INNOVATION & NEW DEVELOPMENT IN PHARMACY FQ

°o

JL5E 2023





MAHARASHTRA EDUCATIONAL SOCIETY'S

H.K. COLLEGE **OF PHARMACY**

PRATIKSHA NAGAR OSHIWARA, MUMBAI 400 102

PHARMACIST'S OATH

I SWEAR BY THE CODE OF ETHICS OF THE PHARMACY COUNCIL OF INDIA IN RELATION TO THE COMMUNITY AND SHALL ACT AS AN INTEGRAL PART OF THE HEALTHCARE TEAM.

I SHALL UPHOLD THE LAWS AND STANDARDS GOVERNING MY PROFESSION.

I SHALL STRIVE TO PERFECT AND ENLARGE MY KNOWLEDGE TO CONTRIBUTE TO THE ADVANCEMENT OF PHARMACY AND PUBLIC HEALTH.

I SHALL FOLLOW THE SYSTEM, WHICH I CONSIDERED THE BEST FOR PHARMACEUTICAL CARE AND COUNSELING OF PATIENTS.

I SHALL ENDEAVOR TO DISCOVER AND MANUFACTURE DRUGS OF QUALITY TO ALLEVIATE THE SUFFERINGS OF HUMANITY.

I SHALL HOLD IN CONFIDENCE THE KNOWLEDGE GAINED ABOUT THE PATIENTS IN CONNECTION WITH PROFESSIONAL PRACTICE AND NEVER DIVULGE UNLESS COMPELLED TO DO SO BY THE LAW.

I SHALL ASSOCIATE WITH ORGANIZATION'S HAVING THEIR OBJECTIVES FOR THE BETTERMENT OF THE PROFESSION OF PHARMACY AND MAKE A CONTRIBUTION TO CARRY OUT THE WORK OF THOSE ORGANIZATIONS.

WHILE I CONTINUE TO KEEP THIS OATH INVIOLATE, IT MAY BE GRANTED TO ME TO ENJOY LIFE AND THE PRACTICE OF PHARMACY RESPECTED BY ALL, AT ALL TIMES.

SHOULD I TRESPASS AND VIOLATE THIS OATH, MAY THE REVERSE BY MY LOT!

CONTENTS

EDITORIAL	2
MISSION, VISION, AND TRUSTEES	4
TRIBUTE TO OUR FOUNDER	5
MESSAGES FROM MANAGEMENT	6
TEACHING AND NON-TEACHING FACULTY	8
LIBRARY	9
M. PHARM. PROJECT	10
ALUMNI	12
H.K TOPPERS.	13
ACHIEVEMENTS	15
CAMPUS EVENTS	16
PLACEMENT CELL	21
ORANE - ANNUAL DAY	22
SPORTS	24
TECH CRUNCH	24
РНО	25
CORE COUNCIL	26
SCIENTIFIC ARTICLES	29
NON-SCIENTIFIC ARTICLES	33
STUDENT SUBMISSIONS	36
FACULTY PHOTOS	41
COLLEGE COMMITTEES	42
DEPARTMENT PHOTOS	48
CLASS PHOTOS	50

Editorial Board











AUZAMMIL SAPTAO,

Remove this



RAM SHAZILA











Editorial Message

It gives us immense pleasure and happiness to present our very own college Annual Magazine Impulse '2023.

With great energy and enthusiasm Impulse is launched every year. The magazine highlights curricular, co-curricular and extracurricular activities of the institute.

Impulse doesn't just highlight the glory of the college; it also provides a platform for the students to showcase their talent. We aim that while reading Impulse, one gets engrossed in it in spite of their busy schedule.

Finally, with immense gratitude we would like to thank everyone who has contributed to Impulse. We hope you enjoy reading it as much as we liked creating it.



The Founding President of Maharashtra Educational Society, the Late Prof. Javed Khan established H.K College of Pharmacy in the year 2006 to provide the foremost pharmacy education to the students.



Founder President

LATE PROF. JAVED KHAN

Former Minister of Education, Housing & Labor Welfare-Govt. of Maharashtra Former Chairman-CIDCO

VISION

To be recognized as the institution providing quality education in pharmacy to serve the healthcare sector.

MISSION

By imparting knowledge in the field of pharmacy through continuous improvement in integrated teaching learning process.

All round development of the students by inculcating sense of ethical practices, social empathy and management skills.

Encourage students towards higher education and research.

HKCP Management

Mrs. Humera Khan PRESIDENT





Mr. Waseem Javed Khan GENERAL SECRETARY

AFFILIATIONS

All India Council For Techincal Education (A.I.C.T.E.)

Directorate of Technical Education (D.T.E.), Maharashtra.

Pharmacy Council of India (P.C.I.)

University of Mumbai

ISO 9001:2008

Dr. Azeem Javed Khan TRUSTEE



President's Message

Consistent with its vision, H.K College of Pharmacy imparts quality education to the students in the field of pharmacy since 2006. Our expert faculties help the students to attain the knowledge and guidance to become successful professionals in the field of pharmacy and explore their talents. Along with better education, students are encouraged to participate in extracurricular activities. Every year cultural and sports events are held for students to explore themselves.

Our annual college magazine "Impulse" is a platform for students to explore their talents and improve their interpersonal skills. "Impulse" is a great opportunity for students to acknowledge their art pieces and articles. Along with the display of the college's achievements, the magazine also features various informative articles and creative artworks.

The Proficient Management, Staff, and Faculty of H.K college of pharmacy, all are committed to provide their best support to the students so that they can achieve their full potential and become academically sound, professionally competent in the field of pharmacy.



Remove highlighted Portion

I look forward to seeing the success of all the Students, Faculty Members, and Editors of Impulse 2023.

Mrs. Humera Khan President, Maharashtra Educational Society.

General Secretary's Message



Education is the mother of leadership; teachers open the door but you need to enter by yourself. Remove

Humera Khan College of Pharmacy pledged to commit itself to improve community health by providing quality education. The institution aims to provide a learning-centred environment with proper mentoring to help students make lifelong contributions to the healthcare sector.

We all are aware of how technology is changing the Maharashtra Educational Society

face of education so to tackle such issues, the need for leaders and experienced professionals who are adept in their respective fields has grown. To encourage leadership and power to influence the students, it has become imperative to employ a refined way of teaching practices that this institution attempts to offer. Remove highlighted portion

The college magazine 'Impulse' helps bring alumni, staff, and budding pharmacists to come together and caters to special interests and gives more recent information to help ameliorate this institution.

The magazine helps in the refinement of the temperament of students via unity, coordination, innovative thinking, and time management. The main objective of Impulse 2023 is to provide a high-regard picture of the institute. I extend my warm wishes to the Principal, Staff, and future pharmacists to continue this journey on the road to excellence.

Mr. Waseem Javed Khan,

General Secretary Maharashtra Educational Society

Trustee's Message

Humera Khan College Of Pharmacy attempts to impart knowledge up to the expected standards provided by the University of Mumbai in the field of Pharmacy.

We at Humera Khan College Of Pharmacy uplift and motivate students to give their heart and soul in their examinations, co-curricular activities, and competitive examinations.

We inculcate an appreciable astute along with a positive perspective, outlook, and conduct providing a strong substructure for the students to tackle different challenges in keywove highlighted portion

We not only focus on educating the students into being successful Pharmacists but also to step up to be socially responsible human beings with good values for a better tomorrow.

I extend my good wishes to all the students and wish them success in their academic careers and future endeavors.



Dr. Azeem Javed Khan

Trustee Maharashtra Educational Society.

Principal's Message



I am glad that the Annual Magazine of H K College of Pharmacy - "Impulse – 2023" is being released. The Covid-19 pandemic has affected almost every aspect of life, the teaching-learning process is no exception. The pandemic was inevitable. However, there was a need to adjust to the unprecedented times.

As per the recommendation by New Educational Policy-2020, the future lies in creating an environment

that relies heavily on Technology. With a vigor commensurate with exigencies of times & a sense of responsibility, our college systems settled down to a new normal. It is commendable that HKCP lived up to its institutional ethos once again and proved to be successful in maintaining a continuum in learning.

Impulse-23 unleashes a wide spectrum of creative skills ranging from writing to editing and even in designing the magazine. I would like to congratulate the editorial team for their hard work and dedication that has resulted in the publication of this issue of the college magazine.

Prof.(Dr.) Madhusudan N. Saraf Principal

HKCP Staff

Prof. (Dr.) Madhusudan Saraf (M.Pharm. PhD), Principal

TEACHING STAFF		
NAME	DESIGNATION	QUALIFICATION
DEPARTMENT OF PHARMACEUT	ICS	
Dr. Indira Parab Remove name	Associate Professor	M.pharm,PhD
Dr. Jaya Agnihotri	Associate Professor	M.pharm,PhD
Dr. Mohd. Wais	Associate Professor	M.pharm,PhD
Dr. Sheela Yadav	Associate Professor	M.pharm,PhD
Mrs. Samreen Khan	Assistant Professor	M.pharm
Mr. Nihal Shaikh	Assistant Professor	M.pharm
Mrs. Vaishali Patel	Assistant Professor	M.pharm
Mrs Geeta Taur	Assistant Professor	M.pharm
DEPARTMENT OF PHARMACEUT	ICAL CHEMISTRY	
Mrs. Rachel Britto	Assistant Professor	M.pharm
Mrs. Shehnaaz Saksena	Assistant Professor	M.pharm
Ms. Jayashree Sharma	Assistant Professor	M.pharm
Ms. Akshata Pahelkar	Assistant Professor	M.pharm
Ms. Sayli Sawant Add Mr. Prathmesh Koth	awadessistant Professor	M.pharm
DEPARTMENT OF PHARMACEUT	ICAL ANALYSIS	
Dr. Anagha Raut	Associate Professor	M.Pharm. PhD (Tech)
DEPARTMENT OF PHARMACOLO	GY	
Dr. M N Saraf	Professor	M.pharm. PhD
Dr Anuradha Pai Unbold name	Associate Professor	M.pharm,PhD
Mrs. Sunanda Patil	Assistant Professor	M.pharm
Ms. Nikhat Khan	Assistant Professor	M.pharm
DEPARTMENT OF PHARMACOGN	IOCY	
Mrs. Parimal Kotkar	Assistant Professor	M.pharm
Mrs.Dipti Chirmade	Assistant Professor	M.pharm
Ms. Nida Afzal	Assistant Professor	M.pharm
DEPARTMENT OF PHARMACY PI	RACTICE	
Dr. Archana Upadhya	Associate Professor	M.pharm,PhD
Mrs. Joshna Mali	Assistant Professor	M.pharm

OFFICE & LIBRARY STAFF

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Ms. Sreelata Kartha	Data Entry Operator	Mr. Venkates
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Ms. Ankita Nitore	Lab. Assistant	Mrs. Madhui
Ms. Sonam Mungekar	Lab. Assistant	Mr. Prashant
Mr. Santosh Padelkar	Lab. Assistant	Mr. Subhash
Ms. Pradnya Gaikwad	Lab. Assistant	Mr. Puttu Ch

ME	DESIGNATION
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rs. Asma Shaikh	Lab. Assistant
. Venkatesh Udaiyar	Supervisor
s. Darshana Kadam	Asst. Librarian
rs. Madhuri Lamkhede	Sr. Accountant
. Prashant Waghmare	Account Assistant
. Subhash Khandare	Lab. Attendant
. Puttu Chauhan	Peon



LIBRARY DETAILS

- TOTAL NUMBER OF BOOKS IN THE LIBRARY(B.PHARM) : 7820
- TOTAL NUMBER OF M.PHARM BOOKS (PHARMACEUTICS) : 470
- TOTAL NUMBER OF BOOKS IN THE LIBRARY : 8290
- TOTAL NUMBER OF TITLES :
 2308
- CD/DVD ROMs : 40
- THESIS : **78**
- BOUND VOLUME : 150



SUBSCRIPTION	DETAILS	BENEFITS
(Http://delnet.in/)	E-Journals – 200 E-Books (Medical Books)- 374 E-Books - 10685	Reference
e-Granthalaya 3.0	Library Software	Automation
HKCP e-Library	http://10.10.0.5/hkcpopac/	Self – Learning for students
HKCP Library Blog	hkcplibrary.blogspot.com	Self –Learning for students
Indian Journal Of Pharmaceutical Science	Journal	Reference
Indian Drugs	Journal	Reference

Other Facilities

- Installed Library Software E- Granthalaya New Version eG3 With OPAC.
- Barcode System for Issue –Return
- Classifying the Books as per DDC 22nd Edition for Standard Classification Faculty.

ALUMNI SPOTLIGHT











Intercollegiate Competition Some achievements are unforgettable!









TEACHER OF EXCELLENCE AWARD

Pharmacology Teacher of Excellence award is bestowed on Professor M. N. Saraf in recognition of his outstanding contributions in Teaching & Research by the Indian Pharmacological Society.











HKCP PRESENTATION AT RAJ BHAVAN

"We are proud to have announced that Shaikh Mohd Fareed Mohd Firoz, a student at H.K College of Pharmacy, had the honor of presenting his Aavishkar research project poster at the prestigious Raj Bhavan in front of the honorable Chief Minister of Maharashtra and Governor of Maharashtra, as well as esteemed veterans from the armed forces and leading industrial figures on the occasion of Republic Day Program. This was a momentous achievement that was a testament to Shaikh Mohd Fareed Mohd Firoz's diligent efforts and unwavering dedication to his studies.





B.PHARM RANKERS

FIRST YEAR



SHAMBHAVI PANDEY FIRST

SECOND YEAR



SAANIKA KABRE FIRST



AAKANKSHA MOKAL SECOND



NAINA PRAJAPATI THIRD



MITTAL CHHITRODA SECOND



VAIDEHI PATIL Third

THIRD YEAR



VORA PAYAAM FIRST



ATEEQA KASIM SECOND



LAXMI MAHTO THIRD

FOURTH YEAR



IMTIYAZ KHAN FIRST



TABASSUM SHAIKH SECOND



RAJNEESH DUBEY THIRD

M.PHARM RANKERS

FIRST YEAR



KHAN SABA FIRST



SHAIKH FAREED SECOND



PATWA PRIYA Third

Design this page with trophis or something else



Cultural

Week



The most awaited cultural week was organized from 3rd February to 7th February 2023. The cultural week was full of fun with various themes and competitions to bring the best out of students. Starting with the Bollywood day on 3rd February, the students were most excited to show their inner Bollywood, Hollywood and superheroes characters. All the students acted their character and entertained the faculty members and proved their acting skills. Also,on this day mehendi,bridal makeup,no brush painting, nail art competitions were held and were judged by our professors. The second day on 4th February was the ethn day as all the students were looking amazing in their traditional attires. The funfair conducted by the committee and various food and game stalls were organized by st On 6th February, event of treasure hunt was conducted and the students enthus ically udents participated in the game. The theme for the day was various meme attires. All the dressed up as a meme character. The last day of cultural week was full of shine, udents wore shiny party wear and formal outfits. Logo designing, food art without fi ace and rangoli competition were conducted on the same day. The students of H.K em d in all the art forms and introduced the artist within them in this cultural week.

World Pharmacists' Day

The TY B.Pharm students celebrated pharmacist day on September 25, 2022, by highlighting the significance of the day and raising awareness of vitamin D deficiency and Arthritis. On Juhu beach, the students assembled with posters and information .They educated individuals on the causes, symptoms, risks, and adverse effects of vitamin D deficiency and arthritis.They also raised awareness about the available treatments for these conditions. The audience cheered them on and expressed their gratitude for their efforts.



Independence Day Republic Day



NAMPUS EVEN

ACG Capsules Seminar

"New Application And **Technology In Capsules"**

A seminar on 'New Products & Applications in Capsule' was organized by ACG Capsules where 3 industrialists Dr. Dgyandev Bhat, Mrs. Dorene Almeida, Ms. Anita Solanki shared their knowledge on the new technologies and innovation with respect to the capsules.





Clinical Trials A two-day career guidance session was organized Seminar

on the 21st and 22nd of December 2022 under the guidance of Dr Indira Parab and Mrs Samreen Khan. The Speaker for the first day was Dr Aasawari

Nalgundwar, a Life member of the Indian medical association and the Indian Association of Preventive and Social Medicine. She summarised healthcare management and its demand in the international market. On the second day, a seminar was conducted by Dr Ajaykumar Malle,



CEO of CLINICA Research Solutions L.L.P. He briefed the students about the challenges faced during clinical research and trials and the strategies to overcome them. Both sessions proved to be helpful for those who wish to uptake clinical research as a future career option





Freshers Day



HKCP hosted a welcome Party for newly admitted students on 14th January 2023. The theme for the party was King and Queen.The formal event was hosted first, starting with the principal's speech for the freshers. The informal Event was organized in which there were games like cup hijack for all the freshers. The fresher's day was full of surprises and prizes for the best dressed student, one lucky winner and prizes for the other games. The best interactive fresher Mr.Shamsh Tabraiz, Ms.Aditi Pandey were given the tag of Mr and Miss fresher, respectively. The event was a ride of joy and a warm welcome for the freshers to start their college journey with great enthusiasm and passion. All the freshers interacted with the faculties and their seniors. The Fresher's party concluded with great food and dance for all the students.

Teachers Day

The cultural committee and student council of HKCP organized a teacher's day celebration on 5th September 2022. The event was graced by various performances of the students including cake cutting and many more.



Independence Day



Independence week was celebrated at HKCP by organising various competitions like elocution, short poem writing, cloth painting, poster competition, singing and quiz competition under the theme of 'Har Ghar Tiranga', Peace and Harmony. The 75th Independence Day was celebrated at the HK college of Pharmacy campus with great joy and pomp. On that pleasurable day, a sense of happiness was seen on the faces of people. The event started with prayers followed by a parade that was performed by students. After the parade, all the senior teachers, and principal unfurled the flag together. The national anthem was sung.

In the cultural program, the students presented various types of activities like dance, singing and drama based on the patriotic theme. Students delivered speeches with great passion. Certificates were distributed to the winners of the competitions conducted during Independence week.

There was a feeling of pride and patriotism in everyone's heart. At the end of the program all the students were given sweets.

Women's Day



IPR Webinar

Online Webinar on "Intellectual Property Rights (IPR) & Patents and Design filing." was Jointly Organized by H.K. College of Pharmacy, Jogeshwari, Mumbai in association with Rajiv Gandhi National Institute of Intellectual Property Management (RGNIIPM) Government of India, Nagpur The Webinar was Supported by the Department of Science and

Technology, Government of India held on 6 th October 2022. The objective of webinar was to spread awareness on IPR and to support our country's economic progress which depends heavily on intellectual property rights as the R&D workforce and infrastructure in India are significant assets. The Program was coordinated by Dr Indira Parab(HOD, Pharmaceutics) and Dr Jaya Agnihotri. The speaker Mrs Puja Vishal Maulikar delivered the content in a knowledgeable manner. The Q&A round were very interactive and informative.



Mentor mentee program: Involve to evolve

An interactive session for the HKCP students was organized by the Alumni committee on 17th September 2022 under the guidance of Mrs.Rachel Britto and Mrs.

Samreen Khan. Various Alumni had joined the session who were invited from different fields like marketing, regulatory affairs, R&D, medical advice, medical writing, etc. The alumni shared the knowledge from their field and solved the students' doubts. Few alumni from abroad like the US and UK sent their videos which were displayed for the students where they talked about the criteria and scope of higher studies.



ORANE

The Annual cultural eve of of the H K college of pharmacy "ORANE 2023" was held on 3rd March 2023 and celebrated enthusiastically.

The program was inaugurated by lighting the lamp. The evening was colourful with vibrant cultural programmes like singing, dancing, Fashion shows, Skits, and group performances. These events were followed by the inauguration of "Technical Bulletin 2023" and our college magazine by the chief guest Mr Rashmikant Mohile, Managing Director of C.L.A.I.M.S. Pvt Ltd.

The magazine inauguration was followed by Prize Distribution where the achievers in various competitions and toppers were felicitated for their achievements. It was a spectacular and fun evening for everyone to remember.





Placement

PLACEMENT DETAILS FOR BATCH 2021-22

Novartis (Trainee) 1 B. Pharm, 2 M. pharm

Ideal cures (Trainee) 2 M.Pharm

Integrace Healthcare Pvt. Ltd.(Field Sales Officer) 3 B.Pharm

Khubee health (Management trainee) 3 B.Pharm

Advnaz pharma (Trainee Regulatory affairs) 1 M.Pharm

Glenmark pharmaceutical (Field Sales Officer) 2 B.Pharm

IPCA Laboratories PVT Ltd. (Trainee) 1 B.Pharm

IKS Healthcare, Airoli (Associate in Data management and Abstraction) 1 B.Pharm

Symbio Research and clinicals Sourcing company (Junior Executive sales) 1 B. Pharm

Life Insurance, Prudential (Trainee) 1 B. Pharm

Troikaa (Business Executive) 1 B. Pharm

Pragati multi-speciality hospital (Pharmacist) 1 B. Pharm

Oscar multi speciality hospital (Pharmacist) 1 B. Pharm

Bharat Generic medical (Pharmacist) 1 B. Pharm

Welcome Medical and General Stores (Pharmacist 1 B. Pharm

Medplus (Pharmacist) 1 B. Pharm

Asian Heart Institute (Trainee Pharmacist) 1 B. Pharm

Family Business 2 B.Pharm Fonts not visible

Higher Studies DETAILS FOR BATCH 2021-22

Name of the student	University	Course Name
Dagia Ahmad Kazi Mohammed Ayaan Qureshi Mohd. Arbaaz Ranasariya Ahmed Amin Shaikh Muskan	Kingston University, London	MS in Pharmaceutical sciences
Shaikh Fatima Dimpele Motiramani	Northeastern University, Boston	M. Pharm
Patil Bhagyesha	Liverpool John Moores University	MS in Pharmaceutical sciences
Chowdhery Aliya S	NIPER, Mohali	MS (Pharm) in Natural Products
Kadam Janvi	Institute of Clinical Research Singhania University	MSc in Clinical research
Maurya Suman	MIMA Institute of Management, Pune	Pharm MBA
Mourya Aman Shetty Samiksha	NMIMS, Shobhaben Pratapbhai Patel School Of Pharmacy & Technology Management	M. Pharm (Regulatory Affairs)
Nanavati Jill Khan Imtiaz	Dr. Bhanuben Nanavati College of Pharmacy, Vileparle	M. Pharm (Pharmaceutics)
Siddiqui Mohd Danish Shaikh Saud Iqbal	IES MCRC	Pharm MBA
Saroj Pradeep	Vivekanand Education Society college of Pharmacy	M. Pharm
Dubey Rajneesh		
Prajapati Ravikesh		
Shukla Arpita		
Singh Supriya	H K College of Pharmacy	M. Pharm (Pharmaceutics)
Walavalkar Ojas		
Mendon Omkar		















TECH CRUNCH

On 28th February 2023, HKCP organized "Science Day". This event was organized by the scientific committee of HKCP under the guidance of Ms.Sunanda Patil, Ms.Rachel Britto and Dr. Archana Upadhyay.Tech-Crunch was held to enhanced students' knowledge regarding case study on the particular subject and to get the innovative idea from the students,the skills to communicate was also one of the motive to hold this event. There has been an excellent participation in the whole event by the students of B. Pharmacy.The enthusiastic participation was shown by each of the year from First to Final years regarding the Tech-Crunch.





PHO

HEALTH CAMPAIGN TO SHANTI DAAN ASHRAM

"Hands that serve are holier than lips that pray"

The PHO Committee of H. K. college of pharmacy organised an event to increase awareness of various health threats by conducting health campaigns at Shanti Daan Ashram, Gorai Creek, Borivali west on Date : 23rd December ,2022.

The vision was to create disease free society with excellence in health care sector with the devotion to inculcate competencies of highest standard. The event was lead by our faculty incharges Dr.India Parab and Dr.Sunanda Patil accompanied by Our PHO student head incharge Mr. Ritik Singh along with fellow members of PHO committee. The purpose behind the visit was to help the 142 residents in the shelter in all the possible way the students could. The event was a success because of the hardwork of PHO Committee.



TREE PLANTATION DRIVE

Public Health Organization (PHO) Committee of H.K College of Pharmacy organized a Tree Plantation Drive in H.K Educational Campus on 1st October, 2022.

The arrangement for the tree plantation program was done under the guidance of Dr. Indira Parab, along with Mrs. Parimal Kotkar by PHO members Aakash and Khushboo. Saplings of medicinal plants like Kokam, Panvel, Lemom, Gulvel, Hibiscus, Almond etc. were bought prior to the event. Fertilizers, gardening pots and other arrangements were also done in advance by the faculty incharge and volunteers. The drive was scheduled at 1:00 pm at the medicinal garden of H.K. Campus. Our Chief Guest Shrimati Humera Khan Ma'am with other dignities planted saplings of medicinal plant. The day was made memorable with the gracious presence of Principal and Ex-Principal of H.K College of Education, Principal of H.K College of Management and Principal and faculty of Oriental Education Society.





HEALTH CHECKUP CAMP



BLOOD DONATION CAMP

"Hands that serve are holier than lips that pray"

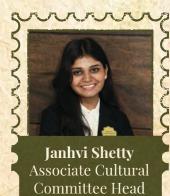
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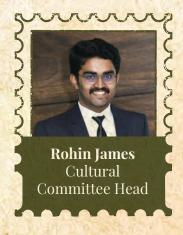
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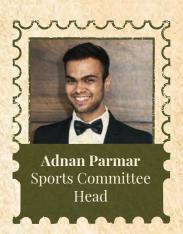






Ritik Singh PHO Committee Head







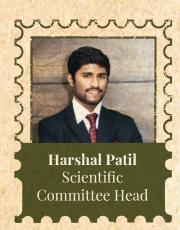
Associate Head

together we are stronger

COUNCIL



Saanika Kabre Magazine Committee Designing Head





Placement Committee Head



Varun Pasi Magazine Committee Editorial Head



Zaim Surve Scientific Committee Associate Head



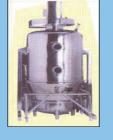
Shivam Chaturvedi Notice Board & Medicinal Garden Committee Head

Working together is success

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FLUID BED DRYER

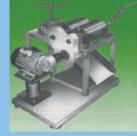


DIFFUSION CELL APP. DIGITAL CENTRIFUGE

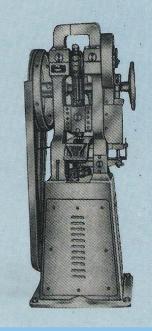


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Р

IMMUNOTHERAPY FOR CANCER

Sadichha Mantri

Cancer immunotherapy, also known as immuno-oncology, is a form of cancer treatment that uses the power of the body's own immune system to prevent, control, and eliminate cancer. Cancer immunotherapy comes in a variety of forms, including targeted antibodies, cancer vaccines, adoptive cell transfer, tumor-infecting viruses, checkpoint inhibitors, cytokines, and adjuvants. Immunotherapies are a form of biotherapy because they use materials from living organisms to fight disease. Some immunotherapy treatments use genetic engineering to enhance immune cells' cancer-fighting capabilities and may be referred to as gene therapies. Many immunotherapy treatments for preventing, managing, or treating different cancers can also be used in combination with surgery, chemotherapy, radiation, or targeted therapies to improve their effectiveness.

Immunotherapy can:

Educate the immune system to recognize and attack specific cancer cells

Boost immune cells to help them eliminate cancer

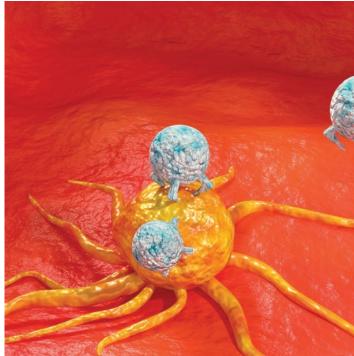
Provide the body with additional components to enhance the immune response

Immunotherapy is among one of the newest approaches to treat cancer. Immunotherapy is based on understanding that cancer cells can hide from the immune system through multiple techniques. Immunotherapy enhances the immune system's ability to recognize, target, and eliminate cancer cells, wherever they are in the body, making it a potential universal answer to cancer. Immunotherapy has been approved in the U.S. and elsewhere as a first-line of treatment for several cancers, and may also be an effective treatment for patients with certain cancers that are resistant to prior treatment. Immunotherapy may be given alone or in combination with other cancer treatments. As of December 2019, the FDA has approved immunotherapies as treatments for nearly 20 cancers as well as cancers with a specific genetic mutation.

It is made up of white blood cells and organs and tissues of the lymph system. Immunotherapy is a type of biological therapy which uses substances made from living organisms to treat cancer. The immune system detects and destroys abnormal cells and most likely prevents or curbs the growth of many cancers. For instance, immune cells are sometimes found in and around tumors. These cells, called tumorinfiltrating lymphocytes or TILs, are a sign that the immune system is responding to the tumor. People whose tumors contain TILs often do better than people whose tumors don't contain them. Even though the immune system can prevent or slow cancer growth, cancer cells have ways to avoid destruction by the immune system. For example, cancer cells may:

Have genetic changes that make them less visible to the immune system.

Have proteins on their surface that turn off immune cells. Change the normal cells around the tumor so they interfere with how the immune system responds to the cancer cells.



Immunotherapy helps the immune system to better act against cancer.

Types of immunotherapy:

Several types of immunotherapy are used to treat cancer. These include:

Immune checkpoint inhibitors, which are drugs that block immune checkpoints. These checkpoints are a normal part of the immune system and keep immune responses from being too strong. By blocking them, these drugs allow immune cells to respond more strongly to cancer.

T-cell transfer therapy, which is a treatment that boosts the natural ability of your T Cells to fight cancer. In this treatment, immune cells are taken from your tumor. Those that are most active against your cancer are selected or changed in the lab to better attack your cancer cells, grown in large batches, and put back into your body through a needle in a vein.

T-cell transfer therapy may also be called adoptive cell therapy, adoptive immunotherapy, or immune cell therapy.

Monoclonal antibodies, which are immune system proteins created in the lab that are designed to bind to specific targets on cancer cells. Some monoclonal antibodies mark cancer cells so that they will be better seen and destroyed by the immune system. Such monoclonal antibodies are a type of immunotherapy.

Monoclonal antibodies may also be called therapeutic antibodies.

Treatment vaccines, which work against cancer by boosting your immune system's response to cancer cells. Treatment vaccines are different from the ones that help prevent disease.

Immune system modulators, which enhance the body's immune response against cancer. Some of these agents affect specific parts of the immune system, whereas others affect the immune system in a more general way.

The routes of administration for immunotherapy are intravenous, oral, topical, intravesical. Immunotherapy can cause side effects, many of which happen when the immune system that has been revved-up to act against the cancer also acts against healthy cells and tissues in your body.

PSYCHEDELIC MEDIČINE

Shubham Sharma

INTRODUCTION:

Clinical research centres around the world are studying the use of psychedelic substances to treat addiction, depression, anxiety, and PTSD (PTSD). Most psychedelic chemicals have been labelled "drugs of abuse" since the 1950s and 1970s. Recently, controlled clinical studies have evaluated the psychopharmacological characteristics and therapeutic efficacy of these drugs as adjuncts to standard psychotherapy. The therapeutic clinician-patient interaction, the patient's set (psychological expectations), and the setting (physical environment) are crucial to this comeback.

HISTORY:

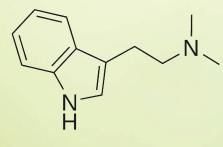
Psychedelics have been used in alternative medicine and religious rituals for hundreds of years because people think they are good for the body and mind. In this setting, the word "entheogen" is often used to describe them. Native American healers who used mescaline-containing cacti (like peyote, San Pedro, and Peruvian torch) to treat alcoholism said it worked, while Mazatec healers often use psilocybin mushrooms for healing and divination. In Peru and the rest of South America, the psychedelic drink ayahuasca is used in religious ceremonies and to heal both the body and the spirit.

TYPES OF PSYCHEDELICS DRUGS

The majority of psychedelic drugs are classified as belonging to one of three families of chemical compounds: tryptamines, phenethylamines, or lysergamides. The majority of these substances tend to exert their effects by acting as serotonin 2A receptor agonists. However, the exact nature of how psychedelics induce changes in perception and cognition via the 5-HT2A receptor is still unknown, although reduction in default mode network activity and increased functional connectivity between regions in the brain as a result may be one of the most relevant pharmacological mechanisms. When compounds bind to serotonin 5-HT2A receptors, they modulate the activity of key circuits in the brain that are involved with sensory perception and cognition. The psychedelic experience is frequently compared to non-ordinary forms of consciousness, such as those that are experienced in meditation, mystical experiences, and neardeath experiences. These non-ordinary forms of consciousness also appear to be partially underpinned by altered activity in the brain's default mode network. It is common practice to highlight the concept of ego death as an essential component of the psychedelic experience.

PHARMACOLOGY

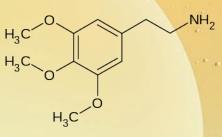
Tryptamines



Tryptamine is one of the trace amines that can be discovered in the central nervous systems of mammals. It is postulated that it acts as a neuromodulator on classical monoamine neurotransmitters like dopamine, serotonin, and

norepinephrine. These are some examples (epinephrine). Tryptamine acts as a non-selective serotonin receptor agonist to activate serotonin receptors and as a serotonin–norepinephrine–dopamine releasing agent (SNDRA) to release more monoamine neurotransmitter, with a preference for evoking serotonin and dopamine release over norepinephrine (epinephrine) release. This causes tryptamine to release Psilocin, DMT, and 5-MeO-DMT are examples of psychedelic tryptamines that can be found in nature. Examples of psychedelic tryptamines that have been created in the laboratory include 4-HO-MET, 4-HO-MiPT, and 5-MeO-DALT.

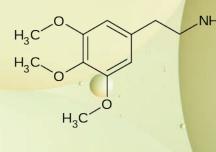
Phenethylamines



Phenethylamine is a trace amine that works as a CNS neurotransmitter (CNS). Phenethylamine modulates monoamine neurotransmission via binding to trace amineassociated receptor 1 (TAAR1), which affects neurotransmission in CNS dopamine, norepinephrine,

and serotonin neurons and inhibits VMAT2 in monoamine neurons. Monoamine neurotransmitters like dopamine cannot be released into synapses when VMAT2 is blocked. Mescaline is a substituted phenethylamine protoalkaloid.

Lysergamides



Lysergamides are amides of lysergic acid that bind to serotonin and dopamine receptors. Lysergamides are a complex Tryptamine with Tryptamine and Phenethylamine structures. LSD is a lysergamide. In recent years, scientific literature has inspired a

variety of lysergamides. Chemical research yielded others. 1P-LSD is an analogue of LSD and ALD-52. It adds a propionyl group to LSD's indole nitrogen molecule.

THERAPEUTIC ADVERSE EFFECTS

Psychedelic chemicals are not addictive and physically harmless, despite popular belief. In 2016, there were no LSD, psilocybin, or mescaline overdose deaths. Unsupervised psychedelic experiences have risks, however Ira Byock noted in 2018 in the Journal of Palliative Medicine that psilocybin is safe when delivered to a thoroughly screened patient in the right context. In the absence of these prerequisites, "fear, a protracted sense of dread, or outright panic" are possible. Due to decreased hand-eye coordination and fine motor control, driving or walking in public might be unsafe during a psychedelic experience. Some people who took psychedelics believed they had superhuman powers and committed unsafe or fatal activities. Most psychedelics can cause flashbacks of the drug experience, albeit rarely. Aftereffects may include HPPD. Psilocybininduced states of mind have traits with psychosis, and while a causal association has not been demonstrated as of 2011, researchers have advocated for investigation. Many unfavourable views of psychological hazards are unsupported by scientific evidence, with most alleged detrimental consequences not detected in a regulated and/or medical environment. A 2013 population study on psychedelic usage and mental disease revealed no link.

Nanotechnology is the study, design, synthesis, manipulation, and application of materials, devices, and systems on the nanometer scale. Nanomaterials differ significantly from other materials due to the billowing two major principal factors: the surface area and quantum effects. These factors can enhance properties such as activity, strength, electrical characteristics and in vivo behavior. Normally, drugs work through the entire body before they reach the sensed area. Using Nanotechnology, the drug can be targeted to a precise location which would make the drug much more effective and reduce the chances of possible side-effects.

Nanotechnology is expected to have a revolutionary impact on medicine, Nanoparticles can play a major role in medicine and especially in diagnosis and therapy of cancer, cardiovascular diseases and infectious diseases.

NANOTECHNOLOGY IN DRUG DELIVERY:

Increased levels of drugs can be delivered by using two types of Nanoparticles. The first type of Nanoparticle locates the cancer tumor and the second type of Nanoparticle (carrying the therapeutic drugs) homes in on a signal generated by the first type of Nanoparticle.

Photosensitizing agent to enhance the ability of drug carrying nanoparticles to enter tumors. First they let the photosensitizing agent accumulate in the tumor, then illuminate the tumor with infrared light. The photosensitizing agent causes the blood vessels in the tumor to be more porous therefore more drug carrying nanoparticles can enter the tumor

Nanoparticle that uses a protein to attach to damaged regions of arteries. This allows drugs to be applied directly to the damaged portion of the artery.

The clex busting drags are attached to a cluster of Nanoparticles that break apart in regions of turbulent blood flow, like that found when a blood flow is restricted by a clot

Drugs to treat glaucoma are being attached to Nanodiamonds which are embedded in contact lenses. The drug molecules released from the Nanodiamonds are in contact with tears, providing a more consistent dosing than often occurs using eye drops.

Nanoparticles that release insulin when glucose levels rise. The Nanoparticles contain both insulin and an enzyme that dissolve in high levels of glucose. When the enzyme dissolves the insulin is released. Nanoparticles that home in on inflamed tissue such as arterial plaque and dissolve, releasing drugs, in the presence of hydrogen peroxide that is present in the inflamed tissue

APPLICATIONS:

Some nanotechnology-based drugs that are commercially available or in human clinical trials include:

Abraxane, approved by the US. Food and Drug Administration (FDA) to treat breast cancer, non-small-cell lung cancer (NSCLC) and pancreatic cancer, is the nanoparticles Albumin bound paclitaxel.

Doxil was originally approved by the FDA for the use of HIV-related Kaposi's sarcoma. It is now being used to also treat ovarian cancer and multiple myeloma. The drug is encased in liposomes, which helps to extend the life of the drug that is being distributed.

Liposomes are self-assembling, spherical, closed colloidal structures that are composed of lipid bilayers that surround an aqueous space. The liposomes also help to increase the functionality and it helps to decrease the damage that the drug does to the heart muscles specifically.

Onivyde, liposome encapsulated irinotecan to treat metastatic pancreatic cancer which was approved by FDA in October.

C- dots (Cornell dots) are the smallest silica-based nanoparticles with the size <10 nm. The particles are infused with organic dye which will light up with fluorescence. Clinical trials have been underway since 2011 to use the C-dots as a diagnostic tool to assist surgeons to identify the location of tumor cells.

An early phase clinical trial using the platform of "Minicell' nanoparticle for drug delivery have been tested on patients with advanced and untreatable cancer. Built from the membranes of mutant bacteria,

NANOTECHNOLOGY ADVANCEMENT IN DRUG DELIVERY SYSTEM Suraj Prajapati

the minicells were loaded with paclitaxel and coated with cetuximab, antibodies that bind the epidermal growth factor receptor (EGFR) which is often overexpressed in a number of cancers, as a "homing' device to the tumor cells. The tumor cells recognize the bacteria from which the minicells have been derived, regard it as invading microorganism and engulf it. Once inside, the payload of anticancer drug kills tumor cells

In 2014, a Phase 3 clinical trial for treating inflammation and pain after cataract surgery, and a Phase 2 trial for treating dry eye disease were initiated using nanoparticle loteprednol etabonate.

ADVANTAGES:

Increased efficacy and therapeutic index

Increased stability via encapsulation.

Improved pharmacokinetic effect.

Producible with various sizes, compound surfaces, etc. Entrap both hydrophilic & lipophilic drug Protect entrapped drug from enzymatic degradation

Large variety of drugs (antineoplastic, antibiotic) peptides or protein (including antibodies) & viruses & bacteria can be incorporated into nanoparticles. Water soluble drugs are trapped in aqueous compartment & lipophilic drugs without the need for chemical modification Nanoparticle encapsulated drugs are delivered intact to various tissues and cells and can be released when nanoparticles are destroyed, enabling site specific and targeted drug delivery.

Other tissues and cells of the body are protected from drug until it is released by nanoparticles thus decreasing drug toxicity

DISADVANTAGES:

Include their tendency to be taken up by cells of the reticuloendothelial system and the slow release of the drug when the liposomes are taken up by phagocytes through endocytosis, fusion, surface adsorption or lipid exchange.

Stabilizing the formulated liposomes is also difficult, but many approaches are now used for their stabilization. Conclusion

The emergence of nanotechnology is likely to have a significant impact on the drug delivery sector, affecting just about every route of administration from oral to injectable. Accenting to specialist market research firms NanoMarket. Nimo-implants will also be used in the not too distant future for treating cancer. Among the first nanoscale devices to show promise in anti-cancer therapeutics and drug delivery are structures called nanoshells which NanoMarkets believes may afford a degree of control never before seen in implantable drug delivery products. Despite these advances, the vast majority of consumers prefer an oral drug delivery system to implantables or injectables. With this in mind, various development groups are working to enhance traditional oral delivery systems with mandengineered improvements. There are some areas where nano-enhanced-drugs could make a big difference in increasing oral bioavailability and reducing undesirable side effects. By increasing bioavailability, nanoparticles can increase the yield in drug development and more importantly may help treat previously untreatable conditions.

The Ocean of Knowledge!

The more you know it, The higher you grow, Yet, you know the least. The confidence within makes you stand, The courage within makes you move, The power within gets refuelled, Yet, you know the least. You feel magnificent, You feel bold, You make the difference within, Yet, you know the least. Again you strive, Again you thrive, Again you conquer, You make the difference within, Yet, you know the least. The cycle revolves, Time changes, you hustle, You evolve & you remember Yet, you know the least. Such vast is the ocean of knowledge! -By Ali Rizvi

प्रदूषण

ग्लोबल वार्मिंग खड़ा मुँह बाई, प्रदूषण रोकिए, इसी में भलाई।

कूड़ा न डारी पड़ोसी के द्वारे, निज में अनुशासन तो शासन लगा रे! कूड़े की कुंडी उपयोग करी जाई. प्रदूषण रोकिए. इसी में भलाई||

नाले गटर में न कचरा बहाओ, नदियों की नइखे महत्ता घटाओ। सात-सात गंगा है देती दुहाई, प्रदूषण रोकिए, इसी में भलाई।।

सिग्रेट, प्रशीतक ने जग को हिलाया. ओजोन परतों को पतला बनाया। पैरा बैगनी किरन कहर बरसाई, प्रदूषण रोकिए इसी में भलाई।।

हेरि-हेरि हरी भरी बगिया लगाओ. परिसर शिवान खूब सूरत बनाओ। 'साहिल' करे ना सुनामी चढ़ाई. प्रदूषण रोकिए, इसी में भलाई ॥ -By Sahil Shaikh





Saanika Kabre

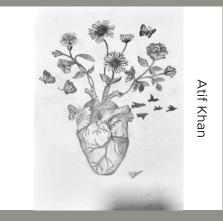








Mansi Kanse







Suraj Prajapati

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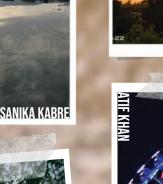






MEHVISH SIDDIQUE











TEACHING STAFF



NON-TEACHING STAFF



DEPARTMENTS



Remove Pharmaceutical Analysis Department of Pharmaceutical Analysis and Pharmaceutics



Department of Pharmacology



Department of Pharmacognosy



Department of Pharm Chem and Advertisement



Alumni Committee



Discipline & Grievance Committee

Grievance Redressal Committee



Entrepreneurship & Scientific Committee



Cultural Committee



PHO Committee



Scientific Committee



Sports Committee

CLASS PHOTOS



B.Pharm 1st Year Division A



B.Pharm 1st Year

Division B



B.Pharm 2nd Year

Division A



B.Pharm 2nd Year

Division B



B.Pharm 3rd Year - Div A



B.Pharm 3rd Year - Div B



B.Pharm Final Year



M.Pharm 1st Year



M.Pharm 2nd Year



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