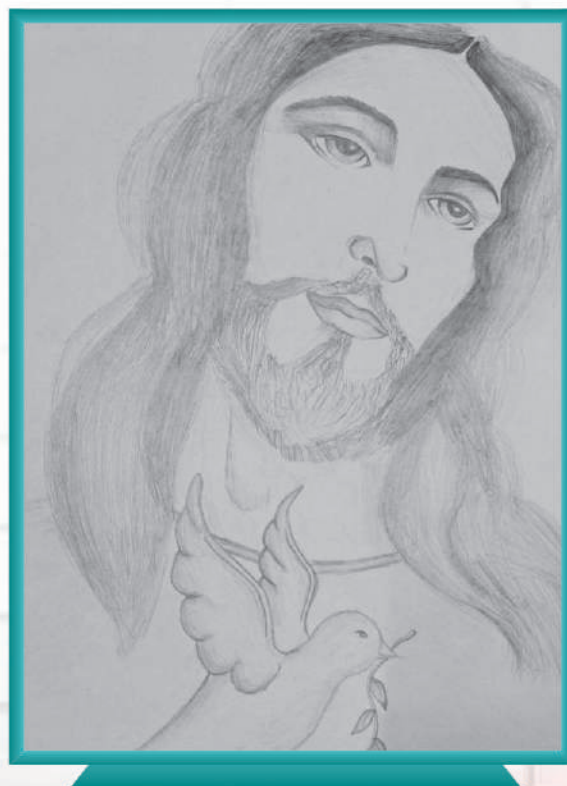




**Kanishka. V**  
B. Pharm  
3<sup>rd</sup> Year



**Sneha. C. A**  
B. Pharm  
2<sup>st</sup> Year





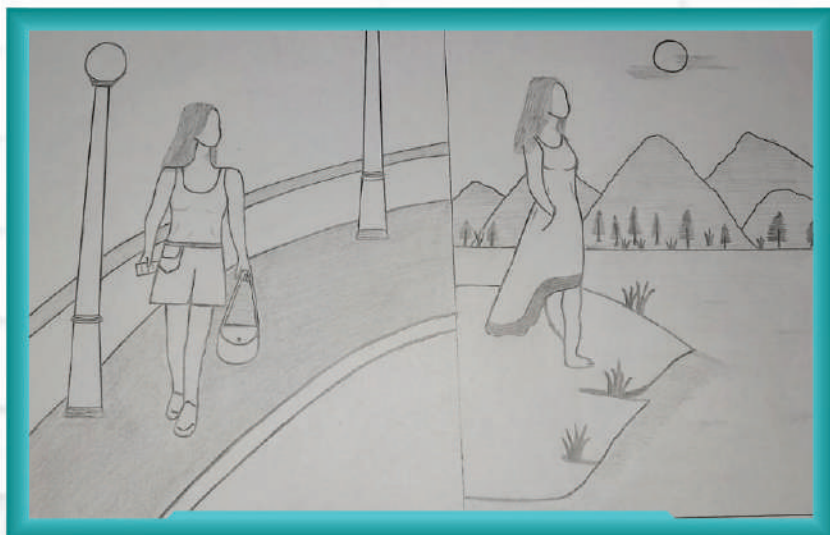
**Priyadharshini. S**

B. Pharm  
4<sup>th</sup> Year



**Sumathi. P**

B. Pharm  
3<sup>rd</sup> Year



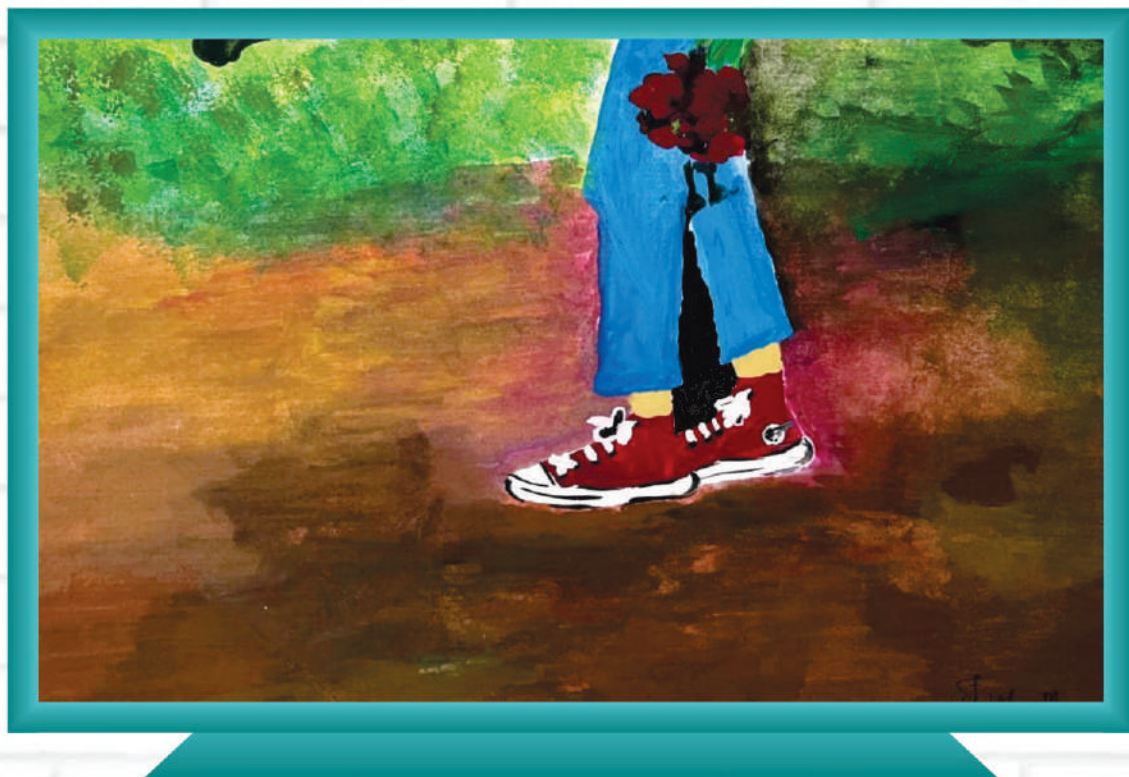


**Roopa Sri. K**  
Pharm.D  
1<sup>st</sup> Year



**Swetha. G. T**  
Pharm. D  
2<sup>nd</sup> Year





**Jegan. P**  
B. Pharm  
3<sup>rd</sup> Year

A watercolor illustration of a desk with various items. In the top left, there are several books with orange, pink, and green covers. One book has a green leaf design. In the top right, a hand in a green sleeve holds a pen, writing on a pink book. In the bottom left, a pair of red-rimmed glasses sits on the desk. In the bottom right, a cup of coffee sits next to a stack of books. A tag with a green leaf design is attached to one of the books. The background is a light beige color with a large, irregular, light green watercolor splash in the center.

# *Gazette's*





**POORNIMA. S**  
B. PHARM  
SECOND YEAR

## AN ERA OF FUTURE PHARMA

In memory of "William Procter," the father of pharmacy, here is my article about the Era of Future Pharmacy. Nowadays, technology continues to evolve and improve at a rapid pace. Instead of visiting a doctor in person, we can connect with them through video chats, apps, etc. But, beyond patient technology, the "pharmacy sector" has been making significant strides to advance the entire profession.

### About

Towards the Era of Future Pharmacy, some of the big pharmaceutical industries in India, like "Mankind Pharmaceuticals," and "Sun Pharmaceuticals," have created separate software through which students acquire knowledge and skills, thus helping them to improve their job opportunities. The major ongoing technological advancements towards the Era of Future Pharmacy focus on

- Keeping track of patient's prescriptions
- Minimizing paperwork
- Automatic Prescription on Refill and a new form of record-keeping

Technology has not only stopped there; the four major pharmacy advancements are diverse and cross-functional.

1. Automated Dispensing Unit
2. Prescription Drug Monitoring Program
3. Medication Therapy Management
4. Medication Reminder Devices

Competitive and technological changes in the pharmaceutical industry, from powerful new drug chemistries to innovative research and development partnerships and



marketing places, are reshaping the business strategies of many pharmaceutical companies, and technology and revolution in the pharmaceutical industry is with the Pharma Software. The pharmaceutical and healthcare sectors in India are expected to see a high number of mergers and acquisitions.

### **Research and development**

Indian pharmaceutical companies spend 8–11 per cent of their total turnover on research and development. Expenditure on research and development is likely to increase due to the introduction of product patents. Companies need to develop new drugs to boost sales.

### **Interesting power of generics**

India's pharmaceutical export market is thriving due to its strong presence in the generics space. CMS Pharma compared the financial performance of the top 14 generic companies to the top 14 pharmaceutical companies. The results demonstrate the power of generics. Over the five years spanning 2007–2011, generic companies achieved an EBIT margin of 18.5%, while the top pharmaceutical companies had a margin of 25.2%. That profitability gap of 7% points is certainly noticeable, but in no way can we dismiss generic as a non-profitable product class.





# ALL ABOUT STEM CELLS



**BABITHA. P**

**B. PHARM  
FIRST YEAR**

Embryonic stem cells are pluripotent stem cells derived from the inner cell mass of a blastocyst, an early-stage pre-implantation embryo. Umbilical cord blood contains blood-forming stem cells for transplantation. Stem cells from the umbilical cord are used to treat different cancers, immune deficiencies and genetic disorders. Diseases such as spinal cord injuries, type 1 diabetes, Parkinson's disease, amyotrophic lateral sclerosis, Alzheimer's disease, heart disease, stroke, burns, cancer, and osteoarthritis have been treated using stem cells.

## RESEARCH ABOUT STEM CELLS

### 1. To understand Embryonic Genome Activation:

Five independent research groups have recently developed human 8-cell-like cells (8CLCs) from pluripotent stem cells. (8CLCs) used as cell models. Embryonic Genome Activation (EGA), is a crucial step in the development of organisms. In humans, EGA remains unexplored due to the lack of cell models. Cell model resembles the human blastomere stage -when the embryo undergoes a cell duplication process, they are necessary to study the earliest stages of human EGA.

### 2. Newly discovered bone stem cell causes premature skull fusion:

Craniosynostosis, the premature fusion of the top of the skull in infants, is caused by an abnormal excess of a previously unknown type of bone-forming stem cell, according to a preclinical study. It occurs in about one in 2500 babies.

### 3. Stem cells in the thymus:

Stem cells are identified in the human thymus for the first time. These cells represent a potential new target for understanding immune diseases and cancer and how to boost the immune system. The stem cells are present in two locations in thymus 1. The outer layer (capsule) is two. Around blood vessels in the medulla.



**4. Genetically modified Neural stem cells for Spinal Cord Injury:**

Genetically modified human neural stem cells (hNSCs) can effectively promote the reconstruction of damaged neural circuits and restore locomotor functions, offering great potential for new therapeutic opportunities for patients with spinal cord injury.

**5. Stem cells derived organoids secrete tooth enamel proteins:**

Organoids have now been created from stem cells to secrete the proteins that form dental enamel, the substance that protects teeth from damage and decay.

**6. Stem cell therapy for Alzheimer's disease:**

The haematopoietic stem cell therapy was effective in receiving memory loss, neuroinflammation and beta-amyloid build-up in a mouse model of Alzheimer's disease.

**7 Neonatal stem cells from the heart could treat Crohn's disease:**

The direct injection of neonatal mesenchymal stem cells, derived from heart tissue discarded during surgery, reduces intestinal inflammation and promotes wound healing in a mouse model of Crohn's disease-like ileitis.

**8 Stem cells for treating Parkinson's disease:**

Stem cell-based therapy for Parkinson's disease called autologous therapy, uses induced pluripotent stem cells (iPSCs) -- made from a patient's own skin or blood cells -- to replace the neurons in the brain that are lost in Parkinson's.

**9. Building muscle in the lab:**

A new method allows large quantities of muscle stem cells to be safely obtained in cell culture. This provides a potential for treating patients with muscle diseases.

10. Human embryo-like models created from stem cells to understand the earliest stages of Human development.



# WHY DO PEOPLE TURN TO ONLINE PHARMACIES? IS IT SAFE?



**SHIVANI. J. M**

PHARM. D - FIRST YEAR

## Online Pharmacy

An online pharmacy is an internet-based vendor that sells medicines and includes both legitimate and illegitimate pharmacies. Contemporary times are witnessing a surge in E-commerce including online shopping and this includes the sale of prescription and non-prescription medicines as well. The concept of online pharmacies and the online sale of medicines has been in vogue worldwide for more than two decades. An estimated 2986 online pharmacies were operating globally in the year 2008, the numbers of which would have risen as of today due to their convenience and accessibility. With just a few clicks, you can have your medications delivered to your doorstep without leaving your home. However, the question arises, is it safe to use online pharmacies for medications? In this article, we will explore the potential risks and benefits associated with online pharmacies to help you make informed decisions.

## Why the Online Pharmacy Popular?

Online pharmacies offer better pricing than offline stores, with increased access, lower transaction and product costs, convenience and greater anonymity for consumers. They are available 24/7, allowing you to order medications at any time that suits you. They also provide a wide range of medications, including over-the-counter drugs, prescribed medications and even rare or hard-to-find medicines. They offer accessibility to people in remote areas. These provided discounts, doorstep delivery within a short time and validation of prescriptions through licensed pharmacists.

## Risks of Online Pharmacy

The main concern is the issue of counterfeit medications. Not all online pharmacies operate legitimately, and some may distribute fake or substandard drugs that can be ineffective, contaminated or even dangerous, posing serious health risks.



## Cyber Doctors

'CYBER DOCTORS' evaluate patients through questionnaires and checklists and prescribe medications based on this communication. It promotes self-prescription. Patients who obtain these medications may suffer drug-drug interactions and adverse effects, about which they may have inadequate warning or counselling.

To determine whether an online pharmacy is safe and reliable, consider the following factors,

- Verify if the pharmacy requires a prescription medication.
- Look for online pharmacies that display certificates or seals from recognised accrediting organisations, indicating adherence to quality standards.
- Read customer reviews and testimonials to gauge the overall reputation and reliability of the online pharmacy.

While online pharmacies offer convenience and accessibility, it is crucial to exercise caution and ensure their safety. Counterfeit medications, potential data breaches, and the absence of professional guidance are some of the risks associated with online pharmacies. By choosing reputable and licensed online pharmacies, obtaining a valid prescription when required and consulting with healthcare professionals, you can mitigate these risks and safely benefit from the convenience of online medication purchasing. Always prioritize your health and safety by making informed decisions when using online pharmacies.



# DISSOCIATIVE IDENTITY DISORDER (MULTIPLE PERSONALITY DISORDER)



**MADHAN SRI. K**  
PHARM. D - FIRST YEAR

## I. Historical background:

DID has a long and fascinating history. It first gained significant attention in the late 19th century when cases like those of Ansel Bourne and Mary Reynolds sparked interest in the phenomenon of multiple personalities. Throughout the 20th century, the understanding and classification of the disorder evolved, culminating in its inclusion in the Diagnostic and Statistical Manual of Mental Disorders (DSM-III) in 1980.

## II. Symptoms of dissociative identity disorder:

1. **Altered Identities:** Individuals with DID experience distinct personality states, often referred to as "alters". These alters can differ in age, gender, personality traits, and even physical abilities.
2. **Memory Gaps:** Memory lapses, or amnesia, are common, with individuals often unable to recall significant life events or periods when another personality is in control.
3. **Identity Confusion:** There is a pervasive sense of confusion regarding one's identity and a feeling of detachment from one's thoughts, feelings, or actions.

## III. Causes:

The exact cause of DID remains a subject of debate. However, several factors are believed to contribute:

1. **Severe Childhood Trauma:** A history of chronic and severe childhood abuse, often involving emotional, physical, or sexual abuse, is frequently linked to DID.
2. **Coping Mechanism:** DID is thought to develop as a coping mechanism, allowing individuals to compartmentalize traumatic experiences to survive and function.



#### **IV. Diagnosis:**

Diagnosing DID can be challenging due to its complexity. Mental health professionals use a set of criteria outlined in the DSM-5 to make a diagnosis. This typically involves a comprehensive assessment, including interviews, psychological tests, and a review of the patient's history.

#### **V. Treatment:**

The primary treatment for DID is psychotherapy, specifically a form known as "dissociative identity disorder treatment." The goal is to help individuals integrate their various alters into a single, cohesive personality. Therapy may also address trauma and develop coping strategies.

#### **VI. Controversies and misconceptions:**

DID has been the subject of controversy, with some critics questioning the validity of the disorder. Media portrayals and sensationalized accounts have contributed to misunderstandings. It is crucial to rely on scientific research and expert opinions to gain a more accurate understanding.

#### **VII. Support and empathy:**

Individuals living with DID face unique challenges and stigma. Providing support, understanding, and empathy is essential to helping them lead fulfilling lives.

Dissociative identity disorder, once known as multiple personality disorder, remains a complex and intriguing psychological condition. While it has faced controversies and misconceptions, advances in research and clinical practice have improved our understanding and ability to support those affected by this disorder. With proper diagnosis and evidence-based treatment, individuals with DID can work towards integration and healing, highlighting the resilience of the human mind in the face of trauma.



# MECONIUM-STAINED LIQUOR AND MECONIUM ASPIRATION SYNDROME



**RASHVANTHIKA. B**  
PHARM. D - FIRST YEAR

## MECONIUM-STAINED LIQUOR:

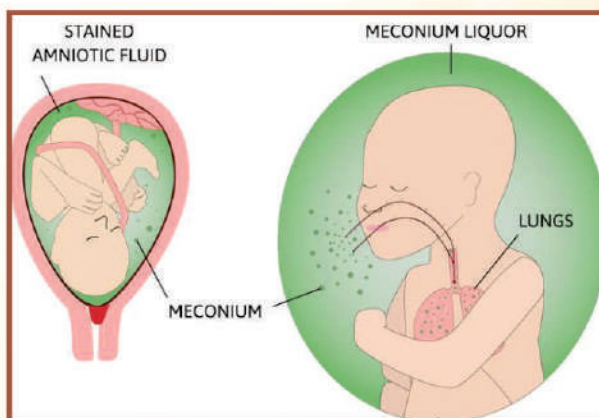
Meconium-stained liquor (MSL) refers to the presence of meconium (a baby's first stool) in the amniotic fluid during the antenatal period or labour. It can sometimes indicate fetal distress and requires careful monitoring by healthcare professionals during childbirth. Meconium is the first stool of a newborn, composed of bile, mucus, and epithelial cells. When the baby while still in utero passes meconium, it can indeed stain the amniotic fluid. Indeed, a germ-free, thick, black-green, and odourless substance begins to accumulate in the fetal colon around 12 weeks of gestation. Normally, newborn infants pass meconium within the first 24 to 48 hours after birth as part of their natural development. There are situations where a fetus may pass meconium into the amniotic fluid during pregnancy due to various reasons, which can be a concern for healthcare providers and may require monitoring. The severity of staining can vary from light to heavy, and it's usually considered significant if it appears dark green or black with a thick and tenacious consistency. This meconium staining can be a concern for healthcare providers during labour and delivery as it may indicate fetal distress.

## GRADES OF MECONIUM STAIN:

Meconium-stained amniotic fluid (MSAF) is a condition during childbirth where the amniotic fluid surrounding the baby in the womb is stained with meconium. This condition can be classified into three grades:

**Grade I:** The amniotic fluid is translucent and appears light green or yellowish.

**Grade II:** The amniotic fluid is opalescent and may have shades of deep green and light yellow or brown.





Grade III: The amniotic fluid is opaque and has a deep green colour, Grade III MSAF, which is characterized by especially thick meconium, is associated with a higher risk of poor neonatal outcomes compared to grades I or II.

### COMPLICATIONS:

Sepsis: An infection in the baby's bloodstream, Respiratory complications, such as meconium aspiration syndrome (MAS): This occurs when the baby inhales meconium-stained amniotic fluid into their lungs, leading to breathing difficulties, Hypoglycaemia: Low blood sugar levels in the new-born, Seizures: Abnormal electrical activity in the baby's brain, Lower Apgar scores: Apgar scores assess the baby's overall health and well-being at birth, and lower scores indicate potential issues, Higher rates of admission to the neonatal intensive care unit (NICU): Babies with grade III MSAF, may need more specialized care.

Because of these risks, there is often a dilemma among healthcare providers (midwives and doctors) about when and how to actively manage grade III MSAF. Management of the condition can involve decisions regarding the timing of interventions such as operative vaginal delivery (using instruments like forceps or vacuum) or caesarean section (surgical delivery). The lack of consensus or guidelines for managing grade III MSAF can make it challenging for healthcare professionals to make informed decisions, and the approach may vary depending on the specific circumstances of each case. It's important for healthcare providers to carefully assess the situation, consider the health of both the baby and the mother, and make individualized decisions to minimize risks and ensure the best possible outcome for both during childbirth.

### MECONIUM ASPIRATION SYNDROME

Meconium Aspiration Syndrome (MAS) is a medical condition that occurs in neonates, who have been born through meconium-stained amniotic fluid. MAS is characterized by respiratory failure, and its symptoms cannot be explained by other factors. This condition typically presents with specific radiological characteristics.

The severity of MAS can be categorized into three levels:

1. Mild MAS: In this case, the baby's oxygen requirement (measured as  $FiO_2$ , which is the fraction of inspired oxygen) is less than 0.40, and this requirement persists for less than 48 hours.
2. Moderate MAS: Babies with moderate MAS require a  $FiO_2$  greater than 0.40 for more than 48 hours, but they do not show signs of air leakage from the lungs.
3. Severe MAS: Severe MAS is characterized by the need for mechanical ventilation for

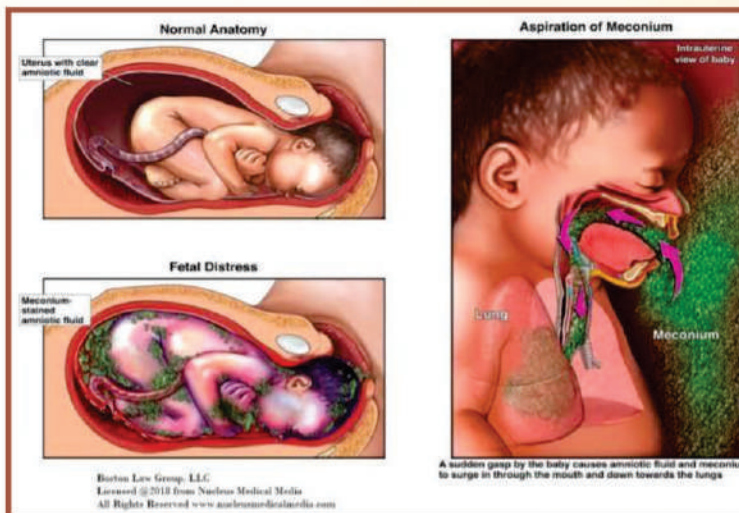


more than 48 hours and/or the presence of pulmonary hypertension, which is high blood pressure in the arteries of the lungs. This is the most critical and severe form of MAS.

These severity categories help healthcare professionals assess the extent of respiratory distress in neonates affected by MAS and guide their treatment decisions accordingly. It is essential to provide appropriate medical care and support to infants with MAS to improve their chances of a positive outcome.

## **PATHOGENESIS AND CURRENT MANAGEMENT**

Aspiration of meconium produces a syndrome characterized by hypoxia, hypercapnia, and acidosis. Perinatal hypoxia, acute airway obstruction, pulmonary inflammation, pulmonary vasoconstriction, pulmonary hypertension, and surfactant inactivation all play a role in the pathogenesis of meconium aspiration syndrome (MAS). Most aspiration of meconium probably occurs before birth. Following aspiration, meconium can migrate to the peripheral airway, leading to airway obstruction and subsequent lung inflammation and pulmonary hypertension. The presence of meconium in the endotracheal aspirate automatically establishes the diagnosis of meconium aspiration. MAS can be diagnosed in any infant born with meconium staining of amniotic fluid who develops respiratory distress at or shortly after birth and has positive radiographic findings. Prevention of intrauterine hypoxia, early cleaning (suctioning) of the airway, and prevention and treatment of pulmonary hypertension are essential in the management of MAS. Recent studies suggest that avoidance of post-term delivery may reduce the risk of intrauterine hypoxia and the incidence of MAS. Routine intrapartum nasal and oropharyngeal suction does not appear to affect the incidence and outcome of MAS. Endotracheal suction now is reserved only for infants who are depressed or have respiratory distress at birth. Mortality of MAS has improved; the causes of death are related primarily to hypoxic respiratory failure associated with irreversible pulmonary hypertension. Morbidity is affected mostly by perinatal hypoxia.





## PREVENTION

It is important to adapt and update prevention strategies to reduce the incidence of Meconium Aspiration Syndrome (MAS). Some key strategies include Reducing Post-Term Births: Inducing labour to prevent post-term pregnancies can help reduce the risk of MAS. Ensuring that pregnancies do not go beyond a certain gestational age can be a preventive measure. Managing Deliveries Effectively: Promptly addressing any abnormalities in cardiotocographic (CTG) tracings during labour and delivery is crucial. Timely intervention can help prevent complications that may lead to MAS. Improved Neonatal Care: Enhancing the care provided to critical newborns in the delivery room is vital.

This includes ensuring adequate resuscitation and support for infants at risk of MAS. Gastric Lavage Not Recommended: Gastric lavage, or washing the stomach, is not recommended as a preventive measure for MAS. It's important to focus on other strategies with stronger evidence of effectiveness. Consideration of Amnioinfusion: Amnioinfusion, which involves infusing saline into the amniotic fluid during labour, may have a role in specific situations with limited surveillance. It can help dilute meconium-stained amniotic fluid, reducing the risk of aspiration. These preventive measures aim to reduce the occurrence of MAS and improve the overall outcome for newborns and mothers during labour and delivery.

## MANAGEMENT

Meconium aspiration syndrome (MAS) and the challenges in its prevention and treatment underscore the importance of continued research to understand the underlying causes and mechanisms, especially those related to foetal bowel activity and meconium passage in utero. It's also critical to explore treatment strategies that target the pathogenetic mechanisms of lung damage rather than solely relying on supportive care. Investigating the timing of injury, whether antenatal, perinatal, or postnatal, and its impact on long-term neurodevelopmental and pulmonary outcomes is a crucial aspect of improving MAS management.

Furthermore, adopting less invasive ventilation methods and exploring newer agents like L-Citrulline and endothelin receptor antagonists for treating pulmonary hypertension in MAS patients could potentially reduce lung damage. Lastly, the global sharing of knowledge, approaches, and equipment between high and low-resource settings will be essential for enhancing the overall management and outcomes of MAS patients worldwide. Collaboration and information exchange can lead to better care and improved outcomes for affected infants.



# HEALTHCARE AT YOUR FINGERTIPS- AN ERA OF DIGITAL HEALTH AND TELEMEDICINE



**KAAVIYA. J**

**PHARM. D - FIRST YEAR**

"In an age defined by rapid technological leaps, the healthcare landscape is undergoing a significant metamorphosis. Amidst these transformative currents, the assimilation of digital health and telemedicine emerges as a beacon of change, reshaping how healthcare is administered and accessed. As we delve into the realms of digital health and telemedicine, we heed the words of Mahatma Gandhi: 'It is health that is real wealth, not pieces of gold and silver.' These technologies embody that very wealth of health, unravelling their benefits, confronting challenges, and forging a path that brings healthcare closer to individuals, quite literally at their fingertips." Among the groundbreaking shifts, the incorporation of digital health and telemedicine stands out as a transformative force, redefining the delivery and accessibility of healthcare services. This article explores the key concepts of digital health and telemedicine, their benefits and challenges, and the role they play in bringing healthcare closer to individuals, literally at their fingertips.

## The Rise of Digital Health

Digital health spans a diverse array of technologies and applications that utilize digital platforms to enrich healthcare delivery, communications, and management. The realm of digital health has grown to encompass an assortment of tools, from wearable fitness trackers to mobile health apps, all aimed at empowering individuals to take charge of their health and well-being.

## Mobile Health Apps: Empowering Patients

The prevalence of mobile health applications has surged, granting users the ability to oversee their health metrics, monitor medication regimens, and even access personalized health advice. These applications empower patients to proactively engage in their healthcare journey, fostering self-awareness and commitment to treatment protocols. As an illustration, individuals managing chronic conditions can employ diabetes management apps to oversee blood glucose levels, monitor dietary habits and physical activity, and gain immediate insights. Wearable Devices: Continuous Monitoring and Data Collection The



paradigm shift brought about by wearable devices like smartwatches and fitness trackers has revolutionized how individuals monitor their physical activities, sleep routines, and vital indicators. These devices engage in ongoing data collection, delivering valuable perspectives on health patterns and motivating users to embrace more health-conscious habits. Regarding telemedicine, wearable devices can transmit real-time data to healthcare providers, enabling remote surveillance and prompt interventions.

### **Telemedicine: Redefining Healthcare Accessibility**

Telemedicine involves offering healthcare services remotely through telecommunications technology and facilitating patient consultations with healthcare experts devoid of the necessity for physical presence. This approach eradicates geographical constraints, thereby expanding access to medical knowledge and expertise.

### **Virtual Consultations: Bridging the Gap**

Telemedicine platforms serve as conduits for remote interactions between patients and healthcare providers, enabling video calls that empower patients to discuss symptoms, seek medical guidance, and procure prescriptions, all within the confines of their residences. This holds particular significance for individuals residing in remote or underserved locales where access to conventional healthcare facilities remains limited.

### **Remote Monitoring: Enhancing Chronic Disease Management**

Telemedicine reaches beyond mere consultations, offering an avenue for patients with chronic ailments to access ongoing care through remote monitoring. Individuals grappling with conditions like hypertension or heart failure can harness connected devices to relay critical data—be it blood pressure readings or ECG outcomes—directly to their healthcare providers. This data-centric strategy facilitates prompt adaptations to treatment regimens while alleviating the necessity for frequent visits to medical facilities.

### **Benefits and Opportunities**

The integration of digital health and telemedicine offers a plethora of benefits that are transforming healthcare delivery:

1. **Improved Accessibility:** Telemedicine eliminates geographical barriers, enabling individuals in remote or rural areas to access specialized medical care.
2. **Convenience and Flexibility:** Patients can schedule virtual consultations at their convenience, reducing the need for travel and wait times.
3. **Enhanced Monitoring:** Continuous data collection through wearable devices allows healthcare professionals to make informed decisions based on real-time information.



4. **Reduced Healthcare Costs:** Telemedicine can lead to cost savings for both patients and healthcare systems by minimizing the need for in-person visits and hospitalizations.
5. **Early Intervention:** Remote monitoring and virtual consultations enable early detection of health issues, leading to timely interventions and improved outcomes.
6. **Challenges and Considerations**
7. While digital health and telemedicine offer significant advantages, they also present challenges that need to be addressed:
8. **Digital Divide:** Not all individuals have access to the necessary technology or internet connectivity, potentially creating disparities in healthcare access.
9. **Data Security and Privacy:** Safeguarding patient data and ensuring privacy are crucial considerations in the digital health landscape.
10. **Regulatory Frameworks:** The rapid evolution of technology often outpaces regulatory frameworks, requiring continuous updates to ensure patient safety and quality of care.
11. **Loss of Personal Connection:** While telemedicine offers convenience, some patients may miss the personal connection and rapport established during in-person visits.
12. **Diagnostic Limitations:** Certain medical assessments, such as physical examinations, are challenging to conduct remotely and may require in-person visits.

### **The Future of Digital Health and Telemedicine**

As the relentless march of technology forges onward, the horizon for digital health and telemedicine becomes a canvas of remarkable potential, offering a host of transformative possibilities:

1. **Integration of AI and Big Data:** Artificial intelligence and big data analytics will enhance diagnosis and treatment, recommendations, and personalized healthcare.
2. **Expanded Specialties:** Telemedicine will extend beyond primary care to include various specialties, such as mental health, dermatology, and radiology.
3. **Remote Surgical Assistance:** Surgeons could use telemedicine to guide and collaborate with colleagues during complex procedures, regardless of geographical location.



4. Healthcare Ecosystem Connectivity: Digital health platforms will become more interconnected, enabling seamless sharing of patient data among different healthcare providers.

The future of digital health and telemedicine beckons with the promise of reshaping healthcare in unprecedented ways. As we stand on the cusp of this transformation, it's clear that the amalgamation of technology and medicine is poised to orchestrate a grand narrative of enhanced diagnostics, expanded expertise, global collaboration, and comprehensive care.

Embracing the digital age, healthcare is evolving, placing services and knowledge within arm's reach. With digital health and telemedicine, patients become captains of their health, forging closer ties to expertise and ushering in a new era of chronic condition vigilance. In the face of challenges, the horizon glows with potential—better outcomes, savings, and broader access steer the growth of these innovations. As we peer ahead, the fusion of technology and medicine illuminates a path to reshape healthcare, enriching lives across the globe. Remember, 'The art of medicine consists of amusing the patient while nature cures the disease.' -Voltaire.



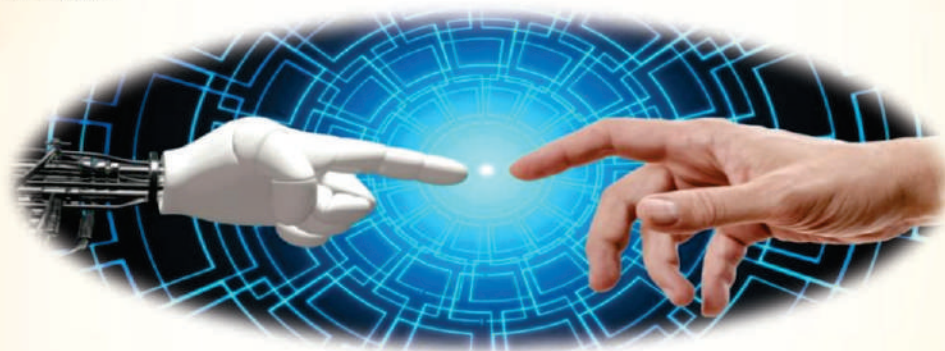
# THE PROMISING FUTURE OF ARTIFICIAL INTELLIGENCE IN HEALTHCARE



**SANJEY. B**

PHARM. D - FOURTH YEAR

Artificial Intelligence (AI) has been making waves in the field of medicine, and its future holds immense promise for transforming healthcare. In this article, we explore the exciting prospects of AI in medicine, ranging from personalized treatment plans to medical breakthroughs.



1. **Personalized Medicine:** One of the most exciting aspects of AI in medicine is its potential to usher in a new era of personalized healthcare. AI algorithms can analyse vast datasets, including a patient's genetic makeup, medical history, and lifestyle, to create customized treatment plans. This approach ensures that treatments are not only effective but also tailored to the individual, leading to improved patient outcomes.
2. **Enhanced Diagnostics:** AI-powered diagnostic tools have already demonstrated their ability to outperform human experts in interpreting medical images like X-rays, MRIs, and CT scans. The future holds the promise of even greater accuracy and speed in disease detection. Early diagnosis through AI can be a game-changer, particularly in conditions where timely intervention is critical.
3. **Drug Discovery:** AI is poised to revolutionize drug discovery and development. By analysing vast datasets and simulating drug interactions, AI can significantly



expedite the process of bringing new medicines to market. This acceleration could lead to breakthroughs in treating diseases that were once considered incurable.

4. **Predictive Analytics:** AI's predictive capabilities are invaluable in healthcare. Machine learning algorithms can analyse patient data to predict disease risk, patient outcomes, and even disease outbreaks. This foresight enables healthcare providers to take proactive measures, allocate resources efficiently, and provide timely interventions.
5. **Virtual Health Assistants:** AI-driven virtual assistants are becoming increasingly sophisticated. These AI companions can help patients manage their health, provide medication reminders, answer medical queries, and offer emotional support. The future will see even more advanced virtual health assistants that can play a pivotal role in patient care.
6. **Administrative Efficiency:** AI is streamlining administrative tasks in healthcare, reducing administrative overhead and improving efficiency. Automated systems manage appointment scheduling, insurance claims, and electronic health records.
7. **Addressing Healthcare Disparities:** AI has the potential to bridge healthcare disparities by providing access to quality healthcare in underserved areas. Telemedicine, powered by AI, can connect patients with specialists regardless of their geographical location, ensuring equitable healthcare delivery.

The future of AI in medicine is filled with promise. From personalised treatments to advanced diagnostics drug discovery, and administrative efficiency, AI is reshaping the healthcare landscape. However, it is imperative to navigate this future responsibly addressing ethnically concerns and ensuring that AI serves the



best interests of patients and society as a whole. The evolving role of AI in healthcare is set to enhance patient care, improve outcomes, and contribute to groundbreaking medical discoveries. As we embrace this future, let us continue to prioritize ethical AI development to ensure that the benefits of this transformative technology are accessible to all.



# CHEMISTRY OF JUNK FOODS' DIGESTIVE CONTENT AND ITS RELATIONSHIP WITH HYPERACIDITY:

**PAVITHRA. V****PHARM. D - FIRST YEAR**

Junk food is a term used to describe food that is high in calories from sugar or fat, but little dietary fibre, protein, vitamins, minerals or other nutritional value is present. It is also known as HFSS food (high in fat, salt and sugar). Junk food is unhealthy, low in fibre, high in fat, and salt, and high in sugar in liquid form. Obesity studies have shown that despite being unhealthy, due to better taste such foods are gaining popularity. Which are rapidly prepared and quickly served, such as burgers, pizza, fries, nuggets etc. Most school-going children skip breakfast and prefer to eat junk food during recess this leads to increased body mass index, and increases the risk of depression, digestive issues, heart disease, stroke, cancer Type 2 diabetes etc. In this article, we will be looking at junk foods and their consequences on health and the alternative to junk foods.

## **Junk Foods to Humans:**

Most junk food affects the digestive and cardiovascular systems. Such as cool drinks are loaded with carbohydrates with little to no fibre. When your digestive system breaks down these foods, the carbs are released as glucose (sugar) into your bloodstream. As a result, your blood sugar increases.

- Advantages of Junk Food.
- Junk food is tasty.
- Junk food is interesting.
- Junk food is fashionable in now a day.
- Junk food is popular
- Hidden Danger (How Does Junk Food Affect Us)
- High calories in sugar can lead to OBESITY.
- Junk food can cause health problems to your organs.
- From the sugar in junk food, you can get fillings in your teeth.



- Cholesterol and salt are known to set off blood pressure, stroke, and heart disease.
- The salts in junk food can affect the functioning of your kidneys.

### The Consequences of eating Fast Food

1. **Increase Risk for Chronic Disease:** A diet high in junk food is associated with an increased risk for diseases such as heart disease and diabetes. It causes Atherosclerosis and hypertension.
2. **Overweight and Obesity:** Junk food is often high in calories, fat and sugar, which can contribute to weight gain and obesity. One of the most common and perceivable effects of junk food is a rise in obesity in an individual. Junk foods are loaded with sugars, calories and fats that are a prime factor resulting in weight gain. Further, obesity is the starting point for issues that originate like diabetes, joint pain and various heart ailments.
3. **Loss of Appetite and Digestion:** One of the bad effects of junk food is overeating. One may end up eating more than they require due to the fluctuation in their blood sugar levels. It makes the brain demand more food than the normal requirements. Furthermore, there are problems in the digestion of such foods, which add up to the harmful effects of junk food consumption.
4. **Learning and Memory Problems:** High intake of sugar and fats tends to suppress the function of the brain, which helps in learning and memory formation. This phenomenon is especially observed in growing children when their learning is at its highest. It was further supported by a study published in the American Journal of Clinical Nutrition, which observed junk food consumption led to poor cognitive test results. Results displayed a sudden inflammation in the hippocampus region of the brain, which is responsible for memory and recognition.
5. **Mental Impact Leading to Depression:** Excess consumption of junk foods changes the chemical composition of your brain. This change makes your body more dependent on such junk foodstuffs and craves them more and more. It almost acts like an addiction and people go through withdrawal symptoms, which can lead to depression. It further causes hormonal imbalance in the body leading to wanting more of those junk foods.



6. **Trans Fat:** Fast food, packaged cookies, popcorn or packed meals are rich sources of Trans fat. The process destroys natural fatty acids. It can make cholesterol levels go haywire and make children prone to developing cardiovascular disease earlier.
7. **Sodium:** Cheese, salty, snacks, pizza, burgers, and frozen food are some of the biggest sources of sodium or salt. Excess intake can lead to problems like water retention, abnormal blood pressure &, and Heart issues.
8. **Monosodium Glutamate (MSG):** It is a taste enhancer commonly added to Chinese and processed food, canned vegetables and soups. The US Food and Drug Administration categorizes it as a safe food ingredient. Adverse effect of MSG overload on the human body. Glutamate, for instance, is naturally present in protein-containing food such as cheese, meat, fish etc.
9. **Artificial Sweeteners:** It is commonly found in diet coals, sodas, and packaged diet snacks. its use in food items has been a point of debate for years. Studies have linked some very serious ailments with their consumption such as metabolic syndrome, depression and insomnia.

Moreover, the intake of healthy food should be promoted in children, so the child should be given brightly coloured vegetables, fruits, and sprouts. Ice cream, chocolates and other heavy desserts that can be replaced by low-fat fresh yoghurt, fresh lime juice, coconut water and fresh fruit juices should be preferred to sodas and soft drinks. Avoid deep-frying to decrease the fat content.

**PUT IT IN THE WASTE - NOT ON YOUR WAIST!**



## CHRONIC KIDNEY DISEASE:



**MONISHA. J**  
**B. PHARM - FIRST YEAR**

CKD is a condition in which the kidneys are damaged and cannot filter blood as they normally do. Because of this, excess fluid and metabolic wastes remain in the body and lead to many health conditions.

CKD - a kidney damage in which the glomerular filtration rate (GFR) is less than 60mL/min/1.73 m<sup>2</sup> for 3 months or more, irrespective of cause. Kidney damage in many kidney diseases is ascertained by the presence of albuminuria in which the UACR is greater than 30 mg/g in two of three spot urine specimens. Approximately 37 million people are diagnosed with CKD in the USA.

### Five stages of chronic kidney disease

1. Stage 1 with normal or high GFR (GFR greater than 90 mL/min)
2. Stage 2 Mild CKD (GFR = 60-89 mL/min)
3. Stage 3A Moderate CKD (GFR = 45-59 mL/min)
4. Stage 3B Moderate CKD (GFR = 30-44 mL/min)
5. Stage 4 Severe CKD (GFR = 15-29 mL/min)
6. Stage 5 End Stage CKD (GFR less than: 15 mL/min)

### Factors that can increase your risk of chronic kidney disease include:

1. Diabetes.
2. High blood pressure.
3. Heart (cardiovascular) disease.
4. Smoking.
5. Obesity.
6. Being Black, Native American or Asian American.



7. Family history of kidney disease.
8. Abnormal kidney structure.
9. Glomerulonephritis

There is no cure for chronic kidney disease (CKD), but treatment can help relieve the Symptoms and stop it from getting worse.

#### **Kidney Disease Medications:**

1. Sensipar (Cinacalcet)
2. Renvela (Sevelamer Carbonate)
3. Aldactazide (Spironolactone / HCTZ)
4. Farxiga.
5. Phoslo (calcium acetate)
6. Kerendia.
7. Renocaps.
8. Invokana.

#### **MEDICATIONS TAKEN FOR CKD:**

Medications such as angiotensin-converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs) as part of the therapy.

#### **Latest treatment**

On 20 January 2023 - The U.S. Food and Drug Administration (FDA) has accepted a supplemental New Drug Application (sNDA) for Jardiance® (empagliflozin) tablets, which is being investigated as a potential treatment to reduce the risk of kidney disease progression.

Company: Boehringer Ingelheim Pharmaceuticals, Inc.

#### **What is Jardiance?**

Jardiance is a prescription medicine used to:

- Reduce the risk of further worsening of kidney disease, end-stage kidney disease (ESKD), death due to cardiovascular disease, and hospitalization in adults with Chronic kidney disease



- Reduce the risk of cardiovascular death in adults with type 2 diabetes who also have known cardiovascular disease.
- lower blood sugar along with diet and exercise in adults and children who are 10 years of age and older with type 2 diabetes.

### **Disadvantages**

- Jardiance must not be used to lower blood sugar in people with type 1 diabetes; it may increase their risk of diabetic ketoacidosis (increased ketones in the blood or urine).
- Jardiance must not be used to lower blood sugar in people with type 2 diabetes who have severe kidney problems, because it may not work.

### **Empagliflozin**

Empagliflozin (marketed as Jardiance®) is an oral, once-daily, highly selective sodium-Glucose cotransporter 2 (SGLT2) inhibitor and the first type two diabetes. Empagliflozin does not help patients who have type 1 diabetes.



# INTRICACIES OF METABOLISM: NAVIGATING WEIGHT AND WELLNESS



**JACK WINFRED. G**  
PHARM. D - FIRST YEAR

In the ever-evolving pursuit of understanding weight management, recent research has broadened our comprehension of factors like genetics, perception, and physical activity. These insights challenge and expand our knowledge in the quest for a balanced approach to maintaining a healthy weight. This article aims to provide a cohesive exploration of these insights, offering a holistic view of weight management bridging our prior knowledge with the latest findings, it equips us to offer more precise guidance to individuals navigating the complexities of achieving and maintaining a healthy weight.

## **Perception, Physical Activity, and Weight Control:**

In weight management, it's vital to grasp the role of perception and physical activity.

Perception matters. Some individuals naturally adjust their eating habits, compensating for indulgence with reduced intake at subsequent meals or by practising portion control. This mindfulness helps maintain calorie balance.

Physical activity goes beyond structured exercise. Those who are naturally more active, whether through fidgeting, active jobs, or constant movement, experience higher daily calorie expenditure and an elevated metabolism. More movement leads to increased calorie burn, even during non-exercise activities. "Some people just move more, even if they are not necessarily athletes," says Dr Kathleen Melanson, a professor of nutrition and food sciences at the University of Rhode Island.

Furthermore, the research by Dr. Ines Barroso and her colleagues at the University of Cambridge in England has identified over 250 different regions of DNA associated with obesity. This study compares healthy individuals with a low BMI against those with severe obesity and controls individuals of normal weight. It found that individuals with a lower BMI had fewer genes associated with obesity and that their neural and hormonal appetite regulatory systems were more sensitive.



## The Intricate Appetite Regulatory System

Delving deeper into weight management, we encounter the appetite regulatory system—an intricate mechanism that orchestrates our feelings of hunger and fullness. This system is influenced by genetics, hormones, and nervous system signals, guiding our eating patterns.

Leptin, a crucial hormone, takes centre stage in this system. It plays a pivotal role in long-term appetite control, signalling our satiety. Some individuals possess a more sensitive system, allowing them to naturally regulate calorie intake without conscious effort. They can recalibrate their energy balance, adjusting their appetite signalling system to maintain a healthy weight.

Beyond leptin, various other hormones, and neurotransmitters, such as ghrelin and serotonin, participate in this symphony of appetite regulation. Ghrelin, often referred to as the "hunger hormone," stimulates appetite, while serotonin, the "feel-good neurotransmitter," influences mood and can impact food cravings. The role of serotonin in appetite management can explain why some people overeat during periods of stress.

This interplay of hormones, signals, and genetic factors creates a highly personalized appetite regulatory system. It's a system that varies from person to person, affecting when and how much we eat.

## Late Eating and Its Hormonal Impacts: A Balancing Act

As we navigate the intricacies of weight management, the role of meal timing, especially when it aligns with our circadian rhythms, becomes increasingly apparent. Research, including studies on nocturnal mice conducted by Dr. Joseph Bass and his team at Northwestern University, sheds light on the profound effects of meal timing on weight regulation.

These studies have intriguing implications for human behaviour. When mice, natural night-time creatures, are confined to consuming their meals during their inactive daytime hours, similar to late-night eating in humans, they tend to gain more weight. This parallels human habits, where late-night eating has been linked to weight gain.

The underlying mechanism behind this phenomenon intertwines with our shared circadian rhythms. Just as mice are biologically predisposed to nocturnal activity, humans possess circadian rhythms that govern metabolism and digestion. Daytime hours are when our bodies are primed for efficient food processing, while nighttime hours signal a metabolic slowdown as we prepare for rest.



Within this intricate dance of biology lies leptin, often called the "satiety hormone." Leptin's role is to signal to our brains that we've consumed enough calories, fostering feelings of fullness and satisfaction. However, late-night eating disrupts this delicate hormonal balance, as observed by researchers such as Dr Frank A. J. L. Scheer and his team at the Division of Sleep and Circadian Disorders at Brigham

Their studies show that individuals who opt for late-night meals, even with identical calorie intake, tend to exhibit reduced leptin levels. These lowered leptin levels translate into diminished feelings of fullness, potentially leading to overeating during nighttime hours.

In contrast, ghrelin, known as the "hunger hormone," emerges as a prominent player in this scenario. Late-night eating often leads to an increased release of ghrelin, which sends powerful signals to the brain, indicating hunger and prompting the desire to eat. This hormonal imbalance can result in heightened late-night cravings, often for calorie-dense and less healthy foods, which contribute to overall calorie excess.

Furthermore, late-night eating disrupts our internal circadian rhythms, affecting the body's ability to process glucose effectively. This disruption can lead to increased insulin resistance, impacting not only weight management but also overall metabolic health.



## OBSESITY



**HARINI SRI. S**

**B. PHARM - FIRST YEAR**

A disorder involving excessive body fat that increases the risk of health problems. LEPTIN a hormone that is capable of effectively reducing food intake and body weight was initially considered for use in the treatment of obesity. Enormous progress has been made in the last half-century in the management of diseases closely integrated with excess body weight, such as hypertension, adult-onset diabetes and elevated cholesterol.

However, the treatment of obesity itself has proven largely resistant to therapy, with anti-obesity medications (AOMs). Anti-obesity medications or weight loss medications are pharmacological agents that reduce or control weight and deliver insufficient efficacy and dubious safety. Recent advances, including an increased understanding of molecular gut-brain communication, are inspiring the pursuit of next-generation AOMs that appear capable of safely achieving sizeable and sustained body weight loss.

Obesity promotes the incidence of conditions such as Type 2 diabetes (T2D), and cardiovascular diseases (CVD) and increases the risk of death due to cancer of the oesophagus, colon and rectum, liver, gallbladder, pancreas and kidney. Prominently noted in the current COVID-19 pandemic.

Compared with normal weight, individuals with a body mass index (BMI) of 30–34.9 kg/m<sup>2</sup> carry a hazard ratio for overall mortality that is elevated by more than 40% and at a BMI of 40 kg/m<sup>2</sup> the relative rate increases to 100%. It is estimated that 4–9% of all cancer diagnoses are attributable to excess body fat and that obesity correlates with poorer prognosis for multiple malignant diseases. Obesity is associated with a decreased life expectancy of 5–20 years depending upon its duration, the magnitude of excess weight and the emergence of associated comorbid diseases. Starting early in life, obesity increases the prevalence of psychological, neurological, pulmonary, gastrointestinal, renal, musculoskeletal and endocrine diseases. Estimates of the financial burden of obesity upon modern healthcare systems are sizeable, with more than US\$190 billion spent annually in the United States alone for obesity-related illnesses.



Genetic and environmental factors each appreciably contribute to the variance in BMI. With an estimated heritability of 40–70%, the contribution of genetic factors to BMI is comparable with that reported for Tourette syndrome (58–77%), psoriasis (66%), heart disease (34–53%) or breast cancer (25–56%).

Recent clinical trials with advanced therapeutic candidates including glucagon-like peptide 1 receptor (GLP1R) agonism are promoting the belief that breakthrough, drug-based management of obesity may be possible. Drugs that are approved for weight loss are Bupropion-naltrexone (Contrave), Liraglutide (Saxenda), Orlistat (Xenical, Alli), Phentermine-topiramate (Qsymia), Semaglutide (Wegovy), Setmelanotide (Imcivree).

### **What causes obesity and overweight?**

1. Food and Activity: People gain weight when they eat more calories than they do through activity.
2. Environment: The world around us influences our ability to maintain a healthy weight.
3. Genetics
4. Health Conditions
5. Medications
6. Stress
7. Emotional Factors
8. Poor sleep

### **ANTI-OBESITY DRUGS FOR LONG-TERM USE**

#### **1. Orlistat**

**SIDE EFFECTS:** Common side effects of orlistat include fatty/oily stools, increased defecation, faecal urgency, and flatus with discharge. It is possible to reduce the gastrointestinal side effects of the medication by prescribing a fibre-containing supplement called psyllium alongside it.

#### **2. Lorcaserin**

**SIDE EFFECTS:** Nausea, headache, dizziness, fatigue, dry mouth, cough, constipation, hypoglycaemia, and back pain.



### 3. Phentermine/topiramate

**SIDE EFFECTS:** Insomnia, paraesthesia, dizziness, dry mouth, dysgeusia, and constipation. A fatal safety issue also exists with this medication: it increases the risk of oral clefts. Thus, advice on contraceptive planning is imperative before this medication is prescribed to women of childbearing age.

### 4. Naltrexone/bupropion

**SIDE EFFECTS:** Headache, dizziness, dry mouth, and gastrointestinal discomfort (i.e., nausea, vomiting, constipation, or diarrhoea)

### 5. Liraglutide

**SIDE EFFECTS:** Nausea (25.0%), vomiting (12.2%), diarrhoea (11.6%), constipation 11.0%), and dyspepsia (6.4%), which were tolerated by most patients over time.

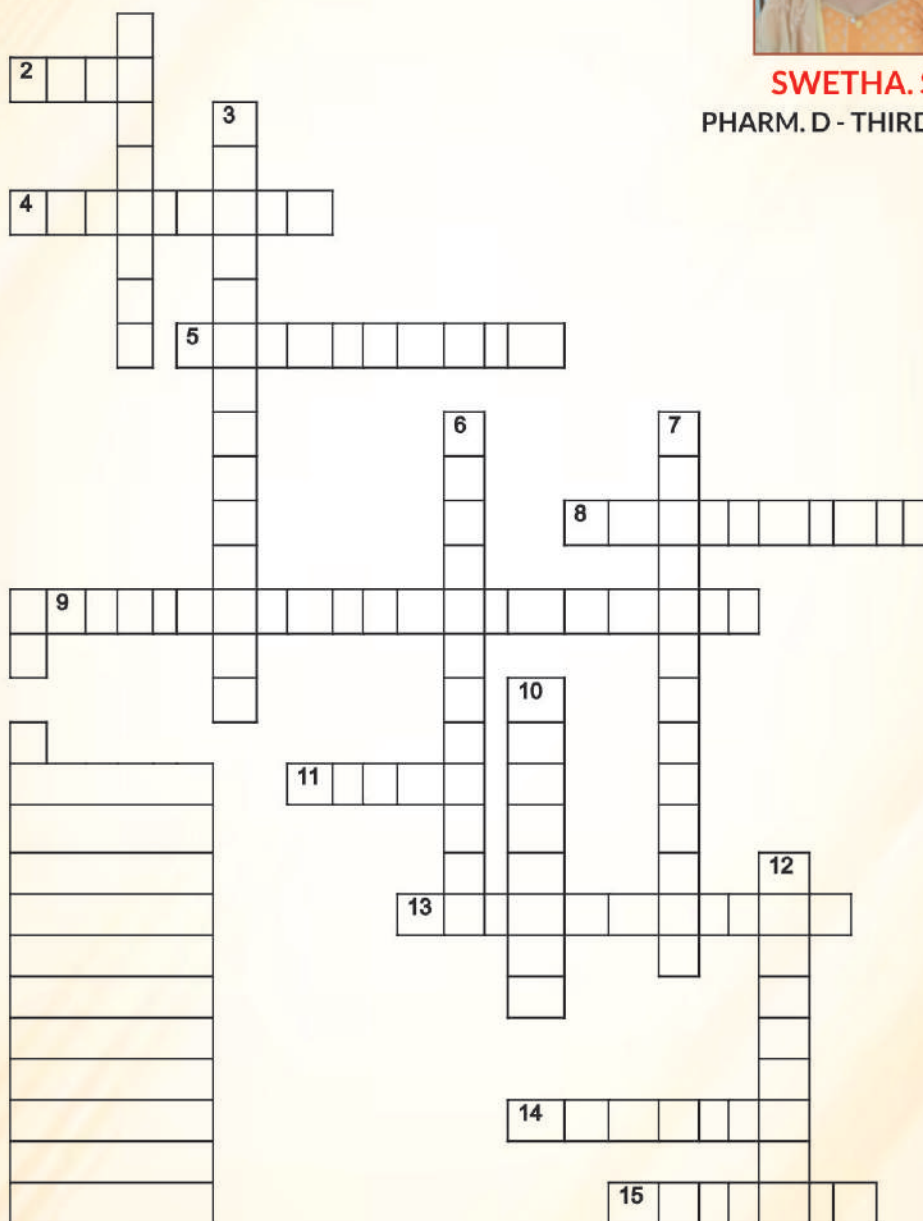
The most important strategies for preventing obesity are healthy eating behaviours, regular physical activity, and reduced sedentary activity (such as watching television, videotapes, and playing computer games).



# INTERESTING CROSSWORD PUZZLE



**SWETHA. S**  
PHARM. D - THIRD YEAR





**DOWN:**

- 1) Cancerous stage of Blood
- 3) Drug that causes GREY BABY SYNDROME as ADR
- 6) In QSAR, 'Q' stands for
- 7) sulfamethoxazole + trimethoprim
- 10) Bathochromic shift also known as
- 12) In a titration, the endpoint can be determined by a change in colour by using

**ACROSS:**

- 2) How many stages of chronic kidney disease
- 4) List of drugs which are habit forming comes under which schedule
- 5) Red Man Syndrome is caused by
- 8) The longest stage in the cell cycle is
- 9) Drug of Choice for Nephrogenic Diabetes Insipidus
- 11) Number of Ex-Official Members in Drug Technical Advisory Board
- 13) Benzylpenicillin is the chemical name of
- 14) Ingredients used to improve flow property of granules in tablet formulation
- 15) Anticoagulant that inactivates Thrombin & Factor

**ANSWERS:**

- 1) Leukaemia
- 2) Five
- 3) Chloramphenicol
- 4) Schedule X
- 5) Vancomycin
- 6) Quantitative
- 7) Cotrimoxazole
- 8) Interphase
- 9) Hydrochlorothiazide
- 10) Red Shift
- 11) Five
- 12) Indicator
- 13) Penicillin G
- 14) Glidant
- 15) Heparin



# *Photographs*





Teaching Faculties 2023-2024



Non Teaching Faculties 2023-2024



B.Pharm I Sem 2023-2024



B.Pharm II Sem 2022-2023



B.Pharm III Sem 2022-2023



B.Pharm IV Sem 2022-2023



B.Pharm V Sem 2022-2023



B.Pharm VIII Sem 2022-2023



I Pharm D 2023-2024



II Pharm D 2023-2024





IV Pharm D (PB) 2023-2024



V Pharm D 2023-2024





I D.Pharm 2022-2023



II D.Pharm 2022-2023





M.Pharm II Sem 2022-2023



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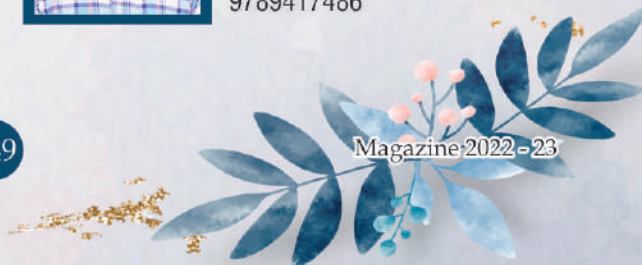
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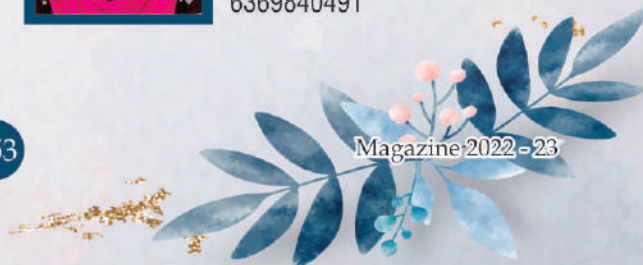
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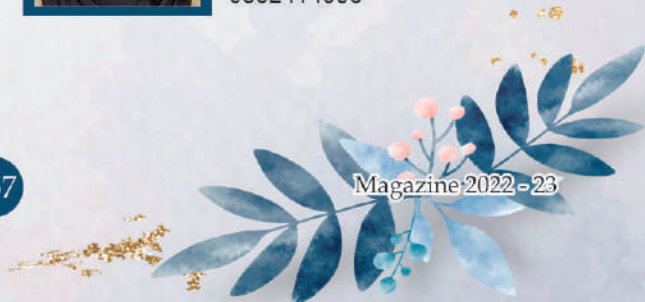
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**VINOTHA**

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9489144424





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# KMCH INSTITUTE OF HEALTH SCIENCES

(Run by Kovai Medical Center Research and Educational Trust)

Coimbatore



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Discipline is Principle  
Performance a habit  
and  
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Approved by the Government of Tamil Nadu and recognized by the PCI & AICTE. Affiliated to The Tamil Nadu Dr. M.G.R. Medical University, Chennai.

**D. Pharmacy | B. Pharmacy | M.Pharmacy**

Branches :

- Pharmacy Practice
- Pharmaceutics
- Pharmacology
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**Pharm D | Pharm D (Post Baccalaureate)**

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**B.Sc. Nuclear Medicine Technology**

**B.Sc. Cardiac Technology**

**B.Sc. Radiotherapy Technology**

**B.Sc. Dialysis Technology**

**B.Sc. Respiratory Therapy**

**B.Sc. Cardio Pulmonary Perfusion Care Technology**

**B.Sc. Operation Theatre & Anaesthesia Technology**

## KMCH COLLEGE OF PHYSIOTHERAPY

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**Bachelor of Physiotherapy (BPT)**

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Branches :

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- Advanced PT in Cardio-Respiratory Diseases
- Advanced PT in Neurology

## KMCH COLLEGE OF OCCUPATIONAL THERAPY

Recognized by the Government of Tamil Nadu and affiliated to The Tamil Nadu Dr. M.G.R. Medical University, Chennai.

**Bachelor of Occupational Therapy (BOT)**

**Master of Occupational Therapy (MOT)**

Branches :

- Advanced OT in Orthopedics
- Advanced OT in Neurology
- Advanced OT in Paediatrics
- Advanced OT in Psychiatry

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Approved by the Government of Tamil Nadu. Recognized by the Tamil Nadu Nurses and Midwives Council, Chennai and the Indian Nursing Council (INC), New Delhi. Affiliated to The Tamil Nadu Dr. M.G.R. Medical University, Chennai.

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**Post Basic B.Sc. Nursing**

**M.Sc. (Nursing)**

Branches :

- Medical - Surgical Nursing
- Child Health Nursing
- Maternity Nursing
- Community Health Nursing
- Psychiatric Nursing

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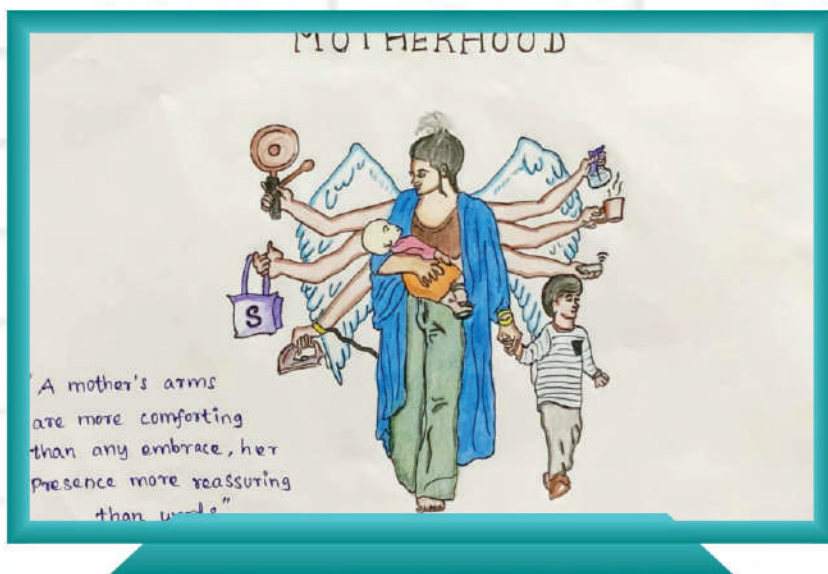
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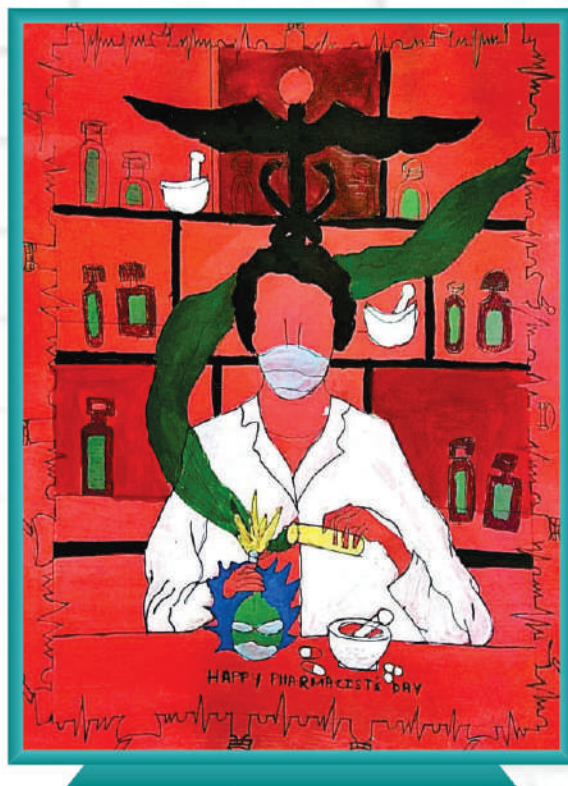
**Kathiravan. B**  
B. Pharm  
3<sup>rd</sup> Year



**Aarthi. N**  
B. Pharm  
1<sup>st</sup> Year



**Kavya. S**  
Pharm . D  
3<sup>rd</sup> Year



YOU'RE THE ARTIST AND THE ART



**Fathima Neha. H**  
B. Pharm  
4<sup>th</sup> Year



**Mohammada Rashidha. A**

B. Pharm

1<sup>st</sup> Year

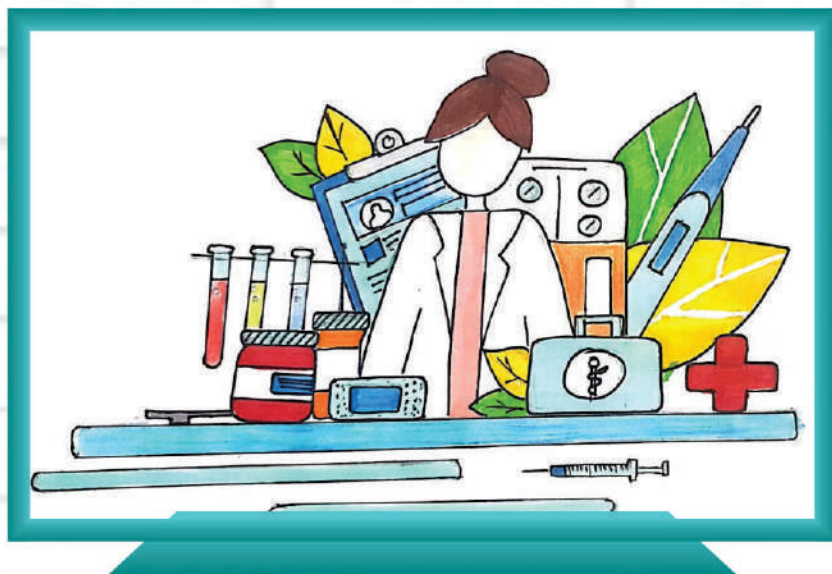


**Jayashree Subiksha. N**

B. Pharm

4<sup>th</sup> Year

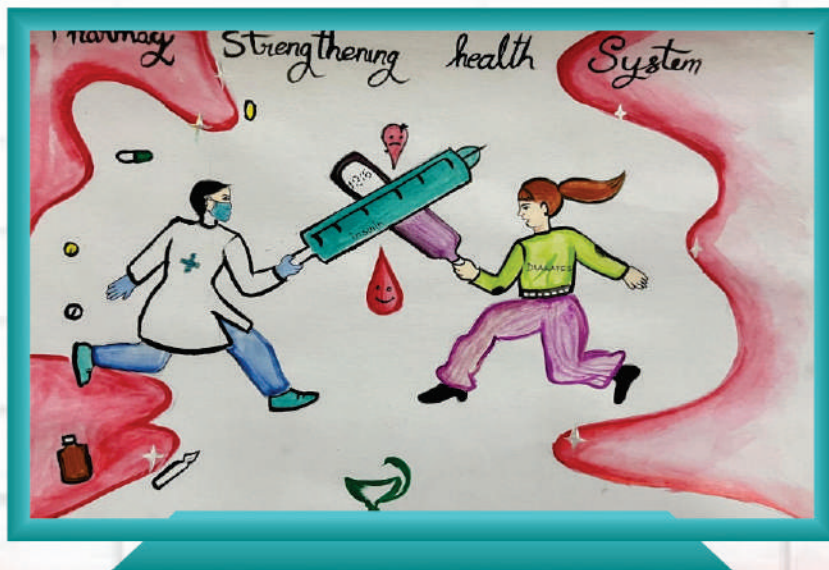




**Aishwarya. G**  
Pharm.D  
2<sup>nd</sup> Year



**Pranavakkumar. T**  
Pharm .D  
1<sup>st</sup> Year

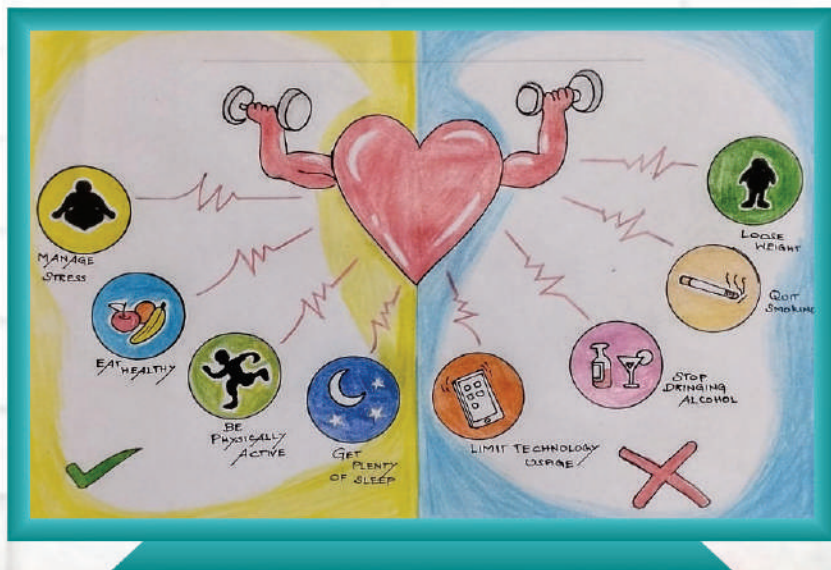




**Ashika Fairose. M**  
B. Pharm  
4<sup>th</sup> Year

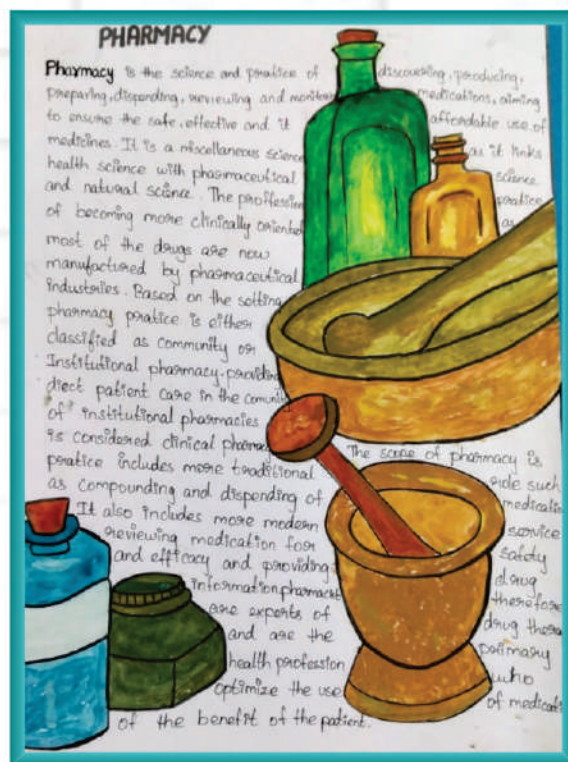


**Chockalingam. P**  
B. Pharm  
2<sup>nd</sup> Year

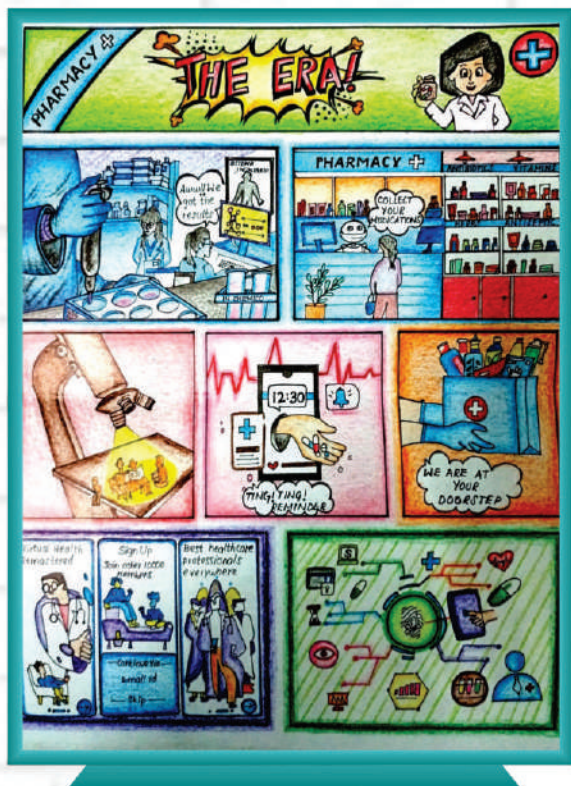




**Bharathi. R**  
B. Pharm  
1<sup>st</sup> Year



**Sakthi. N**  
Pharm .D  
2<sup>nd</sup> Year



**Jamuna. S**  
B. Pharm  
2<sup>nd</sup> Year

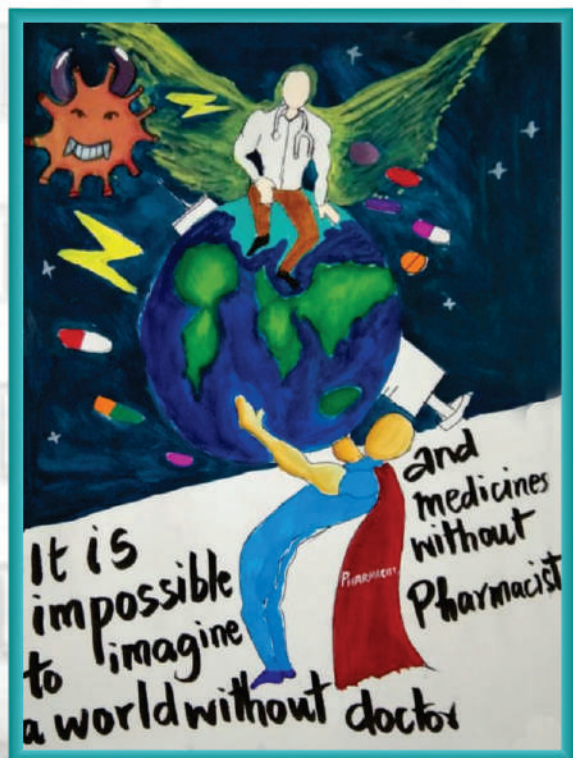


**Daksha. S. D**  
B. Pharm  
4<sup>th</sup> Year





**Pavithra. M**  
B. Pharm  
3<sup>rd</sup> Year



**Vaishnavi. D**  
B. Pharm  
3<sup>rd</sup> Year



**Swetha. G. T**  
Pharm. D  
2<sup>nd</sup> Year

**Mahaswetha. R. M**  
Pharm. D  
1<sup>st</sup> Year





**Aishwarya G**  
Pharm. D  
2<sup>nd</sup> Year



**Rithanya. S**  
B. Pharm  
3<sup>rd</sup> Year



**Janani N**  
Pharm. D  
1<sup>st</sup> Year

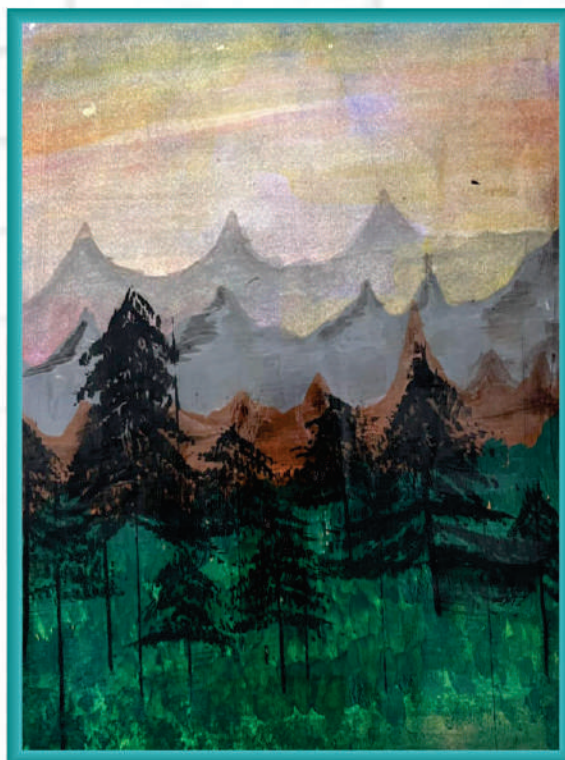


**Janani N**  
Pharm. D  
1<sup>st</sup> Year





**Jenisha Banu. M**  
B. Pharm  
3<sup>rd</sup> Year



**Jenisha Banu. M**  
B. Pharm  
3<sup>rd</sup> Year

