# The Nest

A Student Council Presentation 2022-2023

SUSTAINABLE INNOVATION



THE MET LEAGUE OF COLLEGES

Bhujbal Knowledge City

MET INSTITUTE OF PHARMACY (DEGREE)



Mahatma Jyotiba Phule (1827-1890)



Shrimati Savitribai Phule (1831-1897)

विद्येविना मती गेली मतीविना नीती गेली । नीतीविना गती गेली । गतीविना वित्त गेले ।। वित्ताविना शुद्र खचले । इतके अनर्थ एका अविद्येने केले ।। – महात्मा ज्योतिबा फुले

Lack of knowledge leads to indiscretion;
Indiscretion leads to lack of ethics.

Lack of ethics leads to absence of direction and momentum;

Absence of direction and momentum result in bankruptcy.

Such is the havoc caused by the lack of knowledge.

- Mahatma Jyotiba Phule

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#### **Our Faith**

न चौर हार्यम् नच राज हार्यम्। न भातृभाज्यम् नच भारकारी।। व्यये कृते वर्धते एव नित्यम्। विद्याधनं सर्वधन प्रधानम्।।

Knowledge can neither be stolen by a thief, nor snatched by a king.

It is indivisible unlike ancestral property, it never burdens the bearer, it multiplies manifold when offered to others. Knowledge is the supreme form of wealth.

#### **Our Vision**

To shape professionals, to conquer the present and the future challenges to the socio economic fabric of our society, by institutionalising search, development, research and dissemination of relevant knowledge through structured learning systems.

#### **Our Mission**

To evolve, develop and deliver dynamic learning systems to equip professionals with conscience and commitment to excellence and courage to face business challenges.

# **MET League of Colleges**



Mumbai Educational Trust (MET) is a conglomerate of premiere educational institutions, driven by a single-minded focus on imparting quality education, to make students sharp. Training is imparted round-the-clock, seven days a week. Projects and assignments are given utmost importance and students learn on the job. Application-oriented knowledge, garnered in the lecture halls, is applied to industry assignments. The faculty spares no effort to make the students razor sharp, so that they make their mark in the corporate world. No effort has been spared, to create an environment that encourages students, to push the limits of their minds. All this, to help young professionals face the challenges of life. And make their mark in the corporate world.

#### Bhujbal Knowledge City, Mumbai

- Institute of Management
- Institute of Post Graduate Diploma in Management
- Institute of Mass Media
- Asian Management Development Centre
- Centre for Insurance Training, Research & Development
- Institute of Pharmacy
- Institute of Information Technology
- Institute of Software Development and Research
- Institute of Computer Science
- Institute of International Studies
- Rishikul Vidyalaya

#### Bhujbal Knowledge City, Adgaon, Nashik

- Institute of Management
- Institute of Pharmacy
- Institute of D. Pharmacy
- Institute of Technology (Polytechnic)
- Institute of Information Technology
- Institute of Engineering
- Bhujbal Academy of Science & Commerce (Jr College)

#### Bhujbal Knowledge City, Gowardhan, Nashik

• School of Architecture and Interior Design

At MET, over four thousands students and faculty are involved in delivering unique learning systems, through ultra modern infrastructure and academic rigour. MET Institutes are ISO certified, with affiliations to the University of Mumbai, Savitribai Phule Pune University, Directorate of Technical Education, All India Council of Technical Education, MSBTE, Pharmacy Council of India, C-DAC - Ministry of Communications and Information Technology, The Chartered Insurance Institute (CII), London.

MET also has strategic institutional collaborations with the Association of Chartered Certified Accountants (ACCA), UK, NCC Education, UK, Manhattan Institute of Management, New York, EAE Business School, Spain, Business & Hotel Management School, Switzerland, Robert Gordon University, York St. John University, SetCONNECT, USA and TCS iON.

# **MET** Institute of Pharmacy

The MET Institute of Pharmacy (MET IOP) was established in the year 1993 with the two-year Diploma programme in Pharmacy (D.Pharm.) recognised by the Directorate of Technical Education. The four-year Bachelor's programme in Pharmacy (B.Pharm.) affiliated to the University of Mumbai was started in the year 1994. The MET IOP is approved by the Pharmacy Council of India, New Delhi AICTE, New Delhi, and accredited by NBA.

The Institute pursues the philosophy of perpetual acquisition of knowledge. Apart from academic curriculum, our policy has been to provide value based education and to expose the hidden potential of the students. Our students have free access to the computer facilities and are provided with LCD projector in the class room for their seminar presentation. Our aim is not to make the students mere job-seekers but to make them the architects of their future.

The Institute provides a quasi-corporate ambience for the students. MET has state-of-the-art classrooms, a well-stocked dedicated pharmacy library and fully loaded pharma laboratories. A hi-tech convention centre for seminars and workshops. Recreation areas to unwind. No efforts have been spared to create an environment that encourages students to push the limits of their minds.

Continual exposure to the recent developments in the world of pharmacy through industry interaction programmes keep students at the cutting pharma edge. Unique pedagogy makes them so sharp that they have been consistently making a mark at the University of Mumbai.

Over the years, several distinction holders and University toppers have graduated from our institute. Our students not only excel in academics but they have been champions at various cultural and sports competitions. The average result each year is above 90%. Our alumni are making us proud all over the globe by being leaders in their choice of vocation.

#### Vision and Mission

- Vision: MET Institute of Pharmacy has a vision to be recognized as one of the leading institute of pharmacy education in the nation and envisages to produce world class pharmacists who are equipped to cater to the present and future needs of the profession and society at large.
- Mission: MET Institute of Pharmacy aims to achieve its vision by:
- 1. Imparting quality education and training the students in the field of pharmaceutical sciences through competent staff and supporting infrastructure.
- 2. Working towards the all-round development of the students.
- 3. Enabling students to make ethical and valuable contributions in diverse facets of pharmacy and social welfare, thus improving the quality of life.

#### **PEOs: Program Educational Objectives**

**PEO1:** To equip our graduates with sound knowledge in the field of Pharmaceutical Sciences making them technically competent in areas of Pharmaceutics, Pharmaceutical Chemistry, Pharmacognosy and Pharmacology.

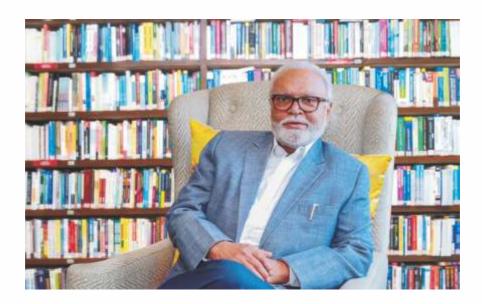
**PEO2:** Using a multi-disciplinary approach inculcate values of team work, strong communication skills, analytical skills and problem solving ability; for a highly productive career in Pharmaceutical industry, Pharmaceutical Management, sales and marketing, clinical research and other fields after graduation.

PEO3: To encourage and enable our graduates to pursue higher education by instilling lifelong learning and research aptitude in addition to core competencies.

**PEO4:** To train the students to contribute towards the pharma sector in an ethical manner for the betterment of society and work towards sustainable development.



### From the Chairman's Desk



With many Indians evidently occupying influential positions globally in business, research, space, design, fashion, technology and more, the world is unmistakably acknowledging India's potential, as much as counting on it. This also bears testimony to the fact that India's education system has consistently performed better than that of many countries. On one hand, the finest educational institutions like IITs, IIMs, AIMS are producing world class professionals. On the other hand, India has also successfully reached out to the rural and suburban section and significantly improved gender equality in education besides boosting literacy rate itself, making people life-long learners. This has resulted in students, even from India's interior districts, rising to commanding heights in various arenas.

With newer proposed changes in Education as a sector, and IT backing and enabling its delivery and reach, we look forward to not only better serve Indian students, but also to attract and groom talent from around the world. All stakeholders, including academia students, industries, and government will have to play critical roles in making institutions capable of taking the next major leap forward and build an independent education ecosystem.

We, at three of our world class MET BKC campuses in Mumbai and Nashik, and at our International School - MET Rishikul Vidyalaya, are ceaselessly endeavoring to provide the best infrastructure, human capital, processes and values, so that tomorrow's India will outperform the India of yesteryears. We at MET believe that India's glorious period is not behind us but ahead of us, as a matter of fact we all are carving it out today

Chhagan Bhujbal Hon, Founder Chairman - MET

# **Advantage MET**

- MET Institute of Management ranked 4th Best B-School in Mumbai, 28th Best B-School All India and 15th amongst Top West B-Schools by the Times B-School Survey 2022
- MET Institute of Management ranked as India's 17th Best Pvt. B-School and 18th Best B-School for Placements by the Times B-School Survey 2022
- Ranked 4th Best B-School in Mumbai and 14th Best B-School in West Zone by the Times B-School Survey 2021
- MET Institute of Management ranked 9th in the Times Top Institutes of West India Survey 2020 across Western and Central India
- Ranked 5th Best B-School in Mumbai and 18th Best Pvt. B-School All India by the Times B-School Survey 2020
- Ranked 5th Best B-School in Mumbai and 28th Best Pvt. B-School All India by the Times B-School Survey 2019
- MET Institute of Pharmacy (Degree) has been awarded 'Best Pharmacy College in India' by National Education Achievement Awards, 2021 organised by the Devoxil Media Group
- MET is recognised as the Best Education Brand 2019 by The Economic Times
- Recipient of the prestigious World Education Awards 2019 for 'Outstanding Institute for Mass Media Management of the Year'
- MET Mass Media has a collaboration with Institute of Creative Excellence (ICE) founded by Balaji Telefilms Ltd

- Unity in Diversity Educational Institute Award awarded by Global Dialogue Foundation & United Nations Alliance of Civilizations in 2016
- Centre of Excellence in collaboration with leading Corporates and Academia
- MET is a Ph.D. Research Centre of the University of Mumbai
- MET has the best e-enabled state of the art infrastructural facilities
- Focus on delivery of lifelong learning skills to build critical professional competencies
- Futuristic e-driven pedagogy and modules deliver e-commerce, IT and digital skills
- Global internship opportunities
- Research focused faculty
- Outstanding Indian/global industry interface
- Freeship awards for meritorious students
- Record placements with salary packages ranging upto fifteen lacs
- Well-networked with the best of corporate in India and abroad
- Sensitising the students towards social causes through MET Seva CSR programmes
- Unique partnership with the CII, London and NCC Education, UK
- Enlightened interaction for urban-rural synergy
- Strong alumni base world over



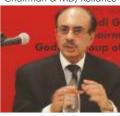
Late Shri Pranab Mukherjee Former President of India



Smt. Pratibha Devisingh Patil, Former President of India



Mukesh Ambani Chairman & MD, Reliance



Adi Godrej, Chairman, Godrej



Ratan Tata Renowned Industrialist



Late Shri. Rahul Bajaj, Chairman, Bajaj Auto



MET Chairman Wins
Edupreneur Award
Founder Chairman
Mr. Chhagan Bhujbal
won the coveted
Edupreneur Award and
was featured amongst 11
iconic educationentrepreneurs from
Maharashtra by
The Times Group.

# From Principal's Desk



Dr. Abha Doshi Principal, MET IOP (Degree)

Dear Students,

After a span of more than two years, this academic year has been different since we are functioning completely in the offline mode. Both faculty and students alike were missing the face-to-face classroom and lab interactions that give me the feeling of "All is well".

The academic year started with exhilarating news - our student Ms. Mitali Kamat made MET Institute of Pharmacy (Degree) proud by being the university topper of 2021-22. There has also been a surge in research activities with most students and teachers being involved in projects that were submitted to CiiA and Aavishkar and I proudly share that some of their projects have been selected for the next round.

The students are also involved in co-curricular and a lot of other activities including social activities, clean-up drive, paralegal volunteer training workshops etc. under the banner of DLLE. All these activities ensure the all-round development of the students.

The New Year started with "Alumni Meet 2023" and this time we felicitated a few of our alumni who contributed to Alma Mater over the years.

Dear students, we at MET IOP want to give you the best NEST to learn, to test your limits and then overcome them and fly high. But, do remember, to take care of others too and work ethically with integrity. Set your own path and cause no harm to others on your way up. Remember to always give back to society and be not only a good pharmacist but also a good human being.

Best wishes for all your endeavours.

# Course Coordinator's Perspective



Dr. Rashmi S. Srivastava Course Coordinator MET IOP (Degree)

My Dear Students,

"The greatest threat to our planet is the belief that someone else will save it."

- Robert Swan, Author

The topic of this year's NEST is sustainability which means "the ability to be maintained at a certain rate or level" for me it's not just about maintaining resources around us but also within us. 3Rs Reduce, Reuse & Recycle that are most commonly used motto for sustainability of resources around us can also be applied for resources within us as Recognize, Respect & Reach.

Recognize powers we have within us respect everything around us including ourselves and reach out to society to serve it to the best of your power. This is a proposal for all my dear students to understand their inner strength and shape up your capabilities such that you all become an asset to universe.

I am happy to share my thoughts as it has always been a great pleasure connecting with you all. NEST magazine is a wonderful compilation of all co-curricular & extra-curricular activities of all the students as well as staff members through write-ups and pictures through out the academic year, reflecting the talent of our students and staff members.

I sincerely thank our honorary Trustees and Principal, Dr. Abha Doshi for their constant support.

I conclude by wishing best of luck to all young and promising students of MET.

# From the Cultural In-Charges

Teamwork is the ability to work together toward a common vision. It is the ability to direct individual accomplishments toward organisational objectives and attain exceptional results — Andrew Carnegie

And what results have all of us achieved! With COVID - 19 gone, the year started with proud announcement of our







student Ms. Mitali Pradip Kamat securing the first rank and topping the University of Mumbai, Final Year BPharm Examination. Our students began the Cultural events by expressing love for their teachers on Gurupurnima, in the form of gifts. This was followed by paying our respects to Lord Vitthal on the auspicious day of Aashadi Ekadashi . Energising bhajans after a wonderful and pleasing Pooja filled the entire atmosphere with gaiety and spirituality which was replicated in the Satyanarayan Pooja. Students brushed up on their legal understanding by organising a legal awareness workshop. The year was filled with many such fun-filled events like a spirited carrom competition, a patriotic Independence Day, a lively Garba Raas, beach cleaning drive, Safety and first aid seminar and a blood donation camp which made us aware about our responsibilities towards our brethren.

The International Delphic Council organised an event at MET wherein the art & culture of Maharashtra was showcased with events such as dance, fashion show, sketching and painting of an art wall. Our students gave an outstanding response to this event. World Pharmacists day was celebrated at Chatrapati Shivaji Vidyalaya by performing a skit and a talk on career prospects in pharmacy. Students participated in various co-curricular acivities like the Poster and model presentation at Aavishkar, CiiA and a Seminar on Nuclear medicine and Radiopharmaceuticals held by MET. Dr.Bandoo Chatale presented posters and gave talks at International Conferences. An Industry Visit at Viva Test lab and Kamala life Sciences Pvt.Ltd was arranged for students. Our prominent alumni, Adv Hafsa Khan, Mr. Gaurav Rajpurohit, Ms. Afreen Khan and Mr. Shailesh Kataria guided our students about their career and inspired them to carve their own paths.

All of us wholeheartedly welcomed our freshers by organising an exciting Freshers's party. Our annual day, Lumiere, was an extravagant 2 days affair with Sports day, songs and dances. Staff and students alike enjoyed the offline Lumiere which was a welcome change from the online version of Lumiere of the last two years. Likewise, the staff and students picnic was a day filled with fun & frolic. We bid farewell to the outgoing batch of students with equal sorrow and wished them luck.

During the Alumni Meet a group of 7 Alumni, gave enlightening talk on Job opportunities available in various upcoming fields of pharmacy profession. We expressed our gratitude by felicitating select 10 Distinguished Alumni on the occasion.

We are extremely thankful to our trustees for their support in all our endeavours. We are grateful for the guidance, support and cooperation extended by Principal Dr. Abha Doshi, all faculty members and non-teaching staff. We acknowledge the entire MARCOM team for giving the final shape to The Nest and making it a reality. We would like to thank our Maintenance department for constantly helping us in each of our programmes wholeheartedly. Due to the tireless efforts of the council members and the active participation by the students each and every event was a grand success.

Dr. Vijaya Patil, Ms. Aushima Dasari, Ms. Sheeja Koliyote, Cultural In-charges

#### **Our Mentors**

Innovation in education can lead to better overall outcomes in the environment. Innovative classrooms are filled with students who are developing stronger communication skills and building engagement capacity amongst their peers. All the teachers made this a reality .Our teachers were the source of inspiration and constant motivation for us to move towards a better understanding and look at things in a new light. They play a major role in our lives, not just as teachers but also as a guide and as role models that we could look up to. No amount of words would be enough to express our gratitude towards our dearest teachers.



(L to R) **First Row:** Dr. Poonam Advani, Dr. Vijaya Patil, Dr. Abha Doshi, Dr. Rashmi Srivastava, Dr. Sonali Naik, Ms. Sheeja Koliyote, Ms. Aushima Dasari

(L to R) **Second Row:** Ms. Bhagyashri Joshi, Ms. Manjiri Shinde, Ms. Priyanka Joshi, Dr. Madhura Vaidya, Ms. Vrushali Keer, Ms. Sindhu Menon, Dr. Bandoo Chatale.

# The Non-Teaching Staff

The non-teaching staff plays an integral role in our lives. They always walk along with us and help us in trivial as well as major They are efficient, hard-working as well as very kind and grounded and thus have a positive impact on our formative years. MET institute of Pharmacy provides an environment where teaching and non teaching staff have mutual respect for each others work in tandem to provide us quality education



First: (L- R) Ms. Aarti Gore, Ms. Sneha Kokate, Ms. Priya Sawant, Dr. Abha Doshi, Ms. Ashwini Pawar, Ms. Manisha Barve, Ms. Ankita Patade, Ms. Asavari Hadkar, Mr. Prashant Rane (L- R)

Second: (L- R) Mr. Sunil Mohite, Mr. Mahendra Surve, Mr. Sudhir Ayare, Mr. Pramod Karbhari, Mr. Pradeep Jadhav, Mr. Dattaram Bhure, t Mr. Dinesh Khanolkar,

Third: (L- R) Mr. Ashwin More, Mr. Ghanshyam Kambli, Mr. Sanjay Katkar, Mr. Gurunath Pednekar,

### **IPA Talks**



The Indian Pharmaceutical Association- Maharashtra State Branch- Students' Forum, one of the chief segments of the Indian Pharmaceutical Association, has been the go-to platform for pharmacy students in the state of Maharashtra for decades.

Under the auspices of this student-run organization, various budding pharmacists have united to harmonize their energies for exploring the boundless avenues of the pharmaceutical sphere. All the diverse facets of the pharmaceutical arena. Be it academia, industry, community and hospital pharmacy, management and public health are emphasized by the conglomerate.

Sr No.	Name of member	Committee	Post	Year
1	Aditya Daware	General Secretary	Chairperson	Final Year
2	Sakshi Upadhyay	Editorial	Editor in Chief	Final Year
3	Hardika Patil	Public Health Office	Public Health Officer	Final Year
4	Noaman Amrelia	General Secretary	Joint General Secretary	Third Year
5	Dharmendra Purohit	Student Exchange Office	Cell Member	Second Year
6	Shristi Shetty	Public Education Office	Cell Member	Second Year
7	Sakshi Parab	Culturals	Cell Member	Second Year
8	Rasika Katre	Public Relation Office	Cell Member	Second Year
9	Tanishqa Rane	Finance	Cell Member	Second Year
10	Yatish Chauhan	Executive	Cell Member	Second Year
11	Shlok Bodke	Sports	Cell Member	Second Year

## Student Council's Message

Integrity, Honesty, Teamwork and Confidence

For acquiring these qualities we need experiences where we practically imply them in life. This is exactly where the Student's council comes into the picture. We aim to lay a concrete foundation for imparting lifelong learning. Like every year we organised and conducted various co-curricular and extracurricular activities along with intercollegiate and inter-departmental events.

We would like to take this opportunity to thank our Principal Dr. Abha Doshi for providing us with this platform. We would also like to thank Dr. Vijaya Patil, Ms. Sheeja Koliyote and Ms. Aushima Dasari for supporting and guiding us throughout this journey.

Whether it was events or celebrations, the members of the council didn't leave a single stone unturned for creating magic in every opportunity provided. Throughout this year, we witnessed a variety of events, enthusiastic participation and a spirit of togetherness. We saw ideas which were unimaginable being put to life. Whether it was sports, performing arts, creativity, academia or debates, we received immense support and engagement from our students.

We couldn't be more grateful for the wonderful team who came together to make the impossible, possible.

Our best wishes to each and every student who was or was not a part of the Student's Council for making this year fruitful and providing us with memories to cherish forever.

Post	Class	Name
General Secretary	ty B.Pharm	Sharvani Pednekar
		Sapna Jaiswar
Cultural Secretary	SY B.PHARM	Kimaya Palav
		Annikshaa Shah
Editor	ty b.pharm	Sharvari Desai
		Gayatri Naik
	SY B.PHARM	Nidhi Mishra
		Nashita Attarwala
Class Representatives	Final Year B.PHARM	Sanika Desai
		Sachi Parab
		Adarsh Singh
	ty b.pharm	Dhanashree Ghodake
		Pratham Mahato
		Vedika Pimple
	SY B.PHARM	Samiksha Gawde
		Simran Keni

# **Student Council's Message**

		Pratham Shah
	FY B.PHARM	Karmanpreet Gill
		Kunal Jadhav
		Trisha Savla
Health Secretary	ty b.pharm	Krushika Soni
		Aneesha Mudaliar
	Sy b.pharm	Mohd. Monishuddin Khan
		Vibhav Phadtare
Social Media and Event Coordinator	Final Year B.PHARM	Siddhi Jain
		Mehreen Patel
	ty b.pharm	Kashmira Chaudhari
	Sy b.pharm	Pratham Panjwani
Sports Secretary	ty b.pharm	Raksha Kumar
	SY B.PHARM	Shivam Rai
Treasurer	TY B.PHARM	Mansi Gupta
	SY B.PHARM	Shravan Choudhari
Social Welfare Committee	TY B.PHARM	Avijeet Baksi
		Atharva Mandhare
		Smruti Chavan

## Student Council's Message



First row (L-R): Ms. Vedika Pimple, Ms. Mehreen Patel, Mr. Abhishekh Yadav, Mr. Sunil Mohite, Dr. Abha Doshi, Ms. Sheja Koliyote, Ms. Aushima Dahotre, Ms. Ankita Parade, Ms. Siddhi Jain, Mr. Raksha Kumar. Second row(L-R): Ms. Samiksha Gawde, Ms. Aneesha Mudaliar, Ms. Gayatri Naik, Ms. Annikshaa Shah, Ms. Sapna Jaiswar, Ms. Sharvani Pednekar, Ms. Kimaya Palav, Ms. Nidhi Mishra, Ms. Nashita Attarwala, Ms. Mansi Gupta, Ms. Dhanashree Ghodke.

.Third row (L-R): Mr. Shravan Choudhari, Ms. Sachi Parab, Ms. Sanika Desai, Mr. Pratham Mahato, Mr. Atharva Mandhare, Mr. Avijeet Baksi, Mr. Mohd. Monishuddin Khan, Mr. Pratham Panjwani, Mr. Pratham Shah, Mr. Vibhav Phadtare, Mr. Shivam Rai, Mr. Adarsh Singh, Ms. Krushika Soni, Ms. Sharvari Desai, Ms. Smruti Chavan

### **Editors' Message**

We, the IOP family of MET, are proud to present you our beloved magazine "THE NEST" in a refreshing new format. The theme for this year, Sustainable Innovation, was decided with an intention to start a discussion on moving towards a more sustainable practice in the field of pharmacy. But, to achieve this we need innovative ways to incorporate sustainability into pharmacy, hence the theme. Sustainable innovation involves making intentional changes to products, services, or processes to generate long-term social and environmental benefits while creating economic profits.



This year, not only do we have articles speaking about the present, but also the future of pharmacy, and how we can make it more people and eco friendly. Our vision as an institute has always been "to provide value based education", we wanted our students to engage in a conversation on how to be more ethical and thoughtful in the practice of our profession. The magazine is adorned with fascinating photographs, artworks and memes with an aim to give a platform to everyone's ability.

This endeavour was successful because of the contribution of a number of people. We are thankful to the students that have spent time writing articles or creating artwork for The Nest. We thank our respected principal Dr. Abha Doshi who has always been a driving force. We are grateful to all our faculty members for the immense understanding and patience with which they guided and helped us through this process. We profusely thank the entire MARCOM department for their rendering constant support and a helping hand in this endeavour. We hope that our readers find this magazine fun to read the same way we had while making it.

#### The Editorial Committee

Gayatri Naik (T.Y.) Sharvari Desai (T.Y.) Nidhi Mishra (S.Y.) Nashita Attarwala (S.Y.)

# **About The Cover Page**

Our cover page speaks about how the pharmacy sector can attain sustainability with innovations. The green earth portrays sustainability and pharmaceutical elements as innovations in pharmacy. Our theme for this year talks about how innovation and technology can help us move towards sustainability

We would like to Thank, Ms. Kasturi Kadam and Mr. Shreeyas Salame (T. Y. B. Pharm) who not only had the vision of the cover page but also turned it into reality.

MET Institute of Pharmacy is one of the most well known pharmacy colleges in India and the students here are not only excelling in academics but also various other activities. These activities include seminars which provide our students and staff with a great amount of knowledge, the various activities performed during occasions help the students learn about the national aspects of our country. Fun-filled extracurricular activities help the students take a break from this rushed life and situation such as pandemic and enjoy their college lives by virtual platform as well

#### **ASHADI EKADASHI**

9th July, 2022 - The 11th day of Shukla paksha of the Hindu month Ashadha is observed as Devshayani Ekadashi. It is also known as Maha Ekadashi, Prathama Ekadashi and Padma Ekadashi. Ashadi ekadashi is quite auspicious for Vaishnavas, the devotees of Lord Vishnu. According to Hindu scriptures, Lord Vishnu goes to sleep for four months on this day. The day also marks the beginning of Chaturmas, a holy period of four months in the Hindu calendar that concludes on Prabodhini Ekadashi.



Every day is a blessing from God and considering it as new genesis we the entire MET Institute of Pharmacy (Degree) started off the Academic year 2022-23 by celebrating the spirits Ashadhi Ekadashi .A wonderful and pleasing Pooja was organised which begin in the morning. All the staff members along with the students wholeheartedly showed their devotion towards Lord Vitthal. Soon the pooja was wrapped up by aarti followed by melodious devotional bhajan. The entire atmosphere was filled with gaiety and spirituality.

#### **GURU PURNIMA**

13th July, 2022 - Guru Purnima is celebrated in the Hindu month of Ashadha, which is either June or July. Also known as 'Vyasa Purnima', as it is on this day Veda Vyasa, who collected the Vedas, was born. As per Yogic tradition, it was the day Lord Shiva became the first Guru and imparted his knowledge to seven men who became the Sapta Rishis.

To celebrate this auspicious day, the students at MET IOP (Degree) collectively gifted an emblem of admiration and gratitude to our Principal, Teachers, and the Non-teaching staff in the form of little hampers filled with love and few gifts.

### **WORLD DAY OF INTERNATIONAL JUSTICE**

23th July, 2022 - To celebrate World Day of International Justice 2022, a Legal Awareness Program was held. We welcomed Reecha Khajuria from DLSA, who is an advocate born in Jammu, with a lively and confident personality, Advocate Hafsa Khan from the Global Care Foundation, our own alumni whose achievements made us beam with pride, and Mr. Abid Ahmed Kundalam, the Founder and the Managing Trustee of Global Care Foundation.

The session started with the energising Bharat Mata ki Jai! initiated by Advocate Reecha Khajuria. She then explained the

Act of the second secon

aim of NALSA (National Legal Service Authority), SLSA (State Legal Service Authority) and DLSA (District Legal Service

Authority) of whom she was a representative, all of which were formed under 1976 Legal Services Authority Act 39A. She discussed various topics like Domestic Violence, Women empowerment, Drug abuse, Sexual Harrasment, Child Abuse, Right to Education, and General legal Awareness in the public. She introduced us to the services of DLSA which were Free Legal Aid for women, children and other weaker sections of our society and ended her talk with an empowering message to the youth of today and the future of tomorrow.

Advocate Hafsa Khan in her session of alumni interaction, mapped out a career path for students who wished to pursue Law after Pharmacy and informed us of the roles and jobs available. She then spoke about the free legal Aid of Global Care Foundation, and Government of India's Para Legal Volunteer program for which the audience eagerly agreed to participate.

The session continued with a question and answer with an actively engaged audience. We ended the session by presenting all our guests with a certificate of appreciation from the hands of our Principal Dr. Abha Doshi for the knowledge they imparted us with.

#### **NAG PANCHAMI**

**2nd August, 2022** - Student council of MET IOP organised "Mandala Art Competition" and "Photography Competition" on the occasion of Nag Panchami. Students participated with zeal, submitting creative and fascinating artworks.

#### **CARROM COMPETITION**

13th August, 2022 - Second week of August marked the beginning of the carrom competition. The competition was organised in phases; the first round of matches were between the final year students followed by SY and TY. The final round of matches was between the winners of the previous matches held on 23rd August which was a special day because it was also the international carrom day. Following were the winners

- 1st prize was given to Shrinath Satpute (Final year)
- 2nd prize was given to Nitesh Choudhary (SY)
- 3rd prize was given to Atharva Mandhare of (TY)

This competition was the perfect way to display extracurricular talents of our students. And help showcase a side of them outside of their academics. The participants described the event as terrific and filled with crucial matches and another participant described the event as competitive and exciting. The SY sports coordinator noted that it was the first offline competition conducted by them; And that they were amazed at the participation of the students making it a successful event.



#### INDEPENDENCE DAY

15th August, 2022 - The event was flagged off by Our trustee Mr. Pankaj Bhujbal by raising the flag for the bike rally by the students of MET IOP wearing the tricolour t-shirt and riding in the formation of the tricolour. The rally started from MET, went around Bandstand and back to MET. The event started with an introduction of our trustee Mr. Pankaj Bhujbal, along with his mother Mrs. Meenatai Bhujbal and our chief guest Ms. Yatri Dave Vitekar, Chairman Of Railway Recruitment Board. Ms. Yatri hoisted the tiranga; Patriotism and pride swelled in each heart at the sight of the tiranga fluttering in the monsoon winds, everyone stood in attention and sang our national anthem with honest respect as the school band of MRV (MET Rishikul Vidyalaya) played it in a melodious tune.

Mr. Pankaj Bhujbal addressed everyone and spoke about how far we have come as a country, the struggles and sacrifices which this gift of independence demanded and how important it is that we keep this gift intact.

Ms. Yatri spoke about the innumerable changes our country has gone through and how it survived and thrived, proving everyone wrong who doubted its capacity to do so. She shared her own philosophy which was to never repeat mistakes, but to acknowledge and learn from them.

This was followed by various entertaining and inspiring performances by students of MRV, from their youngest to oldest involving poem recitation, street plays and various dance

performances all symbolising the importance of literacy and the love & respect we have for our motherland.



Students from the IOP also prepared a beautiful Rangoli with flowers to honour this day. To further honour our independence Day, all students, teaching and non-teaching staff of MET IOP, together sung our national anthem while standing in rapt attention.

#### ALUMNI INTERACTION

**20 August, 2022 -** The alumni interaction with the third-year students was held on August 20, 2022. The seminar was addressed by our alumnus of MET IOP, Mr. Gaurav Rajpurohit, who is an assistant junior executive at Insignia Learning Pvt Ltd.

Mr. Rajpurohit enlightened students on how Insignia Learning Pvt. Ltd works for bringing world-class medical education to the regions they operate in, from the world's leading professional organisations. They aim to upgrade and equip the medical fraternity by bringing the most credible clinical practice enhancement tools and evidence-based



medical education on recent updates. The company works as a medium to gather information from American society and present it to various pharmaceutical companies and hold seminars for doctors to keep them updated with recent progress in the medical field. He spoke about how influencing the teachers of MET have been and his time as a student at MET helped him in his job. It was very enlightening and motivating to see Mr. Rajpurohit who was one among us achieving great success in his desired field. His story inspired the students to search for more aspects of using their skills in the pharmaceutical industry.

#### **BLOOD DONATION CAMP**

**26th August, 2022** - A blood donation camp was organised by MET INSTITUTE OF PHARMACY, in association with the TATA MEMORIAL HOSPITAL on 26th August 2022. The motive behind the camp was to help voluntary blood banks and the patients who need blood at hospitals. It was held in Assembly hall under the guidance of teachers and the council members.

21 volunteers were present to make the camp successful. 10 Staff members of TATA MEMORIAL HOSPITAL were there including 2 doctors for conducting the camp. 55 people turned up at the assembly hall to donate blood. All the teachers & students of the Pharmacy, IOP, IOM, MASS MEDIA & PGDM department donated blood. Before donation

all the donors had to check their Haemoglobin, weight, pulse, Blood pressure & temperature. They were also advised to drink a minimum 1 litre of water. After donation they were given fruits, cookies, and healthy drinks to energise their body. They were also given the certificate for the same.

"My experience during the whole journey of the initiative was quite enlightening. Looking at the



enthusiasm of the donors and the organising team, it also encouraged the patients & professors to come forward for the donation. The success of the event has further encouraged me to carry out more awareness projects in the future." said by one of the volunteers.

"It was a profound experience. The way the volunteers helped out along with the help of the hospital workers was excellently carried out. Safety was ensured on all levels. Would definitely do it again & recommend it to others in the future for this." said one of the donors.

The program concluded with graceful words by the principal.

#### **TEACHERS DAY**

**5th September, 2022 -** On the auspicious occasion of Teachers Day the students of MET IOP organised a celebration to celebrate our wonderful, hardworking and thoughtful teachers. As a way to thank our teachers for all the effort and hardwork they put into our future. The celebration included a very exciting game of antakshari between the students and the teachers. Followed by handing out the cards made by the students for the



teachers. The celebration concluded with the teachers cutting a cake. It was a sophisticated celebration for the teachers and also gave the students a chance to show their appreciation for the teachers.

#### SAFETY AND FIRST AID SEMINAR

7th September, 2022 - The IQAC of MET Institute of Pharmacy hosted a seminar on "Safety and First Aid", the seminar was hosted on Wednesday, 7th September 2022. The seminar included enlightening lectures from acclaimed professionals like Professor Prakash Vaidya who is Rashtriya Chemicals and Fertilizer Chair in the Chemical engineering department at the Institute of Chemical Technology in Mumbai, Dr.Rajesh Advani M.B.B.S, MRMC Gulbarga and finally Dr.Aditya Pattani who had done his B.Pharm and M.Pharm from ICT, Mumbai, PhD from Queens University of Belfast, UK. The seminar started with introductions of our trustees and principal followed by lightening of the Inaugural lamp.

The first speaker of the day Professor Prakash Vaidya talked about accidents in the chemistry world and covered topics of the Bhopal gas tragedy in detail, different reasons why accidents occur in the chemical industry, strategies for chemical process and safety and so on his lecture was eye opening and the students learnt a lot about the hazards and their prevention.





Following Professor Vaidya was Dr.Rajesh Advani he covered the topic of Hands on Workshop on Lab safety and First Aid. He taught us the importance of PPE (Personal Protective Equipment), how to wash our eyes, the use of neutralising agents, and the need for good ventilation in a lab. Dr. Advani demonstrated how to help an unconscious person, how to do the Heimlich manoeuvre, and showed us how to wrap a crepe bandage. He also detailed different ways to treat cuts and wounds by controlling bleeding, applying pressure. Dr. Advani talked about the way Covid pandemic took the medicine world by storm and the way the doctors of India brilliantly handled the situation.

The final lecture was given by Dr. Aditya Pattani, his topic was The Human Factor in Safety. Dr. Pattani started his lecture by enlisting a movie The Burning Train and the miniseries Chernobyl pointing out that both of them had one thing in similar that both of these tragedies were caused by the human factor in that the people working these projects could not accept the errors in their work. He recalled his experience working at a plant that caught fire and the way his manager gracefully managed the situation which didn't cause any fatalities in his unit. He also stressed the importance of MSDS (Material Safety Data Sheet) as a central safety document.

The seminar proved to be an important and enlightening session where everyone present learnt important lessons pertaining to safety in the laboratory. The seminar concluded with Dr. Rashmi Srivastava giving the vote of thanks.

#### **ALUMNI INTERACTION**

**22nd September, 2022** - MET Institute of Pharmacy (Degree) welcomed alumni Ms. Afreen Khan, Assistant Professor, Bombay College of Pharmacy to conduct a lecture to help students understand the application of Machine Learning on in-silico modelling or computer aided drug design.

Ms. Khan explained the entire process of drug discovery, the theories on which drug and receptor binding is based (lock and key and induced conformation theory). She also did touch base on other topics including validation of datasets, assessing models in machine learning and cross validation.

The students were also briefed on Artificial Neural Networks. Terms like structure based virtual screening, descriptors, supervised learning, reinforcement learning, structure and ligand-based drug discovery, were also explained. Regression and classification algorithms in ML were demonstrated on google collab and jupyter. It was a very informative session for the final year students as they prepare for their research projects.

# SHAPING CAREER OPPORTUNITIES THROUGH INNOVATIONS

**24th September 2022** - MET IOP welcomed Mr. Baldev Krishnan Sharma, founder and chairman of B.S.Marshall's Foundation and a recipient of the rashtrapati award. He is also the founder Chairman of Marshalls who introduced the wall coverings concept when no one had even thought of it. Dr. A. P. Jayaraman, nuclear scientist, Chairman of the National Centre for Science Communicators and the President of The Academy for STEAM. In the presence of Pankaj Tanha, Director of Rotary Club of Bombay, Worli.

Rotary Club of Bombay Worli & Baldev Sharma Marshalls Foundation has launched CiiA, an initiative to encourage innovations at grassroot level in schools, colleges, engineering, pharma & chemical technology institutions and involving incubation centres to get start-ups onboard.

The students gathered in the convection hall to hear them speak. Ms. Vrushali Keer introduced and Dr. Abha Doshi welcomed them.

Dr. A. P. Jayaraman spoke about the world of pharmacy, calling pharmacists pain relievers, who have complete control of the health of humanity. To be an ideal student, he gave us a cycle of research i.e. Research, Development, Demonstration, Deployment (RDDD), the world is not interested in you until you demonstrate your research and deployment is where the cycle is complete. He shared the importance of a great question which comes from a great



literature survey, whether the said question or problem is reasonably answerable. It is called research. Communicating your problem is essential, as you will be judged by what you speak. He gave us a ratio of 1:10, where for each problem, you come up with 10 solutions, evaluate each solution and discard the ones which are not suitable. He remarked about not getting attached to one solution.

Mr. Pankaj Tanha spoke about the journey to the foundation of CiiA and the vision behind it, while highlighting the many innovations of Mr. Baldevkrishnan Sharma.

Mr. Baldevkrishnan Sharma who with his lively personality kept the audiences engaged while stating the importance of innovation. He focused on the mindset of being job givers rather than job seekers. The first part of his talk was about "knowing innovation", where he introduced CiiA, a collective philanthropic project to create a mindset of innovation and collective-nation building responsibility. He gave various examples of people which through innovation made it big in life and differentiated between innovation and invention. To be an innovator you need a mindset of knowing change is possible and commitment to put your ideas into action and implement it. Through various examples He gave us the universal formula of innovation i.e. 1. Keen observation, 2. Identifying the problem, 3. Create ideas and develop products as a solution. Nothing is permanently perfect, there is always a chance of improvement.

Our main takeaway from this seminar was that innovation is just an idea away. To be better scientists or entrepreneurs we should possess these tools required for innovation i.e. commitment to perform a great literature survey, an open mind to ask the right questions through this, keen observation of our surroundings as we may find our questions lurking in every corner of this world, a trained mind to understand and identify the problem and determination for implementation of your ideas into products or solutions to these problems.

#### WORLD PHARMACIST DAY

25th September, 2022 - World pharmacist day celebration was organised by IPA in collaboration with MET IOP which was held in the convection hall. Students from various colleges attended the event. The event started with the lamp lighting by our chief guests Mr. Mahesh Zagade (Ex-principal secretary of the Government of Maharashtra) and Mr. Subodh Priolkar (CEO of Wincoat colours and coating Pvt. Limited). After this ritual a small video was shown regarding pharmacists, who they are & what major role they play in society. Mr. Zagade spoke about the importance of innovation in every sector and why it is not based on



what field of education or profession one chooses. He motivated students to be more creative and innovative. Mr. Priolkar illuminated the students on the business aspect of pharmacy, where pharmacy stands in today's world and what improvements we, the future of pharmacy, can bring about. One of the chief takeaways from this seminar was that, Pharmacists are no less than doctors when it comes to saving lives, and that there is a need to be more creative and learn to use simple knowledge to create something significant. Our speakers did an important job of boosting the morale of aspiring pharmacists and giving us hope and a desire to be a better version of our professional selves.

#### **MOTIVATING YOUNG MINDS**

**26th September**, **2022** - The World Pharmacists day 2022 was celebrated by the students of MET IOP along with class 10th students of Chatrapati Shivaji Vidyalaya, Sion. Career prospects after their boards and pharmacy as a potential career option was introduced to the students in a presentation given by our students. The presentation included various options the students can opt for after 10th, followed by the introduction of pharmacy and its core subjects, a detailed map was given to the students to become a pharmacist and the role of pharmacist in our society was explained.

After the presentation, a skit was performed by our students which revolved around the topic of vaccine hesitancy. The message of the skit and natural acting of our performers impressed our audience and left them with smiles and claps. Snacks and drinks were distributed among the audience, who were thankful for these hampers of gratitude.

The students of Chatrapati Shivaji Vidyalaya told us that this session was helpful and it cleared all their doubts. We took leave from the school after thanking the principal for giving us this opportunity and warmly welcoming us in her school.

# MY STORY - MOTIVATIONAL SESSION "JOURNEY TO ACADEMIA"

7th October, 2022 - The Institute's Innovation Council (IIC) of the MET Institute of Pharmacy had organised a seminar entitled "My Story - A Motivational Session Journey to Academia" on Friday, 7th October, 2022. This session was delivered by Dr. Prajakta Dandekar Jain, who is an Assistant Professor at Department of Pharmaceutical Sciences and Technology (DPST) in Institute of Chemical Technology (ICT), Mumbai. She received her Humboldt and Marie Curie fellowships in Europe.

Dr. Prajakta Dandekar Jain summarised her journey from being a student to a professor and also mentioned the importance of finding a balance between academics and extracurricular activities. She advocated the students to grab every opportunity to write reviews or research articles. She then explained her own lab setup, which concerns Pharmaceutical Biotechnology and also emphasised on the biopharmaceutical section of her lab which is led by her significant other, Dr. Ratnesh Jain. She also gave an insight and highlighted major areas of focus of her lab such as



Diagnostics, Electrospun nanofibers, Cell therapies and Green technology. She then proceeded to elucidate about innumerable academic opportunities in India, the different components needed to build a lab, how to plan, choose & proceed to build an innovation platform and finally she stressed upon how to choose an area for research and innovation. It was also strongly suggested that research, if done, should be minorly for academics and majorly for the masses which would benefit the people in some or the other way.

An introduction to 3D as well as the newly developed 4D cell culture models were also talked upon. She presented her experience with the development, along with proof of concept and the related studies, of various 3D cell culture models like Organ on Chip (skin-on-chip & retina-on-chip) and nanofibers (Chitosan nanofibers & Starch-TPU nanofibers). A brief on A549 Spheroid cells of the lungs were also given.

Dr. Prajakta's journey can be related to a rollercoaster ride, which has many ups and downs, yet she had an upward and an optimistic journey. The session was indeed motivational and inspired many aspiring researchers and made the students long for a more advanced and a lucrative career in their life.

#### **GARBA RAAS**

8th October, 2022 - To mark the auspicious festival of Navratri, The student council of MET Institute of pharmacy organised an event of Garba Raas. All the teaching staff and non teaching staff along with the students of Degree and Diploma were present to make the event more remarkable.



The Convention centre was beautifully adorned by flowers, ribbons and lights. The various bright colours of lights and fabrics

were scintillating to the eyes. Everyone was dressed in bright traditional dresses and groomed exquisitely. The celebration started by offering prayers and chanting bhajans in chorus. The whole environment was filled with peace and positivity. Everyone danced together and was deeply synced with the beats and steps of Garba.

The main highlight of this event was the various competitions like "Best dressed male and female" & "Best dancer male & female" & a large number of students participated in those competitions enthusiastically and won many gift hampers. This event brought happiness, joy and a sense of unity among everyone. Later, the event concluded with the aarti of Maa Durga sung by everyone.

#### **GENDER SENSITISATION**

**22nd October, 2022** - MET IOP held a gender sensitisation and legal awareness program in association with DLSA and Global Care foundation, in observance of International girl child day. The seminar started with a talk given by Advocate Trupti patil who is a senior DLSA panel advocate, who pursued her LLB degree at age of 45. Her direct and confident personality gave us all healthy role model. Advocate Patil spoke about "prushi-vikruti" or the sense of patriarchal bias against women, how equality breeds courage to fight against wrongs done to you. She made us realise how law walks with you from birth to death, stating how important it is to become



aware of the laws meant for you. Ms. Trupti gave us 12 steps to achieve equality, which included steps such as empowering mothers and stopping child marriage and sexual harrassment to name a few. Judge Karuna Rajput, judge at small cause court, spoke next. She stated the importance of listening to become a successful judge. Judge Karuna's sweet and humble personality made her a favourite among the audience. With personal anecdotes she delivered her points of generalising every job irrespective of gender and how inequality starts from our roots itself, successfully. The session concluded with an engaging question and answer session and a token of appreciation for the guests delivered by Rashmi Srivastava.

# NATIONAL SEMINAR ON NUCLEAR MEDICINE AND RADIOPHARMACEUTICALS

**12th December, 2022** - MET IOP (Degree) held a two-day national seminar on nuclear medicine and radiopharmaceuticals on 10th December 2022 and 12 December 2022. In the first phase, the students from various colleges presented posters on the aforementioned topic. The students of MET IOP participated wholeheartedly. The next phase was the seminar held in the recreation hall. The programme started with Saraswati Vandana and the lighting of the lamp. The honourable speakers were welcomed by the principal Dr Abha Doshi, our first guest Dr. Yojana Singh who is a scientific officer, and informed students about the Board of Radiation & Isotope Technology

(BRIT). She briefed the students about the uses of radioisotopes in daily life, the selection of isotopes, specialised vehicles of radioisotopes and also about radioisotopes like Molybdenum-99, Cobalt 60 and lodine. Our next speaker Ms. Preethi Nair, a scientific officer at BRIT enlightened the students about the growth of Tc99, production of Molybdenum,



advantages and disadvantages of gel generators and autoselect generators. Our next speaker Ms. Uma Sheri, a scientific officer at BRIT informed students about the cold kit technetium, the chemistry of technetium and its various uses in the medical field. Listening to these informative speeches stirred the curious minds of the students leading to the question-answer session. Post lunch our speaker Dr N.Sivaprasad who is president of the Indian Pharmaceutical Association Maharashtra and technical advisor, GIRL briefed us about the isotopes and production making them riveting. Our last speaker was Dr. Jayaraman, a Nuclear scientist (BARC) chairman of the National Center of Science who enlightened students about the supply chain management and radiopharmacy industry, shortage reasons, JIT and RP. Their talk intrigued the minds of students. The winners of the poster presentation were awarded by our speakers. The seminar was concluded by thanking our speakers with a small token of appreciation. The two days of seminar made the students realise the vast progressive field of radiopharmaceuticals.

#### OLD AGE HOME VISIT

**20th December, 2022** - "Grandparents create memories that the heart holds forever." With this thought the DLLE students from the Third Year paid a visit to St. Anthony's Home For The Aged in Bandra. The day began with a prayer which boosted a new energy and optimism. All the people were greeted and an entertainment show was put up. It all started with a melodious song sung by one of our classmate. All the lovely ladies enjoyed the song and later on a mesmerising dance performance was performed by the students. It was followed by a housie game and some prizes for the winners. All in all it turned out to be a memorable day.

#### INTERNATIONAL DELPHIC MOVEMENT

**15th December, 2022** - The International Delphic Art Wall that Unites project has come to Mumbai, with the Students of MET Institutes and MET Rishikul Vidyalaya expressing themselves on large canvas walls that will be conjoined with other such walls from schools around the world to form the world's longest collaborative activity by children, for the world!

The International Delphic Movement is the reviver of the Delphic Games for Arts & Cultures (also known as the Pythian Games) – the world's most ancient and only-of-a-kind common floor for artistic and cultural engagements between people, cultures and Nations, with a 2600 year history from ancient Greece. They stood for celebrating the creative impulse of civilization, encouraging camaraderie and collaboration amongst people and fostering peace and harmony in the world and this is what we practise even today. The International Delphic Council was founded in 1994 as a League of Nations by J. Christian B. Kirsch in Germany. Delphic Games is to Arts, what Olympic Games is to Sports. They are also called twin-sisters. With 73 member Nations and multiple Regional Councils, Delphic Clubs and affiliated arms and entities, the IDC has an International Presence, with its headquarters in Berlin, Germany. The Delphic movement is a voluntary, not-for-profit, non-political, non-religious, non-sectarian that works to foster peace and harmony through Artistic engagements and Cultural expressions. Delphic Ambassador's have included the late Nobel Laureate Nelson Mandela. The Indian Delphic Council is a network of 30 member States, and Maharashtra aims to play a leading role in it.

#### **BEACH CLEAN DRIVE**

**25th December, 2022** - A beach cleanup drive was organised on 25th December, 2022 by the Student Council & in association with The DLLE council of MET IOP Degree at the Girgaon Beach. This was done in collaboration with an NGO called, Change Is Us. This drive was organised to protect marine life and preserve the beauty of the beach. The purpose of the cleanup drive was to remove litter and debris from the beach.

Plastic waste, particularly single-use items like straws, Milk packets, and bags, pose a major threat to marine life as it can harm or kill sea creatures that ingest or become entangled in it.

The cleanup drive was a success, with a sheer number of volunteers participating in this event. They worked tirelessly to collect and properly dispose of the trash they found on the beach. The volunteers were divided into groups and assigned different sections of the beach to clean up.

The beach cleanup drive not only had a positive impact on the environment but also helped to raise awareness about the importance of protecting marine life.

In conclusion, beach cleanup drives play a crucial role in preserving the beauty and health of our seas and oceans. It is important for individuals, communities, and organisations to continue to work together to protect marine life and prevent litter from entering our oceans. By doing so, we can ensure that future generations can enjoy the beauty and richness of our oceans for years to come.

#### **CULTURAL DAYS**

**2nd -7th January, 2023** - Student Council of MET IOP organised cultural days for everyone to dress up in their best or sometimes worst and be camera ready, following were the days

2/1/2023: Character Day
3/1/2023: Traditional Day
4/1/2023: Mismatch Day

• 5/1/2023 : Black and white Day

6/1/2023 : Tie Day7/1/2023 : Formal's Day

#### PARALEGAL WORKSHOP

**16th-19th January, 2023** - MET IOP (Degree) conducted a workshop on - 'Paralegal Volunteer Training Programme' in collaboration with District Legal Services Authority i.e DLSA and Global Care Foundation from 16th to 19th January 2023. The workshop was organised by the DLLE Coordinators Dr.Vijaya Patil, Ms. Vrushali Keer and Ms. Sindhu Menon.

The objective of the workshop was to create a legal consciousness and spread awareness about legal rights. The invited speakers were Adv. Vasant Bhanage, Adv. Shahnawaz Pathan, Adv. Sohail Sharif, Adv.Reecha Khajuria, Adv. Aileen Marques, Adv. Hafsa Khan, Prof. Rukaiya Joshi and Adv. Seema Adate who spoke about various topics such as Domestic Violence Act, PreConception & Pre-Natal Diagnostic Techniques Act, Government Schemes, Juvenile Justice Act were covered. The training program consisted of a field visit to Byculla Prison, Nagpada Police Station and Gurgaon Court to understand the working and proceedings of the same as well.

#### **ALUMNI MEET**

2nd January, 2023 - An alumni interaction session was held for the third-year students on 2nd January, 2023. The seminar was addressed by our alumnus of MET IOP, Mr. Shailesh Kataria, who is a country head at torrent pharmaceuticals, the flagship Company of Torrent Group. He narrated his journey of a lower middle class boy becoming an esteemed leader in the country's most respected pharma company, through hard work and resilience. Mr. Kataria spoke about his motivation and philosophy in life, the key to his success. He gave insights into the hiring process of companies and how to make a good impression in interviews. He encouraged the students to forge their own paths, to trust in themselves and assured us that dreams do become a reality when vision meets perseverance. His practical and confident personality resonated with the students and inspired them to chase their respective goals. On January 7th, 2023, an alumni meet was organised by the institute. Mrs. Vaishali Ganu spoke about regulatory affairs, emphasising the growth potential and the qualities required for success in that particular field. Next up, Mr. Sankalp Gharat, a research scientist and assistant professor at BNCP, Mumbai, talked about career options after B. Pharm, qualities a person should possess for being an aspiring researcher and his own research interests in innovative drug delivery systems. Rahul Lad, General Product Manager at Glenmark Pharmaceuticals, discussed various aspects of sales and marketing in the pharmaceutical industry, with a focus on skills, hierarchies, and salary. Finally, Ms. Amruta Kanekar spoke about social media management in a corporate career, advising students on avoiding posting things that could negatively impact their professional life and seeking feedback from seniors.

















#### **REPUBLIC DAY**

**26th January, 2023** - Republic Day was celebrated with Pride and Patriotism on the campus of MET. The ceremony began with the hosting of the tricolour by the honourable trustee Mr. Pankaj Bhujbal followed with his inspiring speech. The spectacular dance, soulful presentation of songs and eloquent speeches by the pharmacy students stole the heart of everyone.

The main highlight of the event was the felicitation of the "MET Gaurav Awards" & "MET Ratna Awards". It was a moment of pride for IOP, as our respected professors Dr. Bandoo Chatale & Ms. Sindhu Menon were awarded with MET Gaurav Awards. The prestigious MET Ratna award was given to our student Ms. Madhura Mulkutkar.

The power and energy exhibited by the pharmacy students and their participation irradiated into the environment. Everyone took a pledge to uphold the honour, integrity, dignity and uniqueness of our nation. A vote of thanks was tabled by the Anchors in the end.



#### **PICNIC**

**25th January**, **2023** - Teachers, students and non teaching staff of MET went on an exciting trip to imagica.

Everyone gathered at MET college and from there all of us divided ourselves among 3 buses and left for imagica on the way making stops at sion station to pick up students and staff members from there. We finally reached imagica where we were given the ticket and a wristband. After the check in the fun finally started. Imagica has many thrilling and adventurous rides. It is also the home to nitro India's biggest and fastest rollercoaster which was the most sought out ride in imagica.

Other fast rides included dare drop, scream machine, deep space, etc. There were also rides which were educational such as I for India, rajasaurus, wrath of God's. Other rides included Salimgarh, Alibaba aur chalis chor, Mr.India, teacups etc. At 1:00 everyone was called for lunch at Roberto's cafe. Lunch included pav bhaji, fried rice and gravy and ice cream for dessert. At 4.45 our fun filled day ended. And everyone left with happy memories.

#### CiiA

SR NO	LIST OF TEAM MEMBERS	MENTORS	TOPIC OF PROJECT
1	Kashmira Chaudhari Dhanashree Ghodake Sayali Kothi Daksha Chache Smruti Chavan	Dr. Bandoo Chatale	Herbal anti-inflammatory transdermal patch for Rheumatoid arthritis
2	Aastha Jain Ankita Tiwari Hrutika Dusankar Adarsh Singh Abhijeet Hingol	Ms. Sheeja Koliyote	Rejuvenating Eye Pads
3	Khushi Vora Claire Rebello Sneha Sawant Shanti Sanvordekar	Dr. Vijaya Patil	Nutri Supplier
4	Sharvani Pednekar Pratham Mahato Mansi Gupta Kasturi Kadam	Dr. Rashmi Srivastava, Dr. Vijaya Patil	Formulation and Evaluation of topical herbal wound healing patch
5	Sayali Kothi Smruti Chavan Kashmira Chaudhari Daksha Chache Dhanashree Ghodake	Dr. Bandoo Chatale	Herbal Taste Masked Mouthwash
6	Sharvari Desai Avijeet Baksi Om Rangnekar Ankita Panda	Ms. Vrushali Keer, Ms. Sheeja Koliyote	Appomet - An Unique Formulation
7	Divya Pawar, Sarans Jain Amandeep Gupta Shrutika Damari Maryam Khan	Ms. Manjiri S. Shinde	Molecular docking of fragments and a de novo inhibitor against the spike gp120 Human Immunodeficiency Virus
8	Krushika Soni Prachi Chaurasia Nishant Bomble Shreyas Salame Utkarsha Ingale	Dr. Madhura Vaidya Ms. Vrushali Keer	AQUAlity - The Water Refining Unit

9	Mugdha Salvi Surabhi Chindarkar	Dr. Bandoo Chatale	Capsules for insomnia
10	Mugdha Salvi Surabhi Chindarkar	Dr. Bandoo Chatale	Multifunctional herbal hair mask
11	Samarthan Bhosale Rutali Virnodkar Pallavi Shinde Yasir Hasan	Dr. Vijaya Patil	Polyherbal Multipurpose Shaded Lipstick
12	Purva Hirlekar Preema Shah Vidushi Dhakad Vaishnavi Nagwekar	Ms. Aushima Dasari	Formulation of transdermal patch
13	Sakshi Gholap Pavitra Dass Sachi Parab Devansh Upadhyay	Dr. Vijaya Patil	Herbal Buccal patch with anti inflammatory and anti ulcerogenic activity
14	Om Zanje Pranjal More Vaishnavi Chaudhari Divya Mishra Meenakshi Solanki	Dr. Rashmi Srivastava	Anti-inflammatory herbal cosmetics cream
15	Ranbir Saluja Payal Tatkare Shubham Mahadik Sagar Gare Shruti Parmar	Dr. Madhura Vaidya	Nutraceutical for cancer patients (treatment for cancer and anaemia patients)
16	Aditya Daware Khushi Jha Wahida Qureshi Sakshi Raut Hardika Patil Yash Parab	Dr. Poonam Advani & Dr. Sonali Naik	Pain relief gummies / facial bombs
17	Wasid Ansari Mansi Pawar Yukta Mistry Sadanand Umbarsada	Ms. Vrushali Keer	Sugar free Herbal energy drink
18	Abhishek Yadav Sakshi Upadhyay Piyush Doshi Mahesh Kurlekar Sarth Mistry	Dr. Abha Doshi	Floral Face Pack With Biodegradable Packaging
19	Mehreen Patel Sarvan Bharti	Ms. Priyanka Joshi Jain	Skin whitening gel

	Siddhi Jain Divya Haldive		
20	Vedika Pimple Atharva Mandhare Aneesha Mudaliar Noaman Amrelia	Ms. Vrushali Keer	Protein nutraceuticals formulated to solve the problem of protein deficiency
21	Opal D'sa Harshvardini Pillai Sukhiya Chaudhary Mukesh Mishra Tejas Thorat	Ms. Sindhu Menon	Formulation and evaluation of herbal face wash and hand wash
22	Piyush Doshi Sakshi Upadhyay Mahesh Kurlekar Abhishek Yadav Sarth Mistry	Dr. Abha Doshi	Herbal Anti-Diabetic Preparation using Quassia lakdi

#### **AAVISHKAR**

SR NO.	TEAM MEMBERS	MENTOR	TITLE
1	Sharvani Pednekar Kasturi Kadam Pratham Mahato Mansi Gupta	Dr. Rashmi Srivastava, Dr. Vijaya Patil	Topical Herbal Patch with wound healing property: Formulation and Evaluation
2	Sayali Kothi Smruti Chavan Kashmira Chaudhari Daksha Chache Dhanashree Ghodake	Dr. Bandoo Chatale	Herbal Taste Masked Mouthwash
3	Sharvari Desai Avijeet Baksi Om Rangnekar Ankita Panda	Ms. Vrushali Keer, Ms. Sheeja Koliyote	Appomet - An Unique Formulation
4	Divya Pawar Sarans Jain Amandeep Gupta Shrutika Damari Maryam Khan	Ms. Manjiri S. Shinde	Molecular docking of fragments and a de novo inhibitor against the spike gp120 Human Immunodeficiency Virus.
5	Krushika Soni Prachi Chaurasia	Dr. Madhura Vaidya Ms. Vrushali Keer	AQUAlity - The Water Refining Unit

	Nishant Bomble Shreyas Salame Utkarsha Ingale		
6	Mugdha Salvi Surabhi Chindarkar	Dr. Bandhoo Chatale	Multifunctional herbal hair mask
7	Samarthan Bhosale Rutali Virnodkar Pallavi Shinde Yasir Hasan	Dr. Vijaya Patil	Polyherbal Multipurpose Shaded Lipstick
8	Abhishek Yadav Sakshi Upadhyay Piyush Doshi Mahesh Kurlekar Sarth Mistry	Dr. Abha Doshi	Mouth dissolving film licogen

#### IPC

SR NO	TEAM MATES	MENTOR	TOPIC
1	Aditya Daware Yash Parab	Dr. Poonam Advani	Ibummies
2	Khushi Jha Hardika Patil	Dr.Poonam Advani	Facial bombs

#### **TOPPERS**

#### **FIRST YEAR**

#### **SEMESTER 1**

SR NO	SUBJECT	NAME OF STUDENT
1	Human Anatomy and Physiology I	Sakshi Fulaware
2	Pharmaceutics Theory	Hrishikesh Patil
3	Pharmaceutical Analysis Theory	Kimaya Palav

		Nidhi Mishra
4	Pharmaceutical Inorganic Chemistry	Pratham Shah
5	Pharmaceutical Inorganic Chemistry Practical	Kimaya Palav
6	Pharmaceutics Practical	Shristi Shetty
7	Human Anatomy and Physiology I- Practical	Pratham Shah
8	Communication Skills	Rhutuja Gangan
9	Pharmaceutical Analysis Practical	Siddhesh Wadkar
10		Yesha Shah
		Tanisha Kore
		Nidhi Mishra
		Mohammad Affan Sayyed
		Aniruddha Pathak
		Kimaya Palav
		Tanishqa Rane
	Communication Skills Practical	Yatish Chauhan
11	Remedial Biology	Rhutuja Gangan
12	Remedial Biology Practical	Rhutuja Gangan
12	Remedial Maths	Nashita Attarwala
		Shivam Rai

#### Semester 2

SR NO	SUBJECTS	NAME OF STUDENTS
1	Human Anatomy and Physiology II	Fatema Mohamed Kapasi
2	Pharmaceutical organic chemistry I	Pratham Shah
3	Pathophysiology	Fatema Mohamed Kapasi Nidhi Mishra
5	Computer application in pharmacy	Dhiraj Gupta
6	Biochemistry	Nitesh Choudhary

7	Environmental science	Pratham Shah
8	Human Anatomy and Physiology II - Pratical	Hrishikesh Patil
9	Pharmaceutical organic chemistry I practical	Jinali Faria Kimaya Palav Priyanka Singh Aarti Yadav
10	Biochemistry Practical	Jinali Faria Pradnyesh Modkharkar Pratham Shah
11	Computer Practical	Shristi Shetty

#### **FIRST YEAR TOPPER**

OVERALL TOPPERS	SCORE
Nidhi Mishra	9.02
Pratham Shah	8.89
Shristi Shetty	8.55

#### **SECOND YEAR**

#### **SEMESTER 3**

SR. NO.	SUBJECT	NAME
1	Pharmaceutical organic chemistry II	Mansi Gupta
2	Physical Pharmaceutics I	Pratham Mahato Aneesha Mudaliar
3	Pharmaceutical Microbiology	Sharvani Pednekar
		Swati Baheti
4	Pharmaceutical Engineering	Sayali Kothi
5	Pharmaceutical organic chemistry Lab II	Pratham Mahato
		Atharva Mandhare
6	Physical Pharmaceutics Practical I	Aneesha Mudaliar
		Atharva Mandhare
7	Pharmaceutical Microbiology Practical	Noaman Amrelia

8 Pharmaceutical Engineering Practical	Pratham Mahato
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#### **SEMESTER 4**

SR NO	SUBJECTS	NAME OF STUDENTS
1	Pharmaceutical organic chemistry III	Pratham Mahato
2	Medicinal chemistry I	Pratham Mahato
3	Physical Pharmaceutics II	Kashmira Chaudhari
4	Pharmacology I	Kashmira Chaudhari
5	Pharmacognosy and Phytochemistry I	Vedika Pimple
6	Medicinal chemistry   Practical	Pratham Mahato
7	Physical Pharmaceutics II Practical	Riya Dsilva
8	Pharmacology I Practical	Sapna Jaiswar
9	Pharmacognosy and Phytochemistry I Practical	Dhanashree Ghodake

#### **TOPPERS OF SECOND YEAR**

SR NO.	NAME OF STUDENTS	AVERAGE
1	Kashmira Chaudhari	8.89
2	Pratham Mahato	8.84
3	Dhanashree Ghodake	8.6

#### **THIRD YEAR**

#### **SEMESTER 5**

SR NO	SUBJECTS	NAME OF STUDENTS
1	Medical chemistry II	Shruti Kotian

2	Industrial pharmacy I	Akanksha Surve
	Pharmacognosy and Phytochemistry	
3	II	Anisha Revankar
4	Pharmacology II	Anisha Revankar
5	jurisprudence	Anisha Revankar
6	Industrial pharmacy I Practical	Mahesh Kurlekar
7		Vidhushi Dhakad Mahesh Kurlekar
8	Pharmacognosy II Practical	Mahesh Kurlekar

#### **SEMESTER 6**

SR NO	SUBJECT	NAMES OF STUDENT
1	Medicinal chemistry III	Sachi Parab
2	Pharmacology III	Akanksha Surve
3	Herbal drug technology	Mahesh Kurlekar
4	Biopharmaceutics and Pharmacokinetics	Ranbir Singh
5	Pharmaceutical Biotechnology	Wahida Qureshi
6	Pharmaceutical quality assurance	Akanksha Surve
7	Medicinal chemistry III Practical	Mahesh Kurlekar
8	Pharmacology III Practical	Pavitra Das
		Vaishnavi Nagvekar
		Sarje Humera
		Akansha Surve
		Sakshi Upadhayay
9	Herbal drug technology Practical	Purva Hirlekar

#### **TOPPER OF THIRD YEAR**

SR NO	OVERALL TOPPER	SCORE
1	Mahesh Kurlekar	9.07

	Sachi Parab Pavitra Das	8.8
3	Sudha Yadav	8.73

#### **FINAL YEAR**

#### **SEMESTER 7**

SR. NO.	SUBJECT	NAME OF STUDENTS
1	Pharmaceutical Chemistry II	Mitali Kamat
2	Pharmacognosy III	Mitali Kamat
3	Pharmaceutical Analysis III	Mitali Kamat
4	Pharmacology III	Mitali Kamat
5	Pharmaceutical Jurisprudence	Mitali Kamat
6	Pharmacognosy Lab II	Mitali Kamat
7	Pharmaceutical Analysis Lab III	Mitali Kamat
8	Intellectual Property Rights	Danish Langha
9	Pharmacology lab II	Kinjal Jain
		Mehak Makhija
		Aadish Kotian
		Riya Patil
		Danish Langha
		Namrata Singh
		Atharv Sawant
10	Preformulation studies	Bhavna Jaiswal

#### **SEMESTER 8**

SR. NO.	SUBJECT	NAME
1	Pharmaceutical Chemistry III	Preeti Jaiswar
2	Pharmaceutics IV	Mitali Kamat
3	E6: Clinical Pharmacy	Ankita Kanhere
4	E6 & E7: Pharmaceutical Regulatory Affairs	Kinjal Jain

		Preeti Jaiswar
5	E7: Novel Drug delivery System	Bhakti Kambli
	Pharmaceutical Chemistry Practical	
6	ll .	Nishant Patil
7	Pharmaceutics Lab IV	Mitali Kamat

### **TOPPERS OF FINAL YEAR**

SR NO	NAME	ССРІ
1	Mitali Kamat	9.92
2	Preeti Jaiswar	9.38
3	Tanvi More	8.89

### **Papers Published**

SR NO	NAME	TITLE	
1)	Dr. Bandoo Chhagan Chatale	"Comparative evaluation of ibuprofen co-crystals prepared by solvent evaporation and hot melt extrusion technology"	
2)	Dr. Madhura Vaidya	<ul> <li>Maithili Pokle, Rashmi Singh, Madhura Vaidya"2D QSAR model based on 1,2 - disubstituted benzimidazoles IMPDH Inhibitors, 2022, 59(4), pp 18-23."</li> <li>Shambhavi B. Parab, Chandani T. Muleva, Jinal D. Shah, Bhairavi C. Murkute, Madhura P. Vaidya "Quantitative Structure - Activity Relationship (Qsar) Studies Of Substituted Benzimidazole Analogues With Potent Antibacterial Activity, International Journal of Pharmaceutical Sciences and Research, 2022, 13(6), pp 2358-2366"</li> </ul>	
3)	Ms. Manjiri Shinde	"Molecular docking and ADME Tox properties prediction of fragments and de novo inhibitor against spike glycoprotein of SARS-COV2"	
4)	Dr. Poonam Rajesh Advani	"How effective are ionisation state-based QSPKR models at predicting pharmacokinetic parameters in humans? Molecular Diversity, 1-13, 2022"	
5)	Sheeja.G.Koliyote	Sheeja K, Jessy S. "In vitro Anti-	
		inflammatory Activity and Acute Oral Toxicity Study of Gold Nanoparticles Generated from Stem Extract of Tinospora cordifolia Int.J.Pharm. Investigation. 2022;12(2):211-5"  • Sheeja Koliyote and Jessy Shaji (2022). "The in vivo antiarthritic activity of guggulosomes prepared using gold nanoparticles generated from stem extract of Tinospora cardifolia (Thunb.) Miers. Ann. Phytomed.,11(2):360- 372.http://dx.doi.org/10.54085/ ap.2022.11.2.43."	

#### **Presentations**

SR NO	NAME	TOPIC
1)	Dr. Bandoo Chhagan Chatale	Delivered a presentation on a research topic entitled "Glucose responsive Insulin patch to combat Diabetes" via Webex platform 3rd International conference on Pharmaceutical Research and Drug Discovery held during November 21-22,
		<ul> <li>Delivered presentation on research topic entitled as "Glucose responsive Insulin patch to combat Diabetes" via Zoom platform in 3rd International Scientific and Practical Conference "Modern Pharmaceutics: Actual problems and Prospects" in Tashkent city, Uzbekistan dated 25 November 2022</li> </ul>
2)	Manjiri Shinde	Fragment Based Drug Design of fragments and exemplar inhibitor against spike glycoprotein of SARS COV2
3)	Ms. Sindhu Menon	RP-HPLC method for concurrent estimation of gallic acid, mangiferin, berberine and quercetin in polyherbal formulations  Delivered a presentation on "Development and validation of a high-performance thin - layer chromatographic method for the simultaneous estimation
		of berberine, gallic acid, mangiferin, and quercetin" in Amritamehari churnam

### **CIIA Exhibition**

SR NO	MENTORS	TOPIC OF PROJECT	
1	Mrs. Sheeja Koliyote	Rejuvenating Eye Pads	
2	Dr. Vijaya Patil	Nutri Supplier	
3	Dr. Rashmi Srivastava, Dr. Vijaya Patil	Formulation and Evaluation of topical herbal wound healing patch	Selected for final round
4	Dr. Bandoo Chatale	Herbal Taste Masked Mouthwash	Selected for final round
5	Ms. Vrushali Keer, Ms. Sheeja Koliyote	Appomet - An Unique Formulation	
6	Ms. Manjiri S. Shinde	Molecular docking of fragments and a de novo inhibitor against the spike gp120 Human Immunodeficiency Virus.	Selected for final round
7	Dr. Madhura Vaidya Ms.Vrushali Keer	AQUAlity - The Water Refining Unit	Selected for final round
8	Dr. Bandoo Chatale	Multifunctional herbal hair mask	Selected for final round
9	Dr. Vijaya Patil	Polyherbal Multipurpose Shaded Lipstick	Selected for final round
10	Ms. Aushima Dasari	Formulation of transdermal patch	
11	Dr. Vijaya Patil	Herbal Buccal patch with anti inflammatory and anti ulcerogenic activity.	
12	Dr. Madhura Vaidya	Nutraceutical for cancer patients (treatment for cancer and anaemia patients)	
13	Dr. Poonam Advani & Dr.Sonali Naik	facial bombs	
14	Dr. Poonam Advani	Pain relief gummies	
15	Ms.Vrushali Keer	Sugar free Herbal energy drink	Selected for final round
16	Dr. Abha Doshi	Floral Face Pack With Biodegradable Packaging	Selected for final round
17	Ms.Sindhu Menon	Development of antibacterial herbal formulation	Selected for final round
18	Ms. Priyanka Joshi Jain	Skin whitening gel produce with SPF	
19	Dr. Rashmi Srivastava	Anti inflammatory gel cream	

### **AAVISHKAR 2022 -23**

SR NO.	MENTOR	TITLE	
1	Dr. Rashmi Srivastava, Dr. Vijaya Patil	Topical Herbal Patch with wound healing property: Formulation and Evaluation	Final round
2		Herbal Taste Masked Mouthwash	
		Herbal anti-inflammatory transdermal patch for Rheumatoid arthritis	
	Dr. Bandoo Chatale	Capsules for insomnia	
	Di. Bulluoo Chalale	Multifunctional herbal hair mask	
3	Ms. Vrushali Keer, Ms. Sheeja Koliyote	Appomet - An Unique Formulation	
4	Ms.Manjiri S. Shinde	Molecular docking of fragments and a de novo inhibitor against the spike gp120 Human Immunodeficiency Virus.	
5	Dr. Madhura Vaidya Ms. Vrushali Keer	AQUAlity - The Water Refining Unit	
6	Dr. Poonam Advani	Pain relief gummies	Final round
7	Dr. Vijaya Patil	Polyherbal Multipurpose Shaded Lipstick	
8	Dr. Abha Doshi	Mouth dissolving film licogen	

### IPC

SR NO	MENTOR	TOPIC
1	Dr. Poonam Advani	Ibummies
2	Dr. Poonam Advani	Facial bombs

### **GLORY OF PHARMACY PROFESSION**

'I am not a doctor but doctors are incomplete without me. Yes, I'm a Pharmacist.'

Indeed, the profession of pharmacy is the backbone of the medical world. The pharmacy profession has brought glory to therapy. With the intensifying pathological conditions, the pharmaceutical industry is on its toes to provide prophylactics in terms of medicines. The entire sector works to positively impact public health services by endorsing the cautious use of medications. The multi-faceted mission of Pharmacy includes manufacturing, distribution of medicines, and establishing a connection between patients and healthcare workers. However, pharmacy as a profession is quite underrated among the youth. In many situations, Pharmacy as a career is a reserved option, opted for after rejection from other healthcare careers. But the versatile nature of this career makes it worth the job of serving mankind. Pharmacy education is structured to raise highly skilled professionals who can play multi-faceted roles in the industry that include research, manufacturing, analytics, distribution of medicines, and many more. The profession has also evolved to encourage entrepreneurship among students who are technically skilled.

'If Pharmacy is a vehicle, technology drives it.'

The entire industry works on principles of technology, and the increasing advances in technology have accelerated the growth of pharmacists. It has reduced the administrative load on pharmacists. From equipping the industry with state-of-the-art machinery for manufacturing to various modern analytical techniques, technology has been involved throughout. For example, the time-consuming and tedious process of drug research has eased due to technology. Various innovations and the use of Artificial Intelligence can help pharmacists to take on a similar role as a physician in consulting work and advising patients on their medical conditions. Various applications such as providing retail pharmacy services can also help in the immediate dispensing of medicines even in emergency situations. An aspiring pharmacist may evolve to contribute to digital therapeutics and specialize in the treatment and management of complex diseases by using a deep understanding of genetics.

## **P-**Punctuality **H-**Humanity **A-**Acceptability **R-**Reliability **M-**Morality **A-**Aesthetic **C-**Cordial **I-**Integrity **S-**Sincerity **T-**Tolerance

All of these qualities required for being a pharmacist make it one of the best ways to serve mankind. Also, the pharmacists act as a link between healthcare profession and the common man. It won't be wrong to say that in health sector, a pharmacist is a trustworthy and frequently underused resource. In order to bring more glory to this profession, numerous efforts of providing research grants, practical training, internships, encouraging innovation and enhancing entrepreneurial skills have been practiced at the undergraduate level. The ultimate aim of pharmacy education is to bring out highly skilled professionals who will be able to contribute to the betterment of society's health by providing satisfactory services in preparing and dispensing medicines.

Kashmira Chaudhari T. Y. B. Pharm

# SUSTAINABLE APPROACH TOWARDS MEDICINE DISPOSAL

The Pharma industry has an influence on the environment. In the face of climate crisis, just like every other industry, it has a responsibility to find solutions to mitigate this impact. After expiration, most of the pharmaceutical medications become useless or even harmful to the body, however, when they are mishandled and discarded, they pose an equal threat to nature and humans. India is reportedly a breeding ground for most multi-drug resistant microbes due to improper disposal of medicines into the environment. Antibiotic misuse has long been associated with harming wildlife and the environment as well as raising the danger of antimicrobial resistance. Sustainability means "meeting the needs of the present without compromising the ability of future generations to meet their own needs." Hence sustainable techniques of medicine disposal is the need of the hour.

People have a variety of medications on hand to treat common maladies, but because they are unaware of other options they discard these unused and expired medications with household garbage. The Central Pollution Control Board (CPCB) estimates that 4,057 tonnes of medical waste are produced daily by registered healthcare establishments in India. Also, India is a major producer of pharmaceuticals. The tested wastewater samples taken from South Indian industrial districts revealed dangerous levels of antibiotics. Ciprofloxacin and 21 other medicines, which are exceedingly hazardous to plants and aquatic life, were being dumped into this water at rates sufficient to treat 90,000 people. These drugs cause severe environmental pollution by contaminating the water supplies, soil, and in turn wildlife. Antibiotics disposed off in sewage water can convert many sensitive microbes to deadly drug-resistant pathogens.

All of this information brings forth the need to encourage and educate patients on how they can send any unused drugs to the Drug Enforcement Administration (DEA) with ease. While there are a number of state and federal regulations, there is a general lack of knowledge on how to properly dispose of prescription drugs, which increases the likelihood that unused or expired drugs may end up somewhere they shouldn't be. Giving unwanted medications to NGOs that collect them and provide them to the needy, orphanages, and public hospitals is the most environmentally responsible way to use them. NGOs like Kerala PROUD, Sharemeds, Uday Foundation, and Medicine Baba, work for the same. In recent years, a lot of businesses have created disposal packages made of components that render drugs useless. Dispose Rx, contains a powder that is intended to be mixed with the medications in a vial or bottle to make it safe for disposal. Also, Deterra and Medsaway pouches employ activated carbon to deactivate pharmaceuticals. Bringing in practice these approaches can be a boon for the environment as well as for humankind.

Mansi Gupta T. Y. B. Pharm

### SUSTAINABLE PHARMACY: A BETTER FUTURE

WHAT IS SUSTAINABILITY?

Sustainability refers to the ability to maintain or support a process continuously over time.

Every industry is trying to become more sustainable these days. The pharmaceutical industry is no exception. Recent study suggests, pharmaceuticals emit 55 % more pollutants than the automotive industry. The need to implement sustainability in pharmaceuticals has gained traction in recent times as the industry produces a significant amount of waste and greenhouse gasses, apart from utilizing huge volumes of water.

Here are some of the three ways of suggesting pharmaceutical sustainability —

#### 1. Environmental Manufacturing

One way to fight it out is generating ways to make the process greener. Leadership in Energy and Environmental Design (LEED) certifications are one of the ways to do this. LEED is a widely used green building rating system in the world and provides a process for highly structured, economical green buildings. With huge amounts of energy used in manufacturing operations, pharmaceutical companies are turning to LEED certification to solely verify that a building's layout, construction, operations, and maintenance are resource efficient. Thus this is one of the best example of pharmaceutical sustainability.

#### 2. Green Chemistry

Apart from manufacturing systems and energy consumption, pharma brands should consider the chemicals that go with the medical products. When producing drugs, waste should be confined, the use of high-risk materials should be dropped, focus on the safety of the employees and environment should be highlighted. This will help reserve the conventional resources and go-green.

#### 3. Packaging Design and Materials

The green manufacturing and chemistry process underway, it's vital we remember the everlasting impacts of packaging in the ecosystem. Due to many terms & conditions in this industry like - precautionary packaging; it is a task for companies to abide by the sustainable rules. Packages that contain medicine could be tamper resistant and the product could be thrown away immediately once used. Reusing should not be an option.

If we use these high-tech packaging, it is believed that following it can lower the packaging-associated costs faced, by approximately 60%, as it will then require less raw materials than conventional packaging.

As responsible being we owe it to humankind and nature that we start thinking about the pros and cons of this exceptionally growing industry.

Pallavi Shinde T. Y. B. Pharm

### INDUSTRIAL WASTE MANAGEMENT

In recent years, the Indian Pharmaceutical Industry has made fantastic progress. India is one of the biggest manufacturer of generic medicines alongside manufacturing of several important APIs (Active Pharmaceutical Ingredients). This conjointly ends up in generation of a great deal of waste like, by products, and solvents, or consumer waste like expired medicines, or materials containing excess drug like IV bag and syringes. This makes waste management one of the most important challenges faced by the pharmaceutical industry as the waste generated can be harmful to surroundings. So, it's of utmost importance that the waste generated is treated before disposing it off.

An oversized ecological disaster that occurred within the Indian landmass has resulted in a dramatic decrease in vulture population. This was because the vultures that fed on carcasses of cattles earlier treated with diclofenac died from nephropathy as they were unable to discharge the drug.

Irresponsibly discarded antibiotics may promote the transfer of resistance genes changing harmless environmental microbes into deadly pathogens, resulting in emergence of deadly drug resistant microorganisms. So the risk of drug resistant microbes is increasing at alarming levels.

As the effects of the waste could be detrimental even if it is treated, one of the effective ways to overcome this problem is reducing the waste. Many times the medicines that are disposed of are not expired ones but the unused ones. This may be because the dose prescribed was less than the minimum amount contained in one pack. Also, there is no network for the collection of unused medicines and thus they end up in the dustbin. If there was a system where unused

medicines were collected at the pharmacy, then it might be used by another person or sent back to the manufacturer who may dispose of it properly to make it less hazardous.

Another way to check the amount of waste from the manufacturer's end, is to implement green synthesis wherever possible. Green synthesis is an eco-friendly way of synthesizing compounds, which almost eliminates toxic waste, or produces a non-toxic and easily disposable waste along with the use of eco-friendly solvents like water, ethanol, etc. For example, green synthesis of "sertraline hydrochloride", eliminated use of metal salts like titanium chloride, and solvents like toluene and hexane, while using green solvents like ethanol.

Green chemistry also checks on various aspects of synthesis like atom economy, reducing derivatives, use of safer solvents, designing energy efficient methods of synthesis. This makes it safer and more productive. It also includes consideration of one-pot synthesis, multicomponent reactions (MCRs), continuous processing for improving the energy efficiency of the reaction. So more research on green chemistry should be promoted to find safer and sustainable ways of synthesis and reducing the harmful repercussions.

Pratham Shah S. Y. B. Pharm

# INNOVATING SUSTAINABILITY IN PHARMACY PRACTICE

Sustainability refers to fulfilling the needs of current generations without compromising the needs of future generations, while ensuring a balance between economic growth, environmental care and social well-being. The pharmacy profession is constantly evolving, with the latest technology and research to improve patient care. In order to maintain sustainability in pharmacy, it is important to find innovative ways to manage resources and optimize patient outcomes.

There are many ways to innovate sustainability in pharmacy practice like recycling and waste reduction, helping patients to recycle, selecting eco friendly products, etc. One way is to encourage the use of sustainable practices and products in pharmacies. This can be done through education and outreach programs, as well as by providing incentives for pharmacists and patients to choose more sustainable options. In addition, innovative technologies can be used to improve the efficiency of pharmacy operations and reduce waste. By implementing these and other strategies, pharmacists can play a key role in promoting sustainability throughout the healthcare system.

Another way that pharmacists can use to innovate their practices in order to be more sustainable is by using technology to reduce waste. For example, pharmacies can use electronic medical records (EMRs) to track prescriptions and inventory, which can help reduce the amount of medication that is wasted. The most obvious key to achieving sustainability is through reduction. Waste generation, particularly of plastics, is a major environmental concern. The plastics we send to landfills can remain there for centuries since they do not degrade easily, posing a serious environmental hazard. Plastic packaging alone makes up the bulk of the waste on a typical day at a community pharmacy. Although such packaging is sometimes necessary, more often than not the amount of packaging used is excessive.

Pharmacists can be more sustainable by collaborating with other health care professionals. By working together, pharmacists can develop coordinated care plans for patients and share information about medications and treatments. This can help avoid duplicate tests and therapies, which saves time and resources.

Sustainability in pharmacy is most certainly attainable. Small steps taken by pharmacists today can turn into larger steps in the future as pharmacists lobby and advocate for better practices. Taking action now during patient interaction

can raise awareness for pharmacy's sustainability issues. This is accomplished by educating patients about proper disposal methods for certain medications and the importance of adherence to their medication regimens for both their health and the health of the environment. Additionally, applying practices like recycling stock bottles, efficient packaging, and digitizing documentation could greatly reduce the bulk of physical waste generated as a result of pharmacy operations.

Riya Dsilva T. Y. B. Pharm

### **MAKING PHARMACY GREEN**

As we have entered the third decade of the century, our need for better and greater resources is now more than ever. This is also applicable for the pharmaceutical industry. But our ever growing need for resources also poses the important question of wastefulness. The industry of pharmacy creates waste and pollution via improper drug disposal, medication waste, and operational waste. Sustainability is the need of the hour. So how do we address the demand for more sustainability in pharma practices?

When developing and producing pharmaceutical products, waste can be and should be minimised. Use of hazardous substances should be decreased, and the safety of the workers and the environment should be taken into consideration. Green chemistry is the answer. Green Chemistry is also known as Sustainable Chemistry. Green chemistry is the designing of chemical products and processes that reduce or eliminate the use or generation of hazardous substances. Another way of ensuring sustainability is through having Environmental friendly Manufacturing. The Pharma industry is one of the major global polluters. The activities of the pharmaceutical industry emits approximately 55% more greenhouse gases than the automotive industry. Hence sustainable manufacturing processes are a must. LEED also known as Leadership in Energy and Environmental Design is a major player in ensuring sustainability. Leadership in Energy and Environmental Design is the most widely used green building rating system in the world. A LEED certificate signifies that "creates healthy, highly efficient, cost-saving green buildings," improving environmental performance from carbon footprint to indoor environmental quality. LEED is helping Pharmaceutical industries verify that their building design, construction, operations, processes and maintenance are environmentally friendly and efficient. Packaging Design modifications is another way to ensure sustainability. In the pharma industry waste produced from packaging can be challenging to avoid since packaging of medicines and drugs have to be tamper resistant. Not to mention the fact that medicines and other pharmaceutical products packaging is mainly single-use only. Reusing of packaging can be done in other sectors but not in the pharma industry. But even this hurdle was overcome by use of new packaging materials. Polyolefin laminate is a great example of better packaging designs. It is a 70% recyclable material. Despite the doubts about costing, these high-tech material packaging proved to be the better option, as it was gauged that these packaging can lower the costing by almost 60%. This is due to the fact that conventional blister packaging requires more raw materials. Bioplastic is on its way to becoming another more sustainable packaging material. Bioplastic is a biodegradable material that comes from renewable sources and can be used to reduce the problem of plastic waste. Reducing API concentration in the environment is also a necessary step. Every pharmaceutical product's Active Pharmaceutical Ingredients (API) is released in the air during manufacturing. Hence measures must be taken to ensure that they are released in the atmosphere in safer concentrations.

Generation of pharmaceutical waste is unavoidable, but that does not mean that we can not do our best to minimise it. Sustainability is the need of the hour. By implementing certain sustainable measures and taking a more proactive stance when it comes to sustainability, we can make the pharmaceutical industry a greener one.

### **GREEN AND SUSTAINABLE PHARMACY IN EUROPE**

- •The world today is moving away from untenable goods towards sustainability in order to safeguard the environment. Pharmaceuticals though safe and effective on public health are also detrimental to the environment. The Pharmaceutical group of the European Union (PGEU)- an association representing community pharmacists from 32 European countries published a paper which outlined contributions a pharmacist could make to promote green pharmacy. On 11th March 2019 the European Commission published a Communication on a European Union Strategic Approach to Pharmaceuticals in the Environment which recognized 6 areas in the life cycle of pharmaceuticals where advancement can be made. In response to this the PGEU reinforced the commitment of community pharmacies to protect the environment from the impact of pharmaceuticals. In 2020 the European Parliament adopted a resolution on pharmaceuticals which put forth new measures to tackle pollution. The first Update on Progress and Implementation of the EU Strategic Approach on Pharmaceuticals in the Environment was published in November 2020. The following are the ways laid down by the EU to control pollution due to pharmaceuticals.
- Increasing awareness and promoting prudent use of pharmaceuticals

  According to the European Commission (EC) communication most of the pharmaceutical waste comes from municipal wastewater followed by hospitals and other health care facilities. It is the role of the EU to ensure that pharmacists advise the citizens on appropriate handling, adherence and disposal of pharmaceuticals and educate them about greener pharmaceuticals.
- Promote greener manufacturing

  Some active ingredients used in formulations have a negative impact on the environment of countries where they're manufactured. This can become a hotspot for the growth of antibiotic resistant genes. The EC recommends increasing collaboration with Member States on setting environmental quality standards for pharmaceuticals posing a risk at national level as well as action on third countries which are suspected to contribute to global pollution.
- Reducing wastage and improving the management of waste
  In order to raise awareness about proper disposal of unused or expired medicines some European stakeholders have initiated campaigns on a voluntary basis. Majority of the population can return unused medicines to community pharmacies. In some countries people are also able to return used syringes, needles, lancets etc. to ensure their proper disposal. Many countries like Belgium, Denmark, France, Greece, The Netherlands, Spain, Sweden have schemes and run campaigns for the collection of unused and expired medicines and pharmaceuticals.
- Increasing the environment footprint by ensuring availability of medicines locally
  In Portugal, a study revealed that an average of 15 minutes are required to travel to a pharmacy and an average of
  119 minutes to a hospital pharmacy. More so 55.2% patients walked while 61.7% travelled by their vehicle. The total
  number of journeys can be reduced and thus reducing the pollution, if the pharmacies are in the vicinity of the patient's
  home or work place and enough stock is provided. Also the community pharmacist can reduce carbon footprint by
- Providing bags made of recyclable material.
- Reducing overall plastic waste and raising awareness about unnecessary single use plastic to manufacturers and wholesalers.
- Adoption of environment friendly procedures of distribution and procurement.
- Making use of renewable energy.

It is the duty of every pharmacist to contribute his/her own share by using different means to create awareness about this and protect the environment.

### NANOPARTICLE DRUG DELIVERY SYSTEM

There have been many innovations in the pharmaceutical industry but the innovation that has intrigued me the most is THE NANOPARTICLE DRUG DELIVERY SYSTEM. Nanoparticle drug delivery systems are a type of drug delivery technology that uses nanoparticles to transport therapeutic agents to specific parts of the body. These nanoparticles are typically made of biocompatible materials such as polymers, lipids, or inorganic compounds.

Nanoparticles are very small particles with size ranging from 1 to 1000nm. Nanoparticles have several properties that make them attractive for drug delivery, including their small size, which allows them to be easily taken up by cells, and their large surface area, which allows them to carry a high payload of the drug. In a nanoparticle drug delivery system, the nanoparticles are either given orally, transdermally or intravenously. The nanoparticles are designed to release the drug at the target site in the body, where it can then be absorbed by the cells and exert its therapeutic use. Nanoparticles can be coated with specific molecules that bind to receptors on the surface of the targeted cells, or they can be designed to be taken up by the targeted cells through a process known as endocytosis. Another strategy involves using nanoparticles that are attracted to certain tissues or cells based on their physical properties, such as size, shape, or charge.

Nanoparticle drug delivery systems are being researched for a wide range of therapeutic applications, including cancer, inflammation, and infectious diseases. For example, Nanoparticles are being explored as a means of delivering chemotherapy drugs in a targeted manner, with the goal of improving the effectiveness of the treatment while reducing side effects. Traditional chemotherapy involves the use of cytotoxic drugs, which are designed to kill cancer cells but can also damage healthy cells and tissues. This can lead to significant side effects, including nausea, vomiting, hair loss, and damage to the immune system.

By using nanoparticles to deliver the chemotherapeutic drugs, it is possible to target the cancer cells more specifically, reducing the amount of drug that is required and minimizing the exposure of healthy cells to the toxic effects of the drug. In addition, some nanoparticle delivery systems are designed to release the drug only in the presence of specific markers or conditions, such as pH or temperature, which can further improve the targeting of the drug. There are several approaches to using nanoparticles in chemotherapy, including the use of polymer nanoparticles, liposomes, and gold nanoparticles, among others. Clinical trials are currently underway to evaluate the effectiveness and safety of these approaches in treating various types of cancer.

In conclusion, the use of nanoparticles in drug delivery is still a relatively new area of research, and more work is needed to fully understand the potential risks and benefits of this approach. Overall, nanoparticles show promise as a means of delivering drugs to specific parts of the body in a targeted manner. It is clear that nanoparticles have the potential to transform the way drugs are delivered and administered, and they are likely to play an increasingly important role in the future of healthcare.

Akanksha Jaiswal T. Y. B. Pharm

### AI BASED ANALYTICS ACROSS INDUSTRIES

Al is the buzzword these days as it is going to impact businesses of all shapes and sizes, across all industries. Existing products or services can be enhanced by industrial Al to make them more effective, reliable, and safe. For example, computer vision is used in the automotive industry to avoid collisions and allow vehicles to stay in their lane, making driving safer.

Artificial intelligence (AI) is primarily concerned with comprehending and carrying out intelligent tasks such as thinking, acquiring new abilities, and adapting to new contexts and challenges. All is thus considered a branch of science and engineering that focuses on simulating a wide range of issues and functions in the field of human intellect.

We are now in the age of the 4th Industrial Revolution. While today's Fourth Industrial Revolution is typically focusing on technology-driven "automation, intelligent and smart systems", Al technology has become one of the core technologies to achieve the goal. The area of "artificial intelligence" is huge, we mainly focus on potential techniques towards solving real-world issues, where the results are used to build automated, intelligent, and smart systems in various application areas. Al-based modelling that can play a key role towards automation, intelligent and smart systems according to today's needs. Thus, the key focus is to explain the principles of various Al techniques and their applicability to the advancement of computing and decision-making to meet the requirements of the Fourth Industrial Revolution.

Global AI market is expected to grow at a robust pace over the next five years, owing to its widespread implementation in numerous industries, such as automobile, finance, healthcare, consumer electronics, etc. Moreover, growing investments coupled with increase in number of acquisitions of start-ups by leading players such as Google, IBM, Microsoft and others companies are playing a huge role in pushing the global Artificial Intelligence market.

Today's world has many applications of artificial intelligence and the research rate is increasing to make human life as simple as possible. Most of the search engines use artificial intelligence algorithms to predict the search by user. E-commerce sites use artificial intelligence to recommend the users about products based on their recent search products. Apart from the above few examples, data science and artificial intelligence are used in every possible industry where data is generated and also where data is analysed.

Ankita Panda T. Y. B. Pharm

# THE PIONEER WHO AIMED TO REVOLUTIONISE THE GAP BETWEEN DIAGNOSIS & THERAPY

"The minute you have a back-up plan, you have admitted you are not going to succeed." - Elizabeth Holmes

Theranos, which is inspired from the combination of the words 'Therapy' and 'Diagnosis', was a company which was founded in the year 2003 by a 19-year-old Stanford College dropout, Elizabeth Holmes. It aimed to revolutionise the blood testing industry. By the time her company was caught for the many unethical doings, the company was valued around USD 9 billion. The wrong doings included defrauding its investors, a culture of intimidation and secrecy, technology that repeatedly failed quality assurance and crucially, results sent to real patients that were fundamentally incorrect and were manually manipulated, upon which life-changing medical decisions were being made.

Her idea of getting results of various parameters of blood tests using only a few drops of blood, was not only innovative but also a very fabulous idea which could have replaced the way blood tests that are currently done. This idea was personally inspired by Elizabeth's fear of needles. Rather than sticking a long & prominent needle into the vein by puncturing the skin, a simple prick on the tip of one's finger and collecting a few drops of blood would do the job. The blood was collected in a tiny vessel, called The Nanotainer™, whose size was not more than half-an-inch. This container was supposed to be a part of the self-described 'disruptive' blood testing technology invented by Theranos. Their analysis machine was called The Edison. This machine was portable and convenient to use. But the diagnosis which it provided was incorrect. Even after innumerable efforts by Elizabeth's team, they still could not have gotten a

proper fix for their device. Had it been successful, the Edison could have honestly shaken the industry.

Elizabeth was also motivated by the thought that her device could make available a variety of blood tests to the poor at a cheaper rate than the conventional blood testing method. She felt that it was the need of the hour amid the ever increasing and much inflated costs of the American healthcare system. Instead of waiting hours or days, the patients could have gotten their blood test results instantly. This would have dramatically reduced the waiting period for getting a blood test done in various hospitals. Coupled with the above benefits, the process of drawing blood was also effortless and less painful since it would have only been a prick on the finger. Nonetheless, if it would not have been for the unethical means Elizabeth had opted for, Theranos definitely would have been a revolutionary and a rebellious company.

Avijeet Baksi T. Y. B. Pharm

# DISCUSSING INNOVATORS OR INNOVATIONS WHICH HAVE INTRIGUED YOU

#### Innovation in the pharmaceutical industry:

Continuous innovation is one of the pharmaceutical industry's most defining characteristics. New medications can be crucial for maintaining the quality of human life, and may even affect its duration. The sales potential is staggering: The global pharmaceutical market is expected to reach \$1700.97 billion by 2025. The pressure to succeed is tremendous. Yet, pharmaceutical innovation is hardly an orderly, predictable process. It follows a technology-push model dependent on a meandering path of scientific breakthroughs with uneven timing and hard to foresee outcomes. Technological competency, decades of rigorous research, and profound understanding of unmet customer needs, while necessary, may prove insufficient for market success as the critical decision for commercialization remains outside the firm. Drug innovation as a business process requires savvy, strategic, organizational, and managerial decisions. It is already enjoying intensive research coverage, giving rise to abundant but relatively dispersed knowledge of the mechanisms driving drug discovery and development.

#### 3D Printer

3D printing (also called additive manufacturing) is any of various processes used to make a three-dimensional object. In 3D printing, additive processes are used, in which successive layers of material are laid down under computer control. These objects can be of almost any shape or geometry, and are produced from a 3D model or other electronic data source. A 3D printer is a type of industrial robot.

#### • How 3D Printer Works:

It all starts with making a virtual design of the object you want to create. This virtual design is for instance a CAD (Computer Aided Design) file. This CAD file is created using a 3D modeling application or with a 3D scanner (to copy an existing object).

A 3D scanner can make a 3D digital copy of an object. 3D printing (3DP) is unique technology that was first described by

Charles Hull in 1986. In its most basic setup, 3DP uses computer aided drafting technology and programming to produce a 3D object by sequentially layering material onto a predefined substrate.

The material is first ejected from a printer head onto an x-y plane to create the



foundation of the object. The printer then moves along the z-axis, and a liquid binder is ejected onto the base of the object to a certain thickness. This process is repeated following the computer-aided drafting instructions until the object is built layer by layer. After treatment to remove the unbound substrate, the object is complete.

#### Hoe Does it Work



- Types of 3D Printer in Pharmaceutical Industry:
- 1. Selective laser sintering (SLS):

This builds objects by using a laser to selectively fuse together successive layers of a cocktail of powdered wax, ceramic, metal, nylon or one of a range of other materials

The laser fuses small particles of plastic, metal, ceramic or glass powders into a 3 dimension mass

#### 2. Fused deposition modelling (FDS):

This method uses a plastic filament or metal wire as input material to an extrusion nozzle. The nozzle is heated to melt the material and can be moved in both horizontal and vertical directions by CAM. The material hardens immediately after extrusion from the nozzle.

#### 3. Stereolithography:

Stereolithography is a process for creating three-dimensional objects using a computer-controlled laser to build the required structure, layer by layer. It does this by using a resin known as liquid photopolymer that hardens when in contact with the air.

Starting from a 3D image, a part is built slice by slice from bottom to top in a vessel of liquid polymer that hardens when struck by a laser beam.

#### Conclusion:

3DP technology opens the door to a new era of advanced drug delivery with built-in flexibility that is well suited for personalized/customized medicines. It's a fact that over time 3DP will continue to revolutionize the development of new generations of pharmaceutical formulations that are safe and effective.

### SUSTAINABILITY: COMES WITH INNOVATION

Have you ever wondered that sustainability can go hand in hand with innovation?

Especially in the pharma industry where there is always an urge to create innovative products for the excellence of it and for creating a better future.

But in today's world why pharmacists are rooting more towards sustainable innovative results?

Before answering this question let us see the rise of the pharma industry in India.

## THE PHARMACEUTICAL INDUSTRY IN INDIA IS EXPECTED TO REACH \$65 BILLION BY 2024 AND TO \$120 BILLION BY 2030.

India has seen tremendous growth in the pharma industry in the past few years. From being non-existent, in 1970 to rank the world's 3rd largest by volume and 14th largest in terms of value in this business. India has 20% share in global supply by volume, and is the leading vaccine manufacturer globally.

The pharmaceutical industry in India offers 60,000 generic brands across 60 therapeutic categories. Major segments include generic drugs, OTC Medicines, API/Bulk Drugs, Vaccines, Contract Research & Manufacturing and many more.

But how has the Indian pharmaceutical industry grown rapidly in recent years?

This depends upon many factors. Some of them are...

- a) Low cost of production
- b) Economic engines
- c) Government support

Since we have seen the growth of pharma industry let us see,

#### Why is there a need for sustainable innovation?

As the pharmaceutical industry is growing, the need for more production of medicines, vaccines and other categorical drugs is also growing. The development and production of drugs and devices inherently consumes large quantities of natural, human and economic resources and production of a significant amount of greenhouse gases and other toxic chemical gases. As such, it represents a risk to the environment and the need for sustainability in the pharmaceutical industry.

But only sustainability will not help the pharma industry to grow in India as well as across the globe. Innovation plays a major role in it. Any sector to grow in their respective area, it has to bring new innovative ideas which can broaden the scope. In pharmaceutical sector there can be three types of innovation,

- 1. Product innovation
- 2. Service Innovation
- 3. Business model innovation

1. Product innovation: - It is the innovation in which pharmacists can innovate new drugs or they can modify or improve the already existing drug to meet the patients needs.

Now, if the innovation is happening, their trial will also occur and due to this there will be waste products which will be

obtained. This causes environmental risks for instance the presence of chemicals, API's and their metabolites which have been synthesised in the laboratory can cause harm to the aquatic life, if it has been released without any pretreatment.

Part of the solution to this problem includes the design and development of API's and their constituents in such a way that it reduces the environmental risk along with the greater therapeutic activity.

- 2. Service innovation: It is the innovation that has to do with making changes in the direction, organization and even the product line of a business in order to anticipate demand and keep the company in the forefront of an industry. Now, with the growing market of pharmaceutical industry in India. It is very important for the companies to be on point with their services. Due to this, many of the companies do not think about the amount of waste they are producing and that leads to pollution and threat to the living organisms. The Government of India has made the rules about the management of the waste products but as citizens of India, it is our responsibility to think how we can provide the top-level services in sustainable ways.
- 3. Business model innovation: It is the way that can lead us to sustainability. This is the type of innovation that every business leader is hoping to achieve and that will turn a profit quickly and stay for a long period of time.

This can include the 8 phases,

- 1. Ideation
- 2. Concept design
- 3. Virtual prototyping
- 4. Experimenting
- 5. Detail design
- 6. Pilotina
- 7. Launch
- 8. Adjustment and diversification

To sum up everything that has been stated so far sustainability is now becoming the most important part in the pharmaceutical world. Without innovation, it will not happen. These two components are now starting to become the two paddles of the boat which we can describe as the pharmaceutical world. Without these we will not manage to sail the boat.

Nidhi Mishra S. Y. B. Pharm

# INNOVATIVE WAYS TO INCORPORATE SUSTAINABILITY IN PHARMACY

With the growing awareness of sustainability and its importance in today's world, pharmacists are taking a more active role in incorporating sustainable practices into their practice. As healthcare providers, pharmacists are uniquely positioned to provide advice and support to their patients on how to incorporate sustainability into their lives. Not only can this help create a more sustainable future, but it also has the potential to improve health outcomes for patients. By taking proactive steps to promote sustainable healthcare practices, pharmacists can help protect our environment, reduce waste, and contribute to a healthier society. Through initiatives such as providing sustainable packaging and advocating for green energy sources, pharmacists can help create a healthier, more sustainable world.

Sustainability is key in the pharmacy profession. As pharmacists, we are constantly looking for ways to reduce waste and conserve resources. In addition to our everyday practices, there are a number of innovative ways we can incorporate sustainability into our work.

One way to make our pharmacies more sustainable is to use recycled materials wherever possible. For instance, we can use recycled paper for prescription labels and packaging, and recycle used medication containers. We can also install energy-saving light fixtures and use motion detectors to minimize lighting usage. Another way to make our pharmacies more sustainable is by using green cleaning products. These products are safe for both people and the environment, and they often come in recyclable packaging. Green cleaners also tend to be less expensive in the long run, since they require less maintenance than traditional cleaners.

We can also promote sustainability among our patients by educating them about the benefits of conservation. We can provide tips on how they can reduce their environmental impact at home and work, and we can suggest ways they can become more involved in their community's sustainability initiatives. By incorporating these strategies into our pharmacy practice, we can help make our profession more sustainable for years to come

Pratik Ragji T. Y. B. Pharm

### **ORGAN-ON-CHIP TECHNOLOGY**

Organ-on-a-chip technology, also referred to as tissue chips, contain engineered or natural miniature tissues derived from various organs that are grown inside miniaturized fluid channels molded into glass, silicon, or polymer. The hair-fine microchannels guide and manipulate minute volumes of solution to create the environment that imitates one or more tissue-specific functions. Though simpler than human organs or tissues, they are effective mimics of human physiology and disease.

The development of silicone, plastic, and glass chips and related microfluidic control systems push the boundaries of science and open up unseen potentials. The on-chip control of environmental parameters, the precise application of drug molecules, and precise readouts are now possible and help to cultivate and analyze cells and tissues in a more physiological environment. OoC technology is being employed by a growing number of laboratories worldwide. A variety of chip designs allows for the simulation of virtually every tissue in the human body, including the heart, lung, kidney, bone, and gut, among many others. The combination of various organ models on-chip facilitates a better understanding of a drugs' action in a precisely controlled physiological environment.

Because of variable responses and unexpected toxicity in humans, approximately 40% of the newly developed drugs fail clinical trials even after accomplishing preclinical evaluation with animal models. Therefore, alternative tissue models with biomimetic human pathophysiology were urgently required to bridge the gap between animal studies and clinical trials involving human subjects in the drug development pipeline. Hence in such situations organ-on-chip was very useful.

Rishika Potam S. Y. B. Pharm

### 3D PRINTING - INNOVATION IN SUSTAINABILITY

3D printing (3DP), also known as additive manufacturing, is a method of creating a three dimensional object layer-by-layer using a computer created design. 3DP is an additive process whereby layers of material are built up to create a 3D part. The American Society for Testing and Materials (ASTM) defines 3DP as the "fabrication of objects through the deposition of materials using a print head, nozzle, or another printing technology." It has been newly introduced into the pharmaceutical industry. The 3DP technology has been modified in the pharmaceutical sector, to yield a multitude of dosage forms, medical devices, and bio-printed scaffolds.

3D printing helps in creating medicines that are tailored to a patient's therapeutic requirements and personal preference. The advancement of 3D printing, as well as other digital health technologies, is causing a paradigm shift in clinical pharmacy practice towards a vision of a novel and digitized treatment pathway that can adapt to the changing needs of each individual patient. A wide range of stakeholders, including academic researchers, clinical pharmacists, doctors, biotech start-ups, large pharmaceutical companies and research funding bodies, are exploring this vision globally . This concept could lead to a new era of digital pharmacy, enabling electronic prescriptions to be sent to a decentralized 3D printer location for real-time personalized medicine dispensing. Generally, all of these 3D printing technologies follow a common process for printlet production, described as the '3 Ds of 3D printing' and provide a pathway for the future use and integration of this technology into clinical practice. This new innovation is sustainable in the sense that it can use recycled materials. The filaments and plastics used in 3D printing are biodegradable, which reduces plastic waste. In traditional techniques, it is necessary to use several materials, which is inadequate for the desired sustainability process. That is why 3D printing is helping to make a difference. It helps the manufacturers to maintain a more sustainable policy because they get the exact amount of material needed to make a product. More often than not, factories that developed models and prototypes, using traditional methods, used a lot of energy and produced a high rate of emissions. On the other hand, 3D printing processes use far less energy and produce fewer emissions in the process. In fact, 3D printing could slash CO<sub>2</sub> emissions by up to 5%. It also protects the animals by helping to reduce the number of animals used for testing the medicines on & by helping in creating cell models by using 3D bioprinting .3D bioprinting involves layer-by-layer deposition of bioink to create 3D structures, such as tissues and organs which reduces the use of animals for testing which directly protects the environment.

> Sharvari Desai T. Y. B. Pharm

### **DEVELOPMENT IN FIELD OF PHARMACY**

The field of pharmacy has seen a great deal of innovation in recent years, with new technologies and treatments becoming available on a regular basis. Pharmacists are now able to offer more customized care for their patients, thanks to the many advances that have been made in the field. This is good news for patients, who can now receive more individualized treatment based on their specific needs.

One of the most important innovations in pharmacy has been the development of generic drugs. These drugs are copies of brand-name medications, but they are much cheaper to produce. This has led to significant cost savings for both patients and insurance companies. In addition, generic drugs are just as effective as brand-name medications, so patients can be sure that they are getting the best possible care.

Another recent innovation in pharmacy is the advent of specialty pharmacies. These pharmacies focus exclusively on certain types of medication, such as cancer drugs or HIV medications. This allows pharmacists to provide specialized care for these types of medications and ensure that patients get the most out of them. Overall, it is clear that pharmacy has seen some significant advances in recent years. These advances have benefited both patients and pharmacists alike, and there is no doubt that they will continue

Shubham Ghude T. Y. B. Pharm

### PENICILLIN: AN ACCIDENT THAT CHANGED FUTURE

Humans are not strangers to accidents, sometimes they can be bad but rarely they can lead to ground breaking innovations. The article further recounts the various noteworthy events in the accidental discovery of penicillin by Dr Alexander Fleming. His discovery made a turning point in human history, when doctors finally had a tool that could completely cure their patients of deadly infectious disease. Dr. Fleming found that the petri plate in which staphylococcal bacteria was growing was found to be contaminated by mould spores. Around this mould, no more bacteria grew which was determined by clearance of the surrounding agar gel. He further isolated the mould and identified it as a member of the *Penicillium* genus.

Penicillin fungi portrayed bactericidal activity. That's how penicillin got discovered. Fleming thought that this was another antiseptic, he published his findings but dismissed their importance. As World War II started in 1939, there was a huge demand for effective treatment for soldiers whose wounds were infected. Howard Florey and Ernst Chain tested penicillin on eight mice and then managed to produce enough penicillin by their freeze-drying method to inject it into an infected patient. This was successful and it became the first antibiotic that killed microbes. World war II ended and penicillin treated around 250,000 British and United States soldiers Through many ups and downs penicillin became the first antibiotic that killed bacteria and helped many people enabling control of many infectious diseases such as pneumonia scarlet fever, gonorrhoea, meningitis and diphtheria.

A number of semisynthetic penicillin derivatives improving on the properties of penicillin have been developed for example Ampicillin, Amoxicillin, Cloxacillin to name a few. The fact that penicillin was discovered accidentally highlights how a scientific breakthrough can occur at any point and scientists should never give up and how dangerous a world without antibiotics would be.

Simran Keni S. Y. B. Pharm

## The Da Vinci Club

### **FUTURE OF PHARMACY**

Pharmacy is a healthcare profession based on the chemical, biological and medical sciences. It is concerned with the design, evaluation, production and use of medicines and medicines related information to the public. The ultimate concern of pharmacy is to ensure safe, effective and rational use of medicine. It is a profession that focuses on improving the quality of people's lives.

Few years ago, pharmacy was at a very different place. Each patient had a paper chart and if a pharmacy professional needed information about medication history, needed to sort through stacks of files There were few cell phones and no information software to store patient records or pharmacy applications. Whereas today, technology has revolutionized the day-to-day role of pharmacy technicians and pharmacists. Patient records are now stored online, prescriptions are received digitally, instructions are automatically printed and labelled, payment is done via credit or debit cards. Due to technological advancement, it seems like the future of pharmacy will look very different from what it is now. The healthcare industry has already started implementing robots and other automatic tools to help streamline the various processes and to improve patient care. Because of the increased use of technology, the human component will be even more important to excellent pharmacist-patient relationships. This means shifting the focus from filling prescriptions to interacting with patients.

Currently, patients are able to order their medications with a simple click, add to cart and have them shipped directly to their home. In the future, pharmacies are likely to become even more technologically advanced. This could look like patients being given a prescription by their doctor, often with a QR code, and then taking this to a pharmacy store. Some of these digitized pharmacies will operate via machines, read the QR code, and automatically dispense the corresponding medication. The benefit of this is that inventory will be automatically tracked by the machines. As a result, the packaging of medication will be done in a much faster time frame. Such a solution will relieve pharmacists of a lot of manual work. Instead of receiving a prescription, then calling the doctor to check in with them, pharmacists could simply receive everything via a message over a corresponding computer system or app, where the patient's medical history is already noted. This will save a lot of time, it'll also ensure that fewer mistakes are made, while also allowing the patient to ask the pharmacist more specific health-related questions. Some hospitals have already implemented the use of robotics in order to better and more efficiently serve patients. These machines are able to store the various medications, as well as dispense and distribute them to individual patients in hospitals. Robotic automation can benefit the healthcare system by providing quality service in a very short period of time. Instead of pharmacists standing and counting each and every tablet, their time can be utilized better by consulting patients or advising medical staff. Just because machines will take over some of the more administrative work, doesn't mean the necessity for actual pharmacists has diminished. It simply means that the busy work has been delegated to robots and software. That allows pharmacists to put their education to good use, and help patients get the medical help they need. They are also able to make sure that the patient's experience and customer care are excellent.

> Kimaya Palav S. Y. B. Pharm

### DIGITAL FUTURE OF PHARMACY

The pharmacy sector in India is growing rapidly as the population becomes more affluent and health-conscious. The future of pharmacy in India looks promising, with opportunities for both foreign and domestic companies to capitalise on the growth potential of the market. This growth is being driven by rising income levels, an expanding middle class, and increasing awareness about health and wellness. Additionally, the government is investing in healthcare infrastructure and promoting the use of generic drugs, which is also contributing to the growth of the pharma market in India.

## The Da Vinci Club

Foreign companies are already taking advantage of this growth potential by establishing their presence in India. For example, German drugmaker Bayer has set up a wholly-owned subsidiary called Bayer Pharma AG in Mumbai, while Swiss drugmaker Novartis has created a joint venture with local companies Biocon Ltd. Domestic companies are also expanding their operations with companies such as Sun Pharmaceuticals and Dr. Reddy's Laboratories Ltd investing heavily in new plants and R&D facilities.

The question that should be asked to all the pharmacists is, "Are we using our absolute potential for the welfare and betterment of human society?" With all the technological advancements, pharmacists are pioneering in the unexplored segments of the healthcare sector. These recent developments have strengthened the patient-pharmacist interaction ultimately revolutionising the traditional physician-patient encounter. This means reducing the time from prescription handling and focusing more on patient interaction, which furthers the unanimous goal of patient care. With the increasing use of technology in all aspects of life, it was only a matter of time before pharmacies started to incorporate more technology into its operations. There are already a number of ways that pharmacies are using technology to improve the patient experience and make the pharmacy workflow more efficient.

Pharmacies are also using technology to improve communication with patients. For example, many pharmacies now offer text message reminders for appointments and prescription refills. This helps ensure that patients don't or miss their prescriptions being filled. Pharmacies can also use text messages to notify patients about potential drug interactions or adverse effects of medications they may be taking.

When it comes to regulatory oversight, guidance varies. Most digital health platforms and products don't require clinical evidence or regulatory oversight. Digital medicine, evidence-based software and/or hardware are that measure or intervene in human health may require regulatory oversight, and digital therapeutics (DTx) that deliver evidence-based therapeutic interventions do require regulatory oversight based on product claims of risk, efficacy, and intended use.

"Innovation is the key to developing improved outcomes in healthcare," Keane said. "It is easy to imagine the benefits of a completely digitised and integrated pharmacy stack."

At present, access to electricity and the Internet represent barriers to the use of digital technologies in some countries. Consequently, people who are economically and socially vulnerable, especially in poorer countries, may be excluded from health services provided through digital technologies. In addition to the use of teleconsultations, there is a growing integration of other digital technologies in pharmacy practice, such as robotic and barcode drug dispensing, patients' electronic health records, computer-based support systems for decision-making, and the use of artificial intelligence and big data

Om Rangnekar T.Y. and Rishikesh Barpatil T. Y. B. Pharm

### **TECHNOLOGY IN PHARMACY**

Pharmacists are responsible for helping patients use medications well in an increasingly complex and costly health care system. With changes in population demographics, technology, government policy and how health care providers do their work, the profession of pharmacy must adapt to tackle the challenges of the future. So what is the future of Pharmacy?

The future of pharmacy practice is enhanced, connected and transformed.

The future of pharmacy practice is enhanced clinical care. Pharmacists will spend more time managing changing patient health needs including health promotion, disease prevention, detection and monitoring. Pharmacists and Pharmacy technicians will use their full scopes of practice and work together to provide clinical care. In the future,

### The Da Vinci Club

patients who are more vulnerable, including those on high risk medications with many medical conditions, have lower socioeconomic status or low health literacy will be a focus of increased pharmacy attention. Pharmacists will know the goals, risks and needs of a patient and this knowledge will form the basis of care. Patient monitoring and follow up will become routine. Preventative care will be planned and organized for an individual patient or group of patients and professional pharmacy services will be part of a more holistic care plan.

Advanced data analytics including artificial intelligence (AI) will alert Pharmacists and patients about drug therapy problems and focus pharmacy efforts to where we can have the most impactful use of AI will also streamline pharmacy practice by removing uncomplicated work processes from the pharmacy.

In the future, dispensing medication on site will no longer be the primary focus of many pharmacies. The physical space and work focus in a pharmacy will be improved for better use of eHealth technology, private patient consultations, health programs and inter-professional teamwork. Pharmacists will work with policy makers to lead the development of health and social care policies that will ensure quality medication management and care will be planned around populations needs and care gaps.

The future of pharmacy practice is connected. In the future, electronic pharmacy records will be complete so that they show a patient's medication use and information about health over time. They will include dispensing and professional service, delivery records, electronic records from other organizations such as primary care, hospitals, laboratory and diagnostic test results and data from mobile apps that people use in their everyday lives. Pharmacists will easily share clinical records with other health care providers and with patients themselves. Pharmacists will develop and implement care plans together with other members of the health care team across the spectrum of care. This includes helping patients manage chronic or hospital admissions and post hospital discharge care. Pharmacists working in different organizations or sectors will work easily together.

ENHANCING and BETTER CONNECTING the profession of pharmacy is an exciting opportunity for pharmacists to be part of an integrated care system centered on individual patients needs within their community and throughout every stage of life.

Shraddha Ghollar T. Y. B. Pharm

## **Wordsworth Corner**

#### The Girl Who Stands in the Corner of My Room

She is always around me,
the one who surrounds me constantly.
The one that only I can see,
and people never disagree.
The surrounding air gets cold,
That's how I know she is around.
white gown, white face,
black eyes, intense gaze
Her smile was as sharp as a spear,
you walk towards her, and she draws you near.
Standing in the darkness, I believe she is there,
and sensing her near won't give me a nightmare.

As I see the cloudy sky through the window,
She sits beside me like my shadow.
She tells me stories about her realm,
so fascinating things you won't believe them.
When it's 3 in the middle of the night,
I know I can't sleep right.
She takes me to the forest with her,
and I get circled by wolves, bats, and vultures.
And when I'm lost, in the wild I roam,
her whispers guide me, they lead me to home.
Her voice is my north star,
like a pirate, I am miles far.

You cannot hide from those silent eyes, nobody knows what underlies.

She said, "Come with me." and I'll ultimately be free.

In her realm, there is only dusk and never dawn, the sun is gone, and nothing shines upon.

She declares that I have to take an oath, and we'll ride to the other side by her boat.

And I've to take the vow and seal a pact, knowing that I'll never be able to come back.

She tells me, "One day we'll share a soul." and I won't ever be alone.

Altamash Sayed T. Y. B. Pharm

### **Wordsworth Corner**

#### Mother and Son Rendezvous

Kauravas were in lead, Great warriors smacked the soldiers dead. The army in numbers for Kauravas were more, But Pandavas were not that easy to get sore.

Krishna had tried to stop the war,
Duryodhana ordered to imprison the great Lord.
No one can raise the sword to the Lord.
Krishna moved out of the palace, the war was about to take place.

Kunti made an attempt to stop, brought her relationship with Karna on top.

The mother son relationship was revealed to Karna,

The thought angered, for leaving him alone for years.

'What do you want mother?' Karna asked,

Fight by your brothers she gave the task.

Karna was in huge debt with Duryodhana,
The great warrior Karna was faithful to Kaurava. Karna replied to Kunti that he
would only kill Arjuna,
And would not harm any other Pandava

Manjiri Shinde Faculty

#### **Pain into Power**

Smile's that fade away with the steady passing night, Mornings are fire bringing light to her plight.

Perspective is her strength, which came from a tear filled pool.

No more keeping her foot back, now her dreams are the fuel.

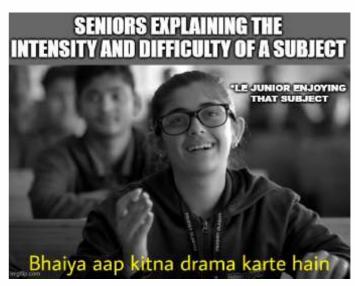
Wings spread wide apart, from her fears she'll flee. Ready to fall, and rise again her face will reflect impish glee.

She drained for some, for some she became a thorn out of flowers. But she got the perfect victory in turning her pain into power.

> Sharvani Pednekar T. Y. B. Pharm



Kashmira Chaudhari (T. Y. B. Pharm)



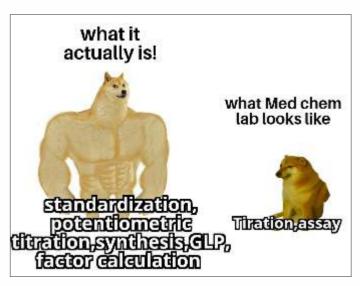
Kashmira Chaudhari (T. Y. B. Pharm)



Kashmira Chaudhari (T. Y. B. Pharm)



Mansi Gupta (T. Y. B. Pharm)



Mansi Gupta (T. Y. B. Pharm)



Mansi Gupta (T. Y. B. Pharm)



Mansi Gupta (T. Y. B. Pharm)



Mansi Gupta (T. Y. B. Pharm)

Colo lab Viva

Colo viva (theory+ Lab)



Mansi Gupta (T. Y. B. Pharm)

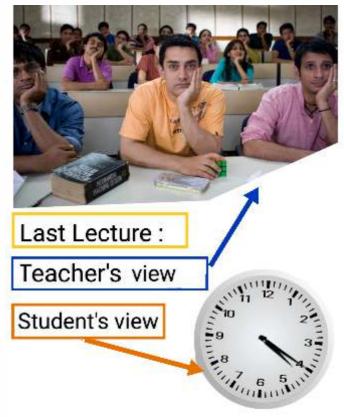
Me and my friends after getting into pharmacy



Mansi Gupta (T. Y. B. Pharm)



Poojary Raksha Kumar (T. Y. B. Pharm)



Sayali Kothi (T. Y. B. Pharm)

Pov : when teachers say mere pyare baccho
Student's be like...



Utkarsha Ingale (T. Y. B. Pharm)



Utkarsha Ingale (T. Y. B. Pharm)



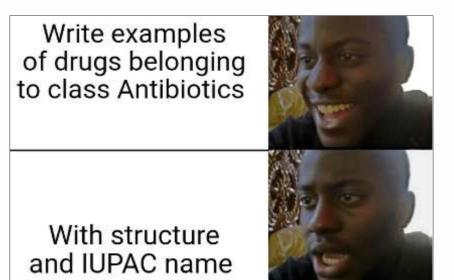
Utkarsha Ingale (T. Y. B. Pharm)



Utkarsha Ingale (T. Y. B. Pharm)



Utkarsha Ingale (T. Y. B. Pharm)



Utkarsha Ingale (T. Y. B. Pharm)



Abhishek Yadav (Final Year)



Akansha Jaiswal (T. Y. B. Pharm)



Abhishek Yadav (Final Year)



Abhishek Yadav (Final Year)



Avijeet Baksi (T. Y. B. Pharm)



Akansha Jaiswal (T. Y. B. Pharm)



Avijeet Baksi (T. Y. B. Pharm)



Avijeet Baksi (T. Y. B. Pharm)



Avijeet Baksi (T. Y. B. Pharm)



Kasturi Kadam(T. Y. B. Pharm)



Kasturi Kadam(T. Y. B. Pharm)



Khan Mohd Monishuddin (S. Y. B. Pharm)



Khan Mohd Monishuddin (S. Y. B. Pharm)



Khan Mohd Monishuddin (S. Y. B. Pharm)



Khan Mohd Monishuddin (S. Y. B. Pharm)



Mayur Mahale (T. Y. B. Pharm)



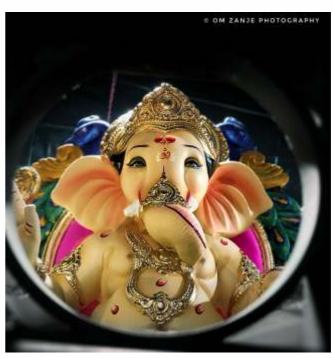
Mayur Mahale (T. Y. B. Pharm)



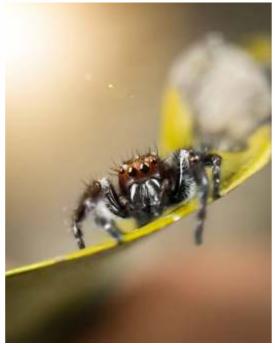
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Om Zanje (Final Year)



Om Zanje (Final Year)



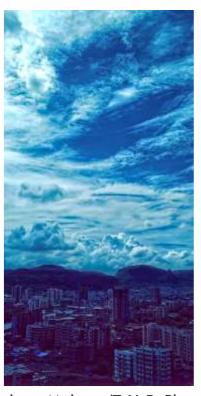
Om Zanje (Final Year)



Poojary Raksha Kumar (T. Y. B. Pharm)



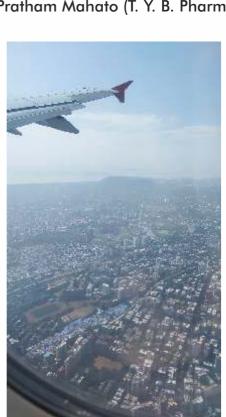
Poojary Raksha kumar (T. Y. B. Pharm)



Pratham Mahato (T. Y. B. Pharm)



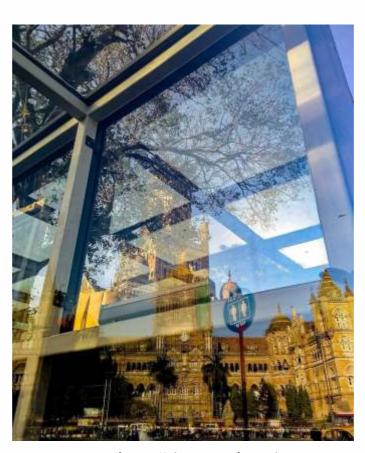
Pratham Mahato (T. Y. B. Pharm)



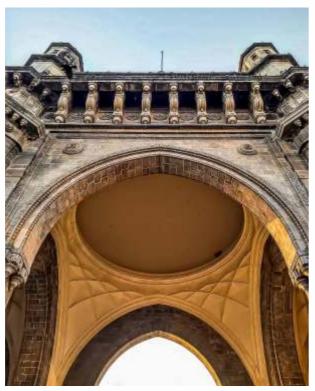
Pratham Mahato (T. Y. B. Pharm)



Pratham Mahato (T. Y. B. Pharm)



Pratik Ragji (T. Y. B. Pharm)



Pratik Ragji (T. Y. B. Pharm)



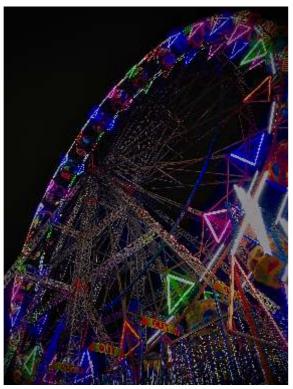
Sakshi Shetty (T. Y. B. Pharm)



Sharvari Desai (T. Y. B. Pharm)



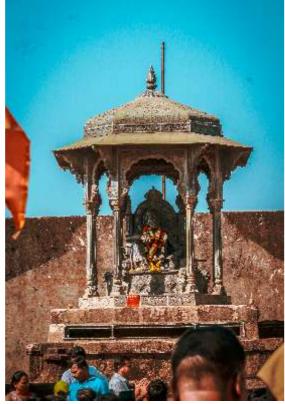
Sharvari Desai (T. Y. B. Pharm)



Shlok Bodke (S. Y. B. Pharm)



Shlok Bodke (S. Y. B. Pharm)



Siddhesh Wadkar (S. Y. B. Pharm)



Siddhesh Wadkar (S. Y. B. Pharm)



Sharvari Desai (T. Y. B. Pharm)



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Sharvari Desai (T. Y. B. Pharm)



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Smruti Chavan (T. Y. B. Pharm)



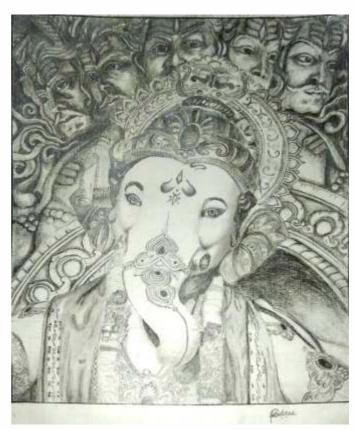
Smruti Chavan (T. Y. B. Pharm)



Vibhav Phadtare (S. Y. B. Pharm)



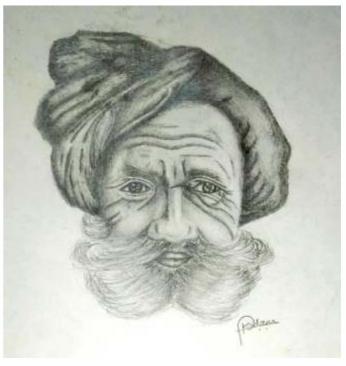
Kasturi Kadam (T. Y. B. Pharm)



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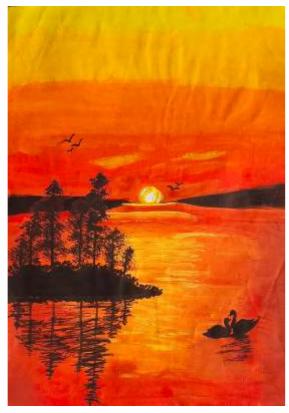
Kasturi Kadam (T. Y. B. Pharm)



Kasturi Kadam (T. Y. B. Pharm)



Pratham Mahato (T. Y. B. Pharm)



Revati Bhalerao (Final Year)



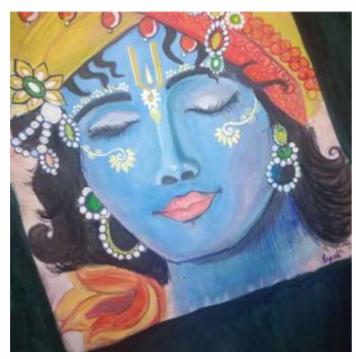
Pratham Mahato (T. Y. B. Pharm)



Revati Bhalerao (Final Year)



Sayali Kothi (T. Y. B. Pharm)



Sayali Kothi (T. Y. B. Pharm)



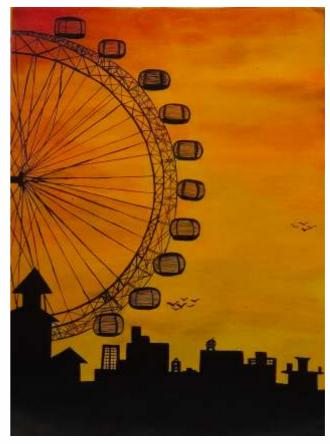
Sayali Kothi (T. Y. B. Pharm)



Sayali Kothi (T. Y. B. Pharm)



Sharvari Desai (T. Y. B. Pharm)



Smruti Chavan (T. Y. B. Pharm)

## Comrades

**IIC (Institution Innovation Council)** is established by the Government Of India and Ministry Of Education with a vision of fostering the culture of innovation amongst all higher education institutions. Its primary mandate is to encourage, inspire and nurture young students by supporting them to work on new ideas. The course strengthens knowledge and advances careers.



**The Department of Lifelong Learning And Extension (DLLE)** was established on October 12, 1978 and has been recognized as a Statutory Department of the University of Mumbai since 1994 to promote a meaningful and sustained rapport between the Universities and the community. During the course period, a variety of events were conducted which revolved around the role of students as a citizen for the benefit of the society.





## **Comrades**









































































## **Committees**

#### 1. Governing body:

Mr. Pankaj Bhujbal, Dr. Abha Doshi (Member Secretary), Mr. Pramod Naik (DTE Nominee), Dr. Rita Lala (Educational expert), Ms. Prachi Bhagat (Industry Expert), Dr. Poonam Advani, Dr. Rashmi Srivastava and Dr. Vijaya Patil.

#### 2. Purchase Committee:

Ms. Vrushali Keer, Dr. Abha Doshi, Ms. Bhagyashri Joshi, Mr. Sanjay Katkar, Mr. Ghanshyam Kambli.

#### 3. Library Committee:

Ms. Sindhu Menon, Ms. Priyanka Jain., Ms. Manisha Barve.

#### 4. Discipline Committee:

Dr. Rashmi Srivastava, Ms. Sindhu Menon, Ms. Manjiri Shinde, Mr. Pramod Karbhari, Mr. Ghanshyam Kambli.

#### 5. Anti-ragging Committee:

Dr. Bandoo Chatale, Ms Sheeja Koliyote, Ms. Asavari Hadkar, Mr. Sunil Mohite.

#### 6. Seminar Committee:

Dr. Madhura Vaidya, Mrs. Sindhu Menon, Ms. Vrushali Keer, Ms. Ashwini Pawar.

#### 7. Examination Committee:

Dr. Poonam Advani, Dr. Vijaya Patil, Dr. Madhura Vaidya, Dr. Rashmi Srivastava, Mrs. Sneha Kokate.

#### 8. Alumni Committee:

**Ms. Sheeja Koliyote**, Ms. Bhagyashri Joshi, Dr. Vijaya Patil, Ms. Priyanka Jain, Mrs. Sneha Kokate, Mr. Gurunath Pednekar.

#### 9. Cultural Committee:

Ms. Sheeja Koliyote, Ms. Aushima Dasari, Mr. Sunil Mohite, Mrs. Ankita Patade.

#### 10. Social Awareness Committee:

Dr. Vijaya Patil, Ms. Sindhu Menon, Ms. Manjiri Shinde, Mr. Yuvraj Thakare, Mr. Gurunath Pednekar.

#### 11. Gender Sensitization Committee:

Dr. Bandoo Chatale, Ms. Aushima Dasari, Dr. Sonali Naik.

#### 12. Women's Grievances Committee:

Ms. Aushima Dasari, Dr. Poonam Advani, Ms. Priyanka Jain.

#### 13. Grievance redressal committee:

**Dr. Rashmi Srivastava**, Dr. Abha Doshi, Dr. Sonali Naik, Ms. Priya Sawant, Ms. Anuja Saha (NGO), Ms. Neela Nair (OMBUDSMAN).

#### 14. Internal complaint committee/ Internal Compliance committee:

Dr. Abha Doshi, Dr. Rashmi Srivastava, Dr. Poonam Advani, Ms. Manjiri Shinde.

### **Committees**

#### 15. Placement Committee:

Ms. Priyanka Jain, Ms. Bhagyashri Joshi, Ms. Aushima Dasari.

#### 16. Animal ethics Committee:

Dr. Bandoo Chatale, Ms. Manjiri Shinde, Mr. Dattaram Bhure.

#### 17. Industry Institute Partnership Cell/ Institution Industrial Cell:

Ms. Bhagyashri Joshi, Dr. Abha Doshi, Ms. Sheeja Koliyote, Ms. Prachi Bhagat, Mr. Krutin Chaturvedi, Mr. Vaibhav Jain, Ms. Kirtida Desai, Ms. Dipti Samant.

#### 18. Academic Advisory Committee:

Dr. Abha Doshi, Dr. Arati Prabhu, Dr. Sonali Naik, Ms. Priyanka Jain, Dr. Rashmi Srivastava.

#### 19. SC/ST committee & Anti-discrimination Committee:

Dr. Sonali Naik, Dr. Rashmi Srivastava, Dr. Bandoo Chatale, Mr. Sunil Mohite.

#### 20. Internal Quality Assurance Cell:

Ms. Sheeja Koliyote, Dr Sonali Naik, Ms. Bhagyashri Joshi, Ms. Ashwini Pawar.

#### 21. Innovation cell/ Journal club:

Dr. Madhura Vaidya, Dr. Vijaya Patil, Ms. Vrushali Keer.

#### 22. Intellectual Property Rights Cell:

Ms. Bhagyashri Joshi, Ms. Sheeja Koliyote, Ms. Aushima Dasari.

#### 23. Social media cell:

Ms. Sindhu Menon, Ms. Vrushali Keer, Ms. Aushima Dasari.

#### 24. College Development Committee:

Mr. Pankaj Bhujbal, **Dr. Madhura Vaidya**, Dr. Vijaya Patil, Dr. Abha Doshi, Dr. Rashmi Srivasatava, Ms. Sheeja Koliyote, Mr. Yuvraj Thakare, Mr. Pranav Bhagat (Industry Alumnus), Mr. Sagar Rawool (from Education) Dr. Nirmala Joshi (from Social service), Dr. Mrinal Sanaye (from Research), Ms. Sachi Parab (Student representative).

#### 25. EBC cell:

Dr. Sonali Naik, Dr. Abha Doshi, Mrs. Sneha Kokate, Dr. Bandoo Chatale.

#### 26. Unfair means enquiry committee:

Dr. Rashmi Srivastava, Ms. Manjiri Shinde.

#### 27. Program Committee:

Dr. Rashmi Srivastava, Dr. Abha Doshi, Dr. Poonam Advani, Dr. Madhura Vaidya, Ms. Sheeja Koliyote.

#### 28. DLLE:

Dr. Vijaya Patil, Ms. Vrushali Keer, Ms. Sindhu Menon.

# Special Thanks to: We truly are grateful to the following members for helping and guiding us through. MET MARCOM DEPARTMENT: Mr. Ashish Srivastava, Mr. Pravin Gongan & Team MET IOP (Degree): Dr. Abha Doshi, Dr. Vijaya Patil, Ms. Sheeja Koliyote, Ms. Aushima Dasari, Ms. Sharvani Pednekar, Ms. Sapna Jaiswar, Ms. Gayatri Naik, Ms. Sharvari Desai, Ms. Nidhi Mishra, Ms. Nashita Attarwala, Mr. Sunil Mohite, Ms. Ankita Patade. Last but not the least our faculty members, Student council and METIOPions for their contribution and support.



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email: communications@met.edu | www.met.edu

