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Editorial Board

Almas Shaikh
Editor
In-Chief



Palak Jain
Designing
Head



Dr. Anubha Khale
Principal



Anushka Dhume
Asst. Editor



Prof. (Dr.) Vinaykumar Velingkar
Technical Director



Jaykumar Chawda
Asst.
Designer



Dr. Mohammad Wais
Vice Principal



Manvi Kalia
Member



Aasma Chouhan
Member



Aman Mourya
Member



Mrs. Parimal Kotkar
Magazine
In-charge



Mrs. Sarita Sharma
Magazine
In-charge



Editorial's MESSAGE

We are pleased to present a unique creation in the form of Annual Magazine 'ImPulse' which serves as a platform to develop and highlight the literary and artistic segment of HKCP family. Every year 'ImPulse' is launched with an immense dedication and enthusiasm. It forms a bridge between flowing thoughts and artistic magnification. The magazine highlights curricular, co-curricular and extracurricular activities of the Institute.

To conclude, with great gratitude, we would like everyone to get acquainted with this creation and offer appreciation to everyone who has played a role in making

ImPulse19.



GOVERNING BODY

PRESIDENT

Prof. Javed Iqbal Khan
Ex. Minister of Education,
Housing and Labour, Govt. of Maharashtra,
Ex. Chairman, CIDCO



TREASURER

Mrs. Humera Khan
Principal,
Oriental College of Commerce and
Management, Andheri (W), Mumbai



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M.S. Computer Science,
Washington University, U.S.A.



TRUSTEE

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M.S. Computer Science,
Columbia University, U.S.A.
Ph.D., IIT Mumbai

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(A.I.C.T.E.)

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

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

University of Mumbai

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Humera Khan College of Pharmacy
was established in the year 2006 as a
private independent co-education in Hindi
linguistics institution.

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.



Computer Lab



Pharmacology Lab



Library



Classroom



Library Book Hall



Staffroom

HK
CAMPUS



Chemical Store Room



Medicinal Garden



Central Instrument Room



Pharmaceutical Analysis Lab



President's MESSAGE

We at H. K. College of pharmacy are committed to impart quality education in

the field of pharmacy since 2006. Our competent faculty always extend their knowledge and expertise to the students. It brings out the best qualities in the students and enables them contribute as qualified pharmacists in all aspects of pharmacy profession such as hospitals, drug stores, industry, education and research. The management, teaching, non-teaching staff members and parents come together in support of the students who promise a great future in the field of pharmacy and contribute to the society.

We at H. K. College of pharmacy always encourage the students to participate in competitive exams as well as in co curricular activities to achieve overall development. Impulse is one platform to bring out the talent in our students.

I extend my best wishes to all the students, faculty and editors of Impulse 2019

PROF. JAVED KHAN
President,
Maharashtra Educational Society

General Secretary's MESSAGE



HK. College of Pharmacy is committed to improve societal health by providing education in

Pharmacy. This is achieved through continuous improvement in integrated teaching learning process. We at HKCP are committed to holistic development of the students by inculcating sense of ethical practices, social empathy and management skills. We encourage students towards higher education and research, to make lifelong contribution in the healthcare sector.

The college magazine 'ImPulse' provides a platform to the budding pharmacists to express their creative pursuit. The magazine is a medium to share the significant accomplishments of the college. 'ImPulse' helps to connect, share and inspire our alumni, students, staff and other stakeholders with our constantly evolving efforts towards the betterment of the college.

'ImPulse' provide the students a platform to think, express, and exhibit their skills. The magazine aims to develop the personality of the students through team work, innovative thinking, critical analysis and time management. 'ImPulse-2019' will create an impact in the mind of the readers by providing a larger picture of the institute. I extend my warm wishes to the Principal, Staff and Students to continue this journey on the road of excellence.

MR. WASEEM KHAN

General Secretary,
Maharashtra Educational Society



Foreword

It gives me a sense of great achievement and satisfaction to announce release of the 9th Edition of our college Annual Magazine, ImPulse 19. The magazine is the outcome of dedicated efforts of our students and staff members.

The magazine takes you through the colourful events and activities which took place in the college in year 2018-19. Glimpses of the excellent infrastructure provided by the supportive management, research strengths of our faculty-scientists with their research students are some of the important features of this magazine in addition to the interesting scientific reading. I appreciate the Editorial Team for its commendable job.

I am glad to say that our students have fully utilized this creative platform to share their innovative ideas and scientific information with the readers.

Wish you all very enjoyable reading. We appreciate your suggestions or comments about the magazine with a view of continuous improvement. Please feel free to write me on email id, anubha.khale@hkcp.edu.in



Dr. ANUBHA KHALE
Principal

Technical Director's Message



Greetings Dear All,

In the immortal words of Swami Vivekananda "Fill the brain with high thoughts, highest ideals, place them day & night before you & out of that will come great work",

I have a firm belief that it's our duty as educators & as a society at large, not just to create highly skilled professionals but also, great leaders who would emerge victorious in all endeavours in life. At this point of time, it is of paramount importance that we produce dynamic professionals who can adapt & lead 'organisations', by imparting quality education coupled with sterling ideals enabling them to achieve commendable success in life ahead!

Our motto at HK College of Pharmacy has always been to impart highest quality of education to our students ensuring their development at this pivotal phase of their career. There has been a great focus on extra-curricular activities too; right from celebrating cultural days to the launch of our annual college magazine, which I am particularly proud of for showcasing the laurels of our students at every stage of their journey in these golden years.

In the years ahead, I am extremely confident & hopeful that we shall achieve even more accolades & remarkable accomplishments as we strive to become an admirable centre of excellence imparting pharmaceutical education in the country.

Keep walking & grow together.

- Prof. (Dr.) V S Velingkar
Technical Director

TEACHING FACULTY

NAME OF FACULTY	DESIGNATION	QUALIFICATIONS
DEPARTMENT OF PHARMACEUTICS		
Dr. Anubha Khale	Principal	M.Pharm, PhD, MBA
Dr. Mohammad Wais	Vice Principal, Associate Professor	M.Pharm, PhD
Dr. Sheela Yadav (HOD)	Assistant Professor	M.Pharm, PhD
Dr. Jaya Agnihotri	Associate Professor	M.Pharm, PhD
Dr. Ritesh Fule	Assistant Professor	M.Pharm, PhD (Tech)
Dr. Geeta Bhagwat	Assistant Professor	M.Pharm, PhD (Tech)
Ms. Shamshiya Malik	Assistant Professor	M.Pharm
DEPARTMENT OF PHARMACEUTICAL MEDICINAL CHEMISTRY		
Dr. Vinaykumar Velingkar (HOD)	Professor and Technical Director	M.Pharm, PhD
Dr. Reshma Tendulkar	Assistant Professor	M.Pharm, PhD
Dr. Arundhati Abhyankar	Assistant Professor	M.Pharm, PhD (Tech)
Mrs. Rachel Britto	Assistant Professor	M.Pharm
DEPARTMENT OF PHARMACOLOGY		
Ms. Faiza Shaikh (HOD)	Assistant Professor	M.Pharm
Mrs. Sarita Sharma	Assistant Professor	M.Pharm
DEPARTMENT OF PHARMACEUTICAL ANALYSIS		
Dr. Anagha Raut (HOD)	Assistant Professor	M.Pharm, PhD
Dr. Archana Bele	Assistant Professor	M.Pharm, PhD, MBA
Mrs. Ojaswi Ghadge	Assistant Professor	M.Pharm
DEPARTMENT OF PHARMACOGNOSY		
Dr. Priyanka Goswami (HOD)	Associate Professor	M.Pharm, PhD
Dr. Iram Nazish	Assistant Professor	M.Pharm, PhD
Mrs. Parimal Kotkar	Assistant Professor	M.Pharm

NON TEACHING FACULTY

NAME	DESIGNATIONS	NAME	DESIGNATIONS
Mr. Hemant Budhawale	Librarian	Ms. Darshana Kadam	Asst. Librarian
Ms. Shubhangi Kamtekar	Computer Operator	Mrs. Pranali Worlikar	Instrument Lab Incharge
Mrs. Deepali Labde	Junior Clerk	Mrs. Rashida Kaskar	Account Assistant
Mr. Vitthal Sawant	Administrative Officer	Mr. Prashant Waghmare	Account Assistant
Mrs. Madhura Chavan	Office Assistant/ Secretary to Technical Director	Mr. Umesh Pal	Lab. Attendant
Ms. Sonam Mungekar	Lab. Assistant	Mr. Anmol Ingole	Lab. Attendant
Ms. Chhaya Sawant	Lab. Assistant	Mr. Subhash Khandare	Lab. Attendant
Mr. Rishikesh Pottam	Lab. Assistant	Mr. Dharmendra Yadav	Lib. Attendant
Ms. Ankita Nitore	Lab. Assistant	Mr. Naresh Pedamkar	Peon
Ms. Ankita Pawar	Lab. Assistant	Mr. Puttu Chauhan	Peon

LIBRARY DETAILS

LIBRARY DETAILS	Total Number of Books in the Library (B.Pharm)	7117
	Total Number of M.Pharm Books (Pharmaceutics)	406
	Total Number of Books in the library	7523
	Total Number of Titles	2096

INTERNATIONAL JOURNAL DETAILS

1.	International Journal of Medicinal Chemistry and Analysis	4.	International Journal of Pharmaceutical Investigation
2.	International Journal of Pharmaceutical Research	5.	International Journal of Research in Pharmacy and Pharmaceutical Sciences
3.	International Journal of Pharmaceutical Research and Analysis	6.	Biopharm International
		7.	Drug Topic

NATIONAL JOURNAL DETAILS

1.	Advances in Pharmacology and Toxicology	18.	Journal of Ayurvedic and Herbal Medicine
2.	Asian Journal of Pharmaceutical Analysis	19.	Journal of AYUSH : Ayurveda, Yoga, Unani, Siddha and Homeopathy
3.	Asian Journal of Pharmaceutical Research	20.	Journal of Medicinal Plant Studies
4.	Asian Journal of Pharmaceutics	21.	Journal of Pharmaceutical Research
5.	Asian Journal of Pharmacy and Technology	22.	Journal of Pharmacognosy and Phytochemistry
6.	Asian Journal of Research in Chemistry	23.	Journal of Scientific and Industrial Research
7.	Asian Journal of Pharmaceutical Science	24.	Medicinal and Aromatic Plants Abstracts
8.	Indian Drug Review	25.	Pharmacy : Natural Product and Herbal Medicine
9.	Indian Journal of Chemistry – Section A	26.	Research Journal of Pharmacognosy and Phytochemistry
10.	Indian Journal of Chemistry – Section B	27.	Journal of Advanced Pharmaceutical Technology and Research
11.	Indian Journal of Heterocyclic Chemistry	28.	Health: Diabetes
12.	Indian Journal of Natural Products and Resources	29.	The Pharma Innovation
13.	Indian Journal of Pharmaceutical Education and Research	30.	Indian Drugs
14.	Indian Journal of Pharmaceutical Sciences	31.	Phytopharma
15.	Indian Journal of Pharmacology		
16.	Inventi Impact : Med Chem		
17.	Inventi Impact : Planta Activa		

STUDENTS DETAILS

FIRST YEAR B. PHARMACY	60
SECOND YEAR B. PHARMACY	66
THIRD YEAR B. PHARMACY	66
FINAL YEAR B. PHARMACY	67
FIRST YEAR M. PHARMACY	15
SECOND YEAR M. PHARMACY	13

MAGAZINE & NEWSPAPER LIST

1.	Pharma times
2.	Down to Earth
3.	CIMS
4.	News papers 5

OTHER FACILITY

1.	Installed Library Software E- Granthalaya New Version eG3 With OPAC.
2.	Barcode System for Issue –Return
3.	Classifying the Books as per DDC 22nd Edition for Standard Classification.
4.	Reprographic /Scanning/Printing Facility Available for Students & Faculty.

Details of the Research papers presented in workshops / seminars/ conferences 2018

Name of the faculty / student	Title of the paper	Name of the workshop/ seminars/ conferences	Year	Date	Place
Dr. Anagha Raut	Extraction, Evaluation & Formulation of leaf essential oil from <i>Murraya koenigii</i> for Anti-diabetic activity	70 th IPC	2018	21 st - 23 rd December 2018	Amity University, Noida, UP
Dr. Geeta Bhagwat	Long circulating Liposomes of semisynthetic antineoplastic agent for prolonged action	70 th IPC	2018	21 st - 23 rd December 2018	Amity University, Noida, UP

POSTER PRESENTATION AWARDS

1. Title of Poster : Patient Centric Healthcare
 Category : Pharma management
 Prize : 1st prize in poster presentation
 Name of Authors : Omkar Ghodke, Jay Chawda, Vithal Gawde
 Conference : Insight: Pharma & HealthCare- Paradigm Shift Towards Patient Centricity held at IES College of Management & Research, Bandra
 Mentor : Dr. Anubha Khale

2. Title of Poster : Bioprinting : Science Fiction to Reality
 Category : Pharmacy
 Prize : 1st prize at Isthmus Urja 2019 poster presentation competition
 Name of Authors : Manvi Kalia, Bhakti Kubal, Preksha Patil.
 Mentor : Dr. Anubha Khale

3. Title of project : Device 18
 Category : Medicine and Pharmacy
 Prize : 3rd position at University Level in Avishkar 2018-19
 Name of Authors : Manvi Kalia, Bhakti Kubal, Preksha Patil, Tanushree Shenoy
 Mentor : Dr. Anubha Khale



Third Prize at National Level Logo Making Competition

Third Year B.Pharm student of HKCP, Ms. Shraddha Upadhayay, guided by Principal, Dr. Anubha Khale won 3rd prize for National level LOGO making competition for 'Cultural Mapping of India.' The competition was under the initiative of 'MyGov'. The logo briefs about the symbol of location sign in which Indian flag is embedded. It represents that the Indian ministry of cultural mapping will work to locate the hidden cultures of India and give them recognition in the society.



With Best Compliments From

Dr. Akhilesh Yadav
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Dental Care Centre

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CHEMISTRY/
BIOTECHNOLOGY/
NURSING/
BIOCHEMISTRY,
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MBBS, BDS, MAMS,
BHMS

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Research Capabilities

H K College of Pharmacy as a center of excellence dedicated towards drug research, believes in multidisciplinary research and trans-disciplinary research.

We inculcate culture of 'Innovation' among young students and motivate them by helping them in filing patents and making them inventors at an early stage of their careers. We at H K College of Pharmacy, are proud of being pioneers in creating an Intellectual Properties Policy of our Institute to help young Innovators to protect their innovations and get the true value of their research efforts.

We give thrust on Industry Academic Research collaboration. We have successfully completed research projects in collaboration with various companies.

PHARMACEUTICS DEPARTMENT :

- Design & Development of following Dosage Forms

Nano Dosage Forms :

1. Solid dispersion
2. Nano crystal
3. Microspheres
4. Nano emulsions
5. Lipid based drug delivery system

Oral & Nasal Dosage Forms :

1. Oro-dispersible system (2 provisional patents filed)
2. Oro Dental & Muco-adhesive Films
3. Nasal & Mouth sprays

Novel Dosage Systems :

1. Herbal
2. Nutraceutical
3. Cosmetic
4. Liquid filled Gelatin Capsules
5. Floating Gastro Relative Drug Delivery
6. Transdermal Gel

- Analytical Method Development for Developed Formulations
- Pre-formulation Studies & Permeability Studies
- Enhancement of Bioavailability of Class IV molecules
- Antimicrobial & Antifungal Studies
- Design & Development of Generic Products for US Market

PHARMACEUTICAL CHEMISTRY DEPARTMENT :

- Target-based designing of novel therapeutic agents
- Ligand-based (Pharmacophore, SAR, QSAR) drug designing
- Lead optimization
- Process optimization
- Synthesis of bioactive molecules by
 - Conventional method
 - Green Chemistry
 - Microwave-assisted methods

- Multicomponent / Convergent methods
- Synthesis and Characterization of Impurity Standards
- Synthesis and Characterization of Prodrugs
- Structural elucidation of drugs

PHARMACEUTICAL ANALYSIS DEPARTMENT :

- Analytical Method Development and Validation of Drugs
- Analysis of Sample using UV-Visible Spectroscopy, Fluorimetry & HPLC
- Study of Characteristics of Drug through FTIR
- Study of Impurity Profile of drugs
- Stability Indicating Analytical Method Development

PHARMACOLOGY DEPARTMENT :

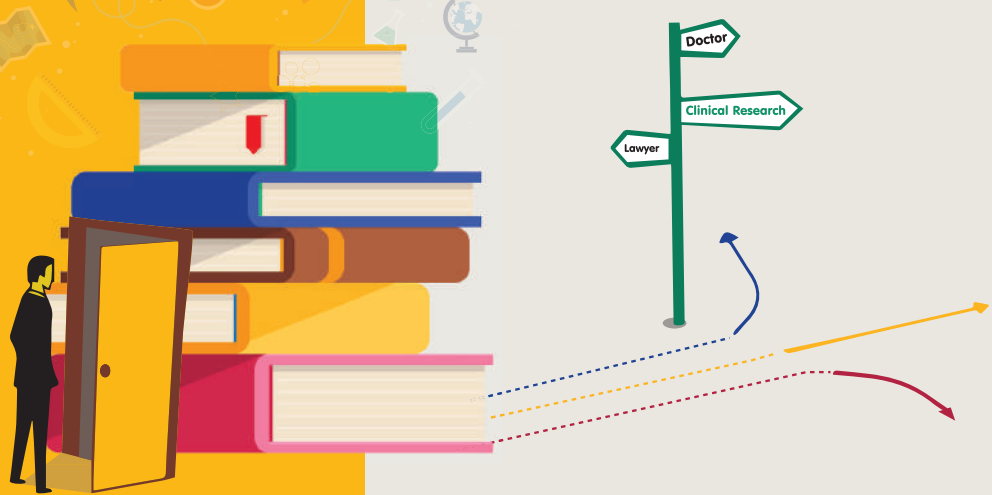
- Standardisation of animal models for different diseases in CPCSEA approved laboratory.
- Toxicity Studies (acute, sub-acute & chronic studies).
- Pharmacokinetic & Pharmacodynamic Studies.
- *In-vitro* & *Ex-Vivo* studies of pharmaceutical formulations.

PHARMACOGNOSY & PHYTOCHEMISTRY DEPARTMENT :

- Pharmacognostic studies of medicinal plants (Pharmacognostical)
- Standardization of crude drug and extract as per pharmacopoeia and WHO guidelines
- Herbal Formulation development
- Evaluation of traditional herbal formulation
- Extraction and isolation of phytoconstituents
- Development of nutraceuticals and cosmeceuticals



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GPAT RESULT 2019 - 10 RANKERS IN TOP AIR 500
19 RANKERS ARE IN TOP AIR 1000 | TOTAL 34 QUALIFIED OUT OF 55.



OMKAR

AIR - 36, BVCP



KAJAL

AIR - 138, MET



SANJIVANI

AIR - 146, SVBCP



SONALI

AIR - 146, BVCP



ANJALI

AIR - 279, KMK



RAMESH

AIR - 306, SVBCP



ANIKET

AIR - 317, ST JHON



RAJASHREE

AIR - 393, MET



GIRIJA

AIR - 481, MET



GANESH

AIR - 495, BCP

FRIDAY	SATURDAY	SUNDAY		
DADAR WEST	KHARGAR	THANE WEST	VASHI	ANDHERI WEST
SHARDASHRAM VIDYA MANDIR	CAREERLINE CLASS	JOSHI BEDEKAR COLLEGE	SACRED HEART HIGHSCHOOL	PEARL PLAZA
6.30 PM	5.45 PM	9.00 AM	12.45 PM	4.00 PM

Contact - 8652214520 / 9326888761

OUR TOPPERS

F. Y. B. Pharm

Manvi Kalia - 1st Rank



Bhakti Kubal - 2nd Rank



Sayed Mohd. Shafat - 1st Rank



S. Y. B. Pharm

Aaynah Shaikh - 3rd Rank



Sanchita Khatal - 2nd Rank



Yogeeeta Patil - 3rd Rank



T. Y. B. Pharm

Zeeshan Patel - 1st Rank



Shifa Haju - 2nd Rank



Reesha Baig - 3rd Rank



Divya Nadar - 1st Rank



Basit Khan - 2nd Rank



Khan Mohd. Fahad - 3rd Rank

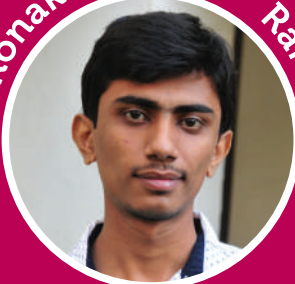


Final Year B. Pharm

Pooja Vishwakarma - 1st Rank



Ronak Dave - 2nd Rank



Sushmita Yelve - 3rd Rank



M. Pharm

ORIENTATION

Every year, the college organizes an orientation program for the students and their parents. The program is designed to facilitate academic, cultural and societal adaptation for the new academic year.

This year the program comprised of updating the students and their parents about

the staff, infrastructural facilities and rules and regulations. The students were oriented about the events and schedules of the Academic Calendar 2018-19.

This was followed by an interactive session with the Principal Dr. Anubha Khale, Technical Director Prof. (Dr.) Vinaykumar Velingkar and faculty.

The students and parents were then taken on a tour of the college premises to acquaint them with the facilities.



GAL CAN

FRESHERS' PARTY

H K College of Pharmacy organized Freshers' Party on 1st September 2018 to welcome the first year students.

The party theme was "Saints and Sinners". Students were dressed elegantly. The party started with pulsating ambience and foot tapping music.

Each fresher was invited on stage and asked to introduce self and showcase their talent. They were assessed by panel of judges to select Mr. and Miss Fresher. The party indeed broke the ice between new comers and seniors.



‘INVOLVE TO EVOLVE’

The 4th Mentor-mentee meet was organized on 28th July 2018 in H K College of Pharmacy for second, third and final year students. This occasion was graced by alumni from different batches of HKCP. Principal, Dr. Anubha Khale, welcomed all of them and mentioned that it's a great pride for HKCP that its Alumni are holding positions of responsibility in different sectors of pharmacy profession and business. Alumni enlightened students about the wide and diverse scope for pharmacy graduates. The mentors and mentees discussed about various fields like regulatory affairs, marketing, IPR, Entrepreneurship and courses offered abroad.



ME OF MPUS 2018-19



“WORLD PHARMACIST DAY” 25th September 2018

A ‘Poster making’ event was organized by Department of Pharmaceutical Analysis to celebrate “World Pharmacists Day”.

The topics allocated to the students for poster preparation were

1. Role of Pharmacist as healthcare provider
2. Growth of Pharmaceutical Industry in India
3. Reforms in Pharmaceutical Education
4. Applications of Analytical techniques in daily life

The event helped the budding pharmacists understand their contribution as a professional towards the society.



WOMEN'S HEALTH & SAFETY PROGRAM

Women's Health and Safety Program was organized for girls and female staff members. Police Sub- Inspector, Ms. Samira Sayyad Oshi and Dr. Fariza Shaikh were invited to deliver the session.

Ms. Samira Sayyad spoke about safety measures and asked to be more aware and be alert at all times. She asked everyone to be observant and interpret the intentions of any suspicious person. She also asked to call on the Police helpline no. 105 in case of emergency.

Dr. Fariza spoke about different phases of womanhood and hormonal imbalance such as menarche, PMS and PCOD. She discussed the importance of menstrual hygiene to tackle women health issues.

The program concluded with the interactive session.



GAL CAM

INDEPENDENCE DAY CELEBRATION

It was a red letter day in the history of India when the country got freedom on August 15, 1947. It took hundreds of years for us to break shackles of slavery. 72nd Independence Day was celebrated with great enthusiasm and respect at H K College of pharmacy. At sharp 9am, The tri-colour flag was unfurled and the national anthem was sung in unison.

This was followed by various performances by the student in the college auditorium. Indeed a day to love, respect and remember the sacrifice of freedom fighters.



PLACEMENT NEWS

H K College of Pharmacy's Placement Cell organized Campus drives and job interviews. Academic year 18-19 witnessed individual counselling of students with respect to higher studies and career. Career Guidance session included sessions on Resume writing, Interview etiquettes, Clinical research, and Marketing. In academic year 18-19, 10 students were selected in TCS, 5 were selected in Cipla and rest of the students will be placed in forthcoming campus drives.



ME OF
MPUS
2018-19

GANDHI JAYANTI CELEBRATION

Gandhi Jayanti is a national festival celebrated in India to mark the birth anniversary of Mohandas Karamchand Gandhi born on 2nd October 1869. The UN General Assembly announced on 15th June 2007 that it adopted a resolution which declared 2nd October will be celebrated as the International Day of Non-Violence.

H K College of Pharmacy celebrated 149th Gandhi Jayanti with full of enthusiasm. Event started with the welcome of the Principal madam Dr. Anubha Khale and Vice principal Dr. Mohammad Wais with all faculty members. Students Shifa Bora, Shanidev Jaiswal and Aayan Kazi gave speeches about great Mahatma Gandhi's life events, his thoughts, his contribution towards the country for the freedom and also about six fundamental rights of

Indian citizens as follows:

- (i) right to equality, (ii) right to freedom, (iii) right against exploitation, (iv) right to freedom of religion, (v) cultural and educational rights, and (vi) right to constitutional remedies.





CONVOCATION

“Convocation ceremony” is a most awaited ceremony for graduate students. Annual convocation of H K Campus was held on 10th March 2018.

Procession was headed by,

1. Prof. Javed Khan, President MES, Former Minister of Education, Housing and Labour, Government of Maharashtra.
2. Dr. Azeem Javed Khan, General Secretary, Oriental Education Society, Mumbai.
3. Mr. Robin Banerjee, Managing Director, Caprihans India Limited.
4. Ms. Shilpa Joshi- Borkar, Assistant Director, University of Mumbai's Garware Institute of Career Education & Development.
5. Dr. Ashok D.B. Vaidya, Research Director, Kasturba Health Society.
6. Dr. Shirish Sherlekar, Global Head, Life Sciences, TCS Consultancy Pvt. Ltd.

After four years of hard work, the pride of wearing the graduating attire and holding the degree certificate was experienced by all graduating students.

TEACHER'S DAY

Teachers are source of knowledge and guide who helps students to reach goals. Teacher's Day is a tribute to hard work and devotion of the teachers all year long. The teacher's day celebration on 5th of September started with lot of energy and enthusiasm. The council members eagerly decorated both the staff room as well as principal's office too. While entering the staff room there was a smile of happiness on the face of each teacher. The students presented the teacher's with a token of appreciation to thank them for all their hard work and dedication, then students cut a cake to celebrate the day. Teachers and students rejoiced, laughed and captured this special moment together, celebrating the student-teacher relation.

FACULTY DEVELOPMENT PROGRAM

H K College of Pharmacy, Jogehwari, Mumbai, successfully organized Industry Sponsored, ISTE Recognized, One-week faculty Development Program "New Paradigm in Pharmaceutical Education and Research" from 26th November to 1st December. Scientific and technical sessions were held. All the delegates were benefitted with the thought-provoking and interactive lectures.



ME OF MPUS

2018-19

FAREWELL PARTY



Isn't it always emotional to leave the institution where you have spent the most valuable 4 years of your student life? Yeah, bidding farewell is just another way for expressing your love for your seniors who have taught you more about the college life and probably a little less about studies. The Farewell Party organized for our beloved seniors was just a token of love & respect for them. The evening began with a bash as all the handsome hunks and pretty girls arrived beautifully dressed.

The evening started with a humongous amount of enthusiasm which later turned out to be a realization that not all of them are going to be in touch as they were so far. The joy & sorrow for leaving the college

and entering into a totally new phase of life. The event started with a note of teachers who expressed their feelings for the students and how well they bonded through the span of 4 years. This was followed by students who expressed their feeling by a giving a last goodbye to the teachers and their beloved classmates who were more than classmates. The evening was followed by dinner along with melodies. The evening ended with tears in the eyes of students & some teachers. Nothing could be depressing than seeing such a precious moment and capturing some candid snaps.

Two Day Seminar & Workshop on “JOURNEY OF A DRUG MOLECULE : DESIGN TO APPROVAL”

H K College of Pharmacy organised a two day seminar and workshop for the students on “Journey of a Drug Molecule: Design to Approval”. The seminar was organised by Department of Pharmaceutical Chemistry, Pharmaceutical Analysis and Pharmacology on 24th and 25th of January 2019. The seminar included various informative session on topics such as “Drug Design and Synthesis”, “Drug Characterization”, “Soft Skills Training”, “New Drug Discovery- An Introspection” and “Approval Process For NCE's”.

The session also included workshop on Laboratory Safety and First Aid, Analytical Skills, In-Silico Drug Design and Clinical Research & Associated Domains.

The session concluded with thanks giving to the speakers by Technical Director Dr. Vinaykumar Velingkar and Principal Dr. Anubha Khale.

GAI CAN



Two Day Seminar & Techcrunch “CHALLENGES AND STRATEGIES IN HERBAL FORMULATION & TECHCRUNCH COMPETITION”

The department of Pharmaceutics and Pharmacognosy of the H. K. College of Pharmacy, Jogeshwari (W), Mumbai, organized two days inter-college scientific program on 5th and 6th October 2018. The theme of the seminar was ‘Challenges and Strategies in Herbal Formulation’ along with Techcrunch competition. Students and faculty from various Pharmacy colleges participated in this two-day event.

Different competitions like Debate, Model Making and Innovative Product Packaging were arranged.

The Chief Guest, Dr. Vijay Bagul (Sr. Gen. Manager ADL, Medley Research Center, Mumbai) highlighted the various challenges encountered in the herbal formulations and discussed few aspects of problems associated with respect to stability.

- This was followed by the lecture ‘Reducing Variability in Dissolution Testing’ by Dr. Neelam Sayed (Application Scientist, Electrolab Pvt. Ltd. Mumbai) and session on ‘Advances & Prospects in Nutraceuticals’ by Ms. Sangeetha Srinivasan (Head marketing, Human Nutrition, South Asia region). Second half of first day was dedicated to Quiz Competition.

- The second scientific session was on ‘Challenges and Strategies in Herbal Formulations’ by Dr. Krishna Javadekar (Senior Medical Writer, Lupin Pvt. Ltd., Mumbai).
- The second half of this day was dedicated to Model Making and Innovative Product Packaging competition.



Thoughts from Alumni



When I look back at HKCP, I can see that it has grown and has many great achievements, in form of the great new faculty, research grants, labs machinery and infrastructure, sports and cultural achievements and of course research accomplishments, in terms of publications and poster presentation. I was, am and will be proud and privileged to say that yes I was the student of the first batch of HKCP where one achieves overall development. Everyone from our faculties to the students has strived very hard to make HKCP what it is today. The college has made sure that the students get complete and overall exposure of pharmacy, as a career, both academically and professionally; so that the students are ready to face all challenges assigned to them with success.



HKCP was and still is my second home. My sincere thanks to Mr Azeem, Anubha mam and all my teachers, for their unmatched support & guidance, I underwent a 360° transformation from being an introvert to having achieved milestones in the current sales and marketing industry.

JENIL ASHANI

Assistant Manager,
Baxter International
Inc., Mumbai



PALAK MOTAN

Patent Agent,
Krishna and Saurastri
Associate LLP

The journey of my 4 years, was one of the most memorable and lifetime experience at HKCP (2009-2013). The experienced faculty bestowed me with immense knowledge which in turn helped me achieve great height in my life and career front. I can't be thankful enough for this wonderful journey which I believe every student in their academic front should experience.

RUSHAB MAMANIA

Sole Proprietor, M/s. Jain Distributor
Dealers in : Surgical PDS, Rehabs Aids PDS,
Adult diapers

It's been four years since I graduated, but I still get nostalgic about my time at HKCP. What made the college great are the people: the teachers, my fellow batch mates and the memories with them. Thank you HK!

ZAID TEMRIKAR

PhD, The University of Tennessee Health
Science Centre



As a confused soul wandering in this world full for opportunities, I accidentally landed in Pharmacy. It was never a dream to become a pharmacist but it is one of the fortunate incidents that has happened to me. I arrived in HKCP, with an ocean to explore and a milestone to touch and it was hell of a roller-coaster ride. First year was as it is supposed to be for anyone as we all were in our inchoate stages of development and luckily I was able to clear it without faltering. Post that all the years have been an upward movement for me on both professional as well as personal front. The college gave me the opportunity to hone my skills in the myriad facets of pharmacy and I owe an important part of my life so far to HKCP. I also received the best student of the batch award in my final year which served as an icing on the cake. I would like to mention special thanks to principal madam for my industrial training opportunity in FDC and also Priyanka Goswami madam to believe in me as no one did in the college (your cognate lectures and practicals are still missed).

BHAGYESH PENDSE

Jr. Executive,
R&D (Formulation Development),
Meyer Organics Pvt. Ltd.

Entrepreneurship Cell

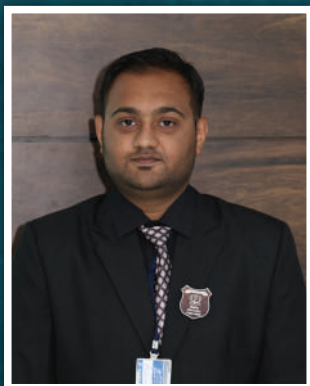


The concept of “Zero to One” describes the thought of entrepreneurship perfectly. The aim is to provide the students with exposure & basic knowledge to the business world.

The committee is guided by the Principal of the institution Dr. Anubha Khale and headed by the student council members Mr. Omkar Ghodke & Ms. Shraddha Upadhyay.

OBJECTIVES:

- Motivate students to imbibe thinking on new startup plans.
- To provide a platform for interaction with entrepreneurs.
- Impart entrepreneurial education/ skills amongst students through various trainings and exercise.
- Arrange vibrant interaction with organizations promoting the cause of entrepreneurship.
- Develop business incubation among the crowd.



IDEAS UNDER INCUBATION:

- “Application of Information Technology Innovations for Agricultural & Rural Upliftment” by Manvi Kalia, Bhakti Kubal, Tanushree Shenoy, Preksha Patil from S. Y. B. Pharm.
- “A web-based platform for trading of scrap materials” which is currently under construction by Omkar Ghodke from T. Y. B. Pharm.
- “Mohe Bharat : An Integrated Approach Towards the Enhancement of Rural Handloom Crafts” by Aasma Chouhan, Sweeti Chowdhury, Jahid Halder, Sehrash Ansari from S. Y. B. Pharm.
- “An App-Based platform for Health Care Services” by Omkar Ghodke, Vaibhav Singh, Shraddha Upadhyay from T. Y. B. Pharm.
- “Hydroponics (A Boon for Farmers)” by Vaibhav Singh & Shraddha Upadhyay from T. Y. B. Pharm.

Orane

2018

The much awaited college annual function ORANE was celebrated at H.K.C.P. on 15th February 2018. The function was celebrated with immense enthusiasm and dedication by the students and faculties. The students in various years of degree competed in different events like solo singing, dancing, group performances, etc. All these events were followed by inauguration of the college magazine IMPULSE by the Chief Guest Mr. Renganathan CT, Managing Director, RPG Life Sciences Ltd, Mumbai, the Guest of Honor Mrs. Usha Renganathan and our Principal Dr. Anubha Khale. The magazine inauguration was followed by Prize Distribution where the achievers in various competitions and toppers were felicitated for their achievements. The function was also attended by parents and ex-students who enjoyed the performances.

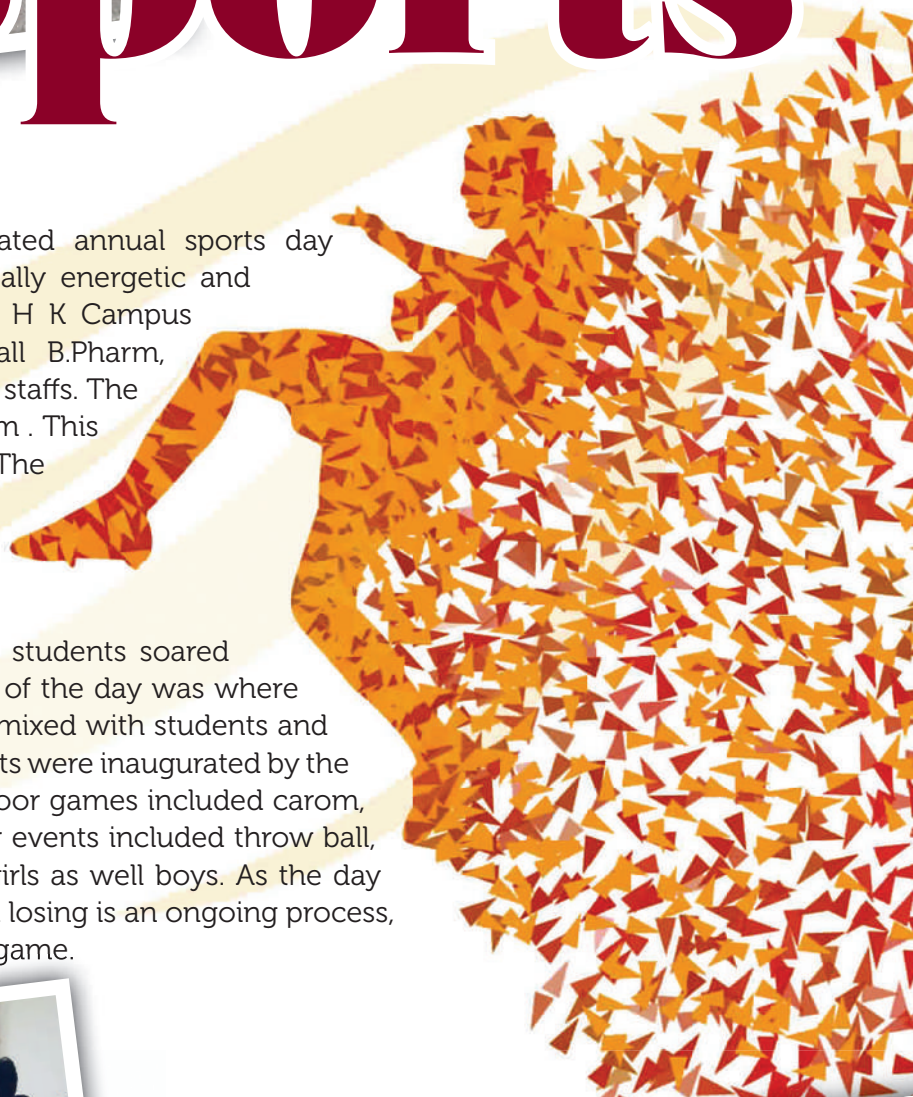




Sports



H K College of Pharmacy celebrated annual sports day on 15th January, 2018. It was a really energetic and enthusiastic day as the ground of H K Campus was crowded with students of all B.Pharm, M.Pharm as well as all the teaching staffs. The day started with the national anthem . This was followed by the athletic event. The audience witnessed various displays symbolizing alternative source of energy. The displays made way for the highly awaited athletic events where competitiveness among the students soared through the roof. Another highlight of the day was where all the teachers as well as principal mixed with students and involved in playing . The indoor events were inaugurated by the principal Dr. Anubha Khale. The indoor games included carom, chess and table tennis. The outdoor events included throw ball, football, volleyball, box cricket for girls as well boys. As the day came to an end, where winning and losing is an ongoing process, but students learnt that talent wins game.



A group of six students in school uniforms (three boys and three girls) are posed together. They are wearing blue lanyards with HKCP ID cards. The background is a dynamic, blue-toned image of water splashing or a galaxy.

VITHAL GAWDE
GENERAL SECRETARY

VAIBHAV SINGH
ASSO. GENERAL SECRETARY

RAHUL VERMA
SPORTS HEAD

PALAK JAIN
DESIGNING
HEAD

SANCHITA
KHATAL
PLACEMENT
HEAD

MOHD. SHAFAT
SAYYED
SCIENTIFIC HEAD

HKCP CORE



JAYKUMAR CHAWDA
ASSO. GENERAL SECRETARY

NIDA KHAN
TREASURER

PRIYA GUPTA
PUBLIC HEALTH
OFFICER

ALMAS SHAIKH
EDITOR-IN-CHIEF

AQSA SIDDIQUE
PUBLIC RELATION
OFFICER

HRISHABH
PANDEY
CULTURAL HEAD

COUNCIL

PUB HEA CAMP

Bottle for Change

Plastic is a miraculous material that human beings have invented for their convenience. According to the popular belief, plastic has a negative impact on our environment and is considered a threat to flora & fauna. The fact that plastic is not bad, if disposed and recycled responsibly. Thus our campaign aimed at educating the masses about plastic & plastic waste, the disposal, collection, recycling and reuse of plastic.



Antibiotics-Accidental boon

Antibiotics are powerful medicines that fight bacterial infections. If used properly, antibiotics can save lives. Due to poor knowledge about antibiotics, they are misused and are prescribed at an alarming rate. In today's world, in spite of being a schedule H drug, it is easily accessible to people as OTC product. To curb the misuse of antibiotics, we organised an awareness campaign in different areas near CSMT station by performing a street play where people were enlightened about the same.



Generic vs Branded Medicine - battle of being best

"Sasta hai, kam nahi karega" a phrase which we came across while evoking the minds of people and presenting generic medicines in limelight. Generic vs branded medicine is the most controversial issue in Pharma industry. People are not aware of generic medicines and thus, their minds are clouded by false information regarding the efficacy, quality, safety of generic medicines. We conducted campaign to make people aware about the true or rather real nature of generic medicines.



PUBLIC HEALTH CAMPAIGN



Anti Malarial Campaign

Malaria being the most common disease and people are being aware of it right from their childhood; yet every year cases of malaria are seen across India. This is due to the lack of scientific and pharmacological information about malaria. It was observed that the high risk of people getting affected by malaria, we organised a campaign and explained the spread, prevention, treatment of malaria by a flash-mob at Juhu beach.



Anti-tuberculosis campaign

Tuberculosis a.k.a "ticking bomb", is the disease that kills more than 4 lakh people per year (Source : Estimates of TB and MDR-TB burden are produced by WHO in consultation with countries) and as a pharmacist it's our duty to make people aware of this infectious disease. Despite the nation wide campaigns done by government of India, people under poverty are still diagnosed and affected by it. Thus an antituberculous campaign was conducted in areas where tuberculosis was prevalent. All the government schemes, diagnosis, prevention, cure, treatment were informed to the people.

People with disability day

This campaign aimed to promote the rights and well-being of people with disabilities in all spheres of society and development, and to increase awareness of the situation of persons with disabilities in every aspect of political, social, economic and cultural life. People are never disabled; rather they are differently abled, which was truly showcased by the students of Anza Special School, Mumbai. We organised a co-curriculum activity which was to bring out the hidden artist within them, and it was truly a garland of talent. People show sympathy towards disable people and pity them but one should never forget they are superheroes in their lives.



Stent is a short narrow metal or plastic tube in the form of mesh that is inserted in the lumen of artery or bile duct to keep the previously blocked passageway free.

	History of Stents
1912	Paraffin-coated glass & metal tubes implanted in canine thoracic aorta
1964	Silicone elastomer endovascular splint, Dotter & Judkins propose concept of stents
1969	Non-surgical endovascular placement of guide wire mounted spiral springs
1983	Nitinol coils implanted in canine peripheral vessels
1985	Balloon mounted stainless steel graft implanted in canine aorta & peripheral vessels
1985	First human coronary Self-expanding stainless steel wire mesh stent implanted in canine coronary arteries
1969	FDA approval of coronary stents LESS & BENESTENT show reduced restenosis with stenting vs. PTCA
1999	First drug eluting stent implanted in humans

Early design utilized glass/metal tubes that were implanted in aortas. By the middle of that decade, experimentation advanced to the placement of balloon mounted, Woven stainless steel 'grafts' in the aorta. After the implant of first drug-eluting stent in humans, there is tremendous growth in the in the development and clinical application of coronary stents for the treatment of atherosclerosis

Current Indications
Acute & threatened closure
Focal de novo lesions in native vessels > 3 mm
Acute Myocardial Infarction (MULTI-LINK® stents)
Chronic Stenosed Lesions
LAD stenosis
Saphenous vein graft (focal or tubular lesion)
Restenotic lesions

Characteristic of stent

It is important to achieve a reasonable balance among these characteristics while designing a stent

Strut thickness refers to the measurement of the stent from the inner to outer surface. Strut width is the distance across the strut surface. Thinner struts may provide for more flexibility thin struts are associated with reduced binary restenosis.

Flexibility & Conformability

Flexibility of the crimped stent contributes to deliverability. Conformability impact vessel wall apposition and stent scaffolding. The flexibility and conformability of the device are important

Apposition The Proximity of Stent Struts to the Arterial Wall

Metal to Artery Ratio is the ratio of metal surface area to the arterial surface area that the stent is covering. **Metal Volume** is the total metal volume. The metal-to-artery ratio is closely related to strut depth. A greater ratio may decrease plaque prolapse. However, excessive metal may result in greater thrombogenicity, decreased flexibility and reduced side branch access. High chances for restenosis rates in the aorta

Strut depth may also influence the thrombogenicity and neointimal hyperplasia following deployment

Unsupported Surface Area (USA) is the area of the vessel wall which lies between the stent struts. Cell geometry is used to discuss USA. Other common measurements are Maximum Circular Unsupported Surface Area (MCUSA) and Maximum Circular Access Diameter (MCAD). When the distance between two struts is short vs long you can control injury and reduce endothelial denudation of the vessel in the unsupported area. As a result one understands shape of the cell is more important than the size of the cell. This is another way stent design impacts vessel injury.

Vessel Scaffolding

Structural support or framework that a stent provides for a diseased vessel, which Indicates how well a stent may prevent plaque prolapsed and secure dissections. Scaffolding can be defined as the structural support or framework that a stent provides for a diseased vessel. The degree of scaffolding may serve as an indicator of how well a stent can be placed and may prevent plaque prolapse and secure dissections.



Fig. No. 1 (Shape of the Stent)

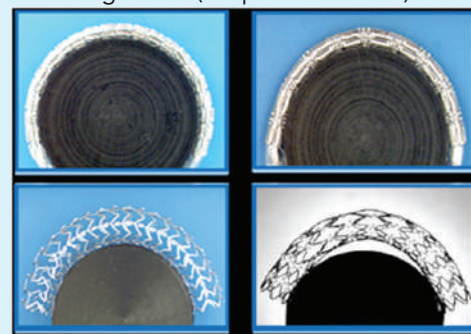


Fig. No. 2 (Shape of the Stent)

Radial strength and recoil

Following successful stent deployment, recoil is a consideration. This is the percent of the deployed diameter achieved by balloon inflation that will be lost when the balloon is deflated. Less recoil is better since recoil will cause a reduction in luminal area, which could lead to an increased risk of restenosis. It is important to consider adequate pre-dilatation and vessel preparation before stent deployment to reduce the concern for vessel recoil

Radial strength is the pressure it takes to collapse the stent. Too much radial strength can impact conformability and vessel stress. A stent that lets the vessel retain its shape is an

important design goal in our effort to control injury. Too much radial strength and vessel straightening has a negative impact on vessel injury, especially in tortuous anatomy

Radiopacity, or visibility of the stent under fluoroscopy, is dependent on the stent material, design, strut thickness, and placement. Radiopacity, of course, is very important in ensuring accurate stent placement.

Balloon Expandable & Self Expanding Stents

The expansion and delivery of a stent within a vessel.

Expansion mode refers to the mechanism utilized to deliver a stent at the selected site. Balloon expandable stents are mounted on a balloon catheter which may vary in size depending upon the size of the stent. If a stent is self expanding the device is held in place on a catheter under a sheath. When the sheath is retracted the stent expands on its own. Typically, sheathless systems provide for a lower profile and enhanced trackability which is important in accessing distal anatomy. Sheathed devices, on the other hand, help prevent loss of the stent when traversing calcification or stents already in place. If a branch becomes "jailed", access for flow of blood and passage of equipment at a later time may be lost.

Structural Designs

Wire-Like

Let's begin with the wire based. This design utilizes either one continuous wire wound into a helical, or similar, shape or multiple wire segments which are welded together. This was used on older stent designs such as the GR11, gfx, AVE Micro II and Wiktor products.

Tubular

A second stent design in use is tubular in which a solid tube is etched chemically, electrically or by laser to create a scaffolding structure. e.g. Palmaz-Schatz, J&J Bx Velocity and MULTI-LINK® stents.

A stent needs to be deliverable, deployed accurately and achieve long-term results. In deliverability, a physician needs to be able to access the lesion. Stent design attributes that impact deliverability are stent flexibility and stent delivery system trackability and profile. A stent needs to be deployed accurately means it has to be precisely placed with minimal injury.

Deployment is impacted by radiopacity, accurate placement, accurate sizing and pressure requirements, conformability and minimal balloon outside of the stent. A stent needs to achieve long term results alongwith low inflammation and rapid endothelialization and vessel healing for reduced stent thrombosis. The long-term implant is impacted by low metal-to-artery ratio, strut thickness, comformability & apposition, scaffolding & low unsupported surface area and adequate radial strength.

• Materials for stent construction must be:

	Cobalt Chromium	Stainless Steel	Nitinol	Ideal / future Material
Thickness of strut	Thinner strut			Thinnest struts
Radial Strength	High			Good
Radiopacity	Excellent	Relatively high	Less radiopaque	Better visibility
Biocompatibility	Biocompatible	Biocompatibility		Bioabsorbable
Corrosion resistance	Yes		Yes	Corrosion resistant
			Self-expanding metal used outside the coronary	
Thrombogenicity			Less thrombogenic	

Summary

Stents enable treatment of many lesion types. Stent design influences optimal delivery, deployment and long-term outcomes. Stent design is a balancing act of trade-offs between performance and clinical attributes. Acute and long-term outcomes continue to improve with new stent technologies.



Fig. No. 3 Balloon-expandable - Factory mounted on a balloon delivery system



Fig. No. 4 Self-expanding, Stent Sheath retraction allows stent Expansion



Leadless Pacemaker

Scientific Articles

pacemaker and is comprised of a pulse generator that includes a battery and a steroid-eluting electrode that sends pulses to the heart when it recognizes a problem with the heart's rhythm. Leadless pacemaker technology is made up of computer chips

A pacemaker is prescribed when a heart's electrical conduction system malfunctions and causes the heart to beat too slowly (a condition called bradycardia). A Conventional Pacemaker is a device consisting of generator and lead wires. The device is implanted just below the skin near the collarbone. Lead thin wires are inserted through a vein, which connect the generator to the heart. Installment requires the doctor to make a surgical incision in the chest where a pacemaker permanently sits in a pocket under the skin. The doctor then implants leads from the pacemaker through the veins into the heart. These leads deliver electrical pulses that prompt the heart to beat at a normal rate.

A rapid advancement in cardiac pacemaker implantation technology is seen since the first pacemaker implantation in 1950s. Reduction in generator size, increased battery longevity, quality of pacemaker leads and rate responsive programming all have revolutionized and transformed the implantation and management of cardiac pacemaker. Despite these advances, the potential for complications and technical failure always necessitates consideration. Short-term complications include pneumothorax, cardiac perforation, lead dislodgement, and pocket infection or hematoma. Long-term complications are also related primarily to the pacing lead and subcutaneous pocket, and include pocket infection, tricuspid regurgitation, venous obstruction, lead fractures and insulation failure.

Leadless pacemakers were initially experimented in the 1970s and successfully implanted in dogs using a mercury battery powered capsule. With advanced battery technology, communication capability, and catheter-based delivery systems leadless pacemakers became a reality and boon to mankind.

A leadless pacemaker is a small implantable device that sends electrical pulses to the heart whenever it senses that the heartbeat is too slow. Unlike conventional pacemakers, a leadless pacemaker is placed directly in the heart without the need for a surgical pocket and pacing leads. The device is much smaller than a conventional

and a small, but long-lived battery in a sealed case that resembles a AAA battery. The device is implanted through a vein that passes very close to the outer surface of the upper thighs. As the implant procedure does not require surgery like a traditional procedure, it is considered as an easier approach for patients who need pacemaker technology.

Two leadless pacing systems are currently available: the Micra transcatheter Pacing system and the Nanostim Leadless Cardiac Pacemaker. Both systems provide right ventricular sensing, pacing, and rate responsiveness. While both of these pacing systems are through skin via the femoral vein through a catheter delivery system, they differ with respect to size, fixation to the myocardium, and responsiveness. The Micra Transcatheter Pacing system received FDA approval in April 2016, while the Nanostim is still awaiting FDA approval.

Leadless pacemakers have shown both safety and efficacy in the short term and intermediate follow-up as an alternative to transvenous pacemakers. This technology shows promise in the field of cardiac pacing. As this technology continues to mature, randomized clinical trials comparing this technology to traditional transvenous pacemakers are needed to confirm or prove the perceived advantage of this technology. However, the early positive response with leadless pacing systems supports the wider use of this novel technology in a select group of patients.



Collected by :
- **Bhakti Kubal**
S.Y.B.Pharm

Biodegradable Artery Graft

The treatment of coronary artery disease has seen many innovations over the past decade. Once thought to be the solution for restenosis, drug-eluting stents are now faced with their own challenges of late stent thrombosis and the requirement for extended dual antiplatelet therapy. The development of a cell-free, biodegradable artery graft comes a potentially transformative change in coronary artery bypass surgeries. Within 90 days after surgery, the patient will have a regenerated artery with no trace of synthetic graft materials left in the body.

Designing the graft was a complex process. It was designed with three properties in mind- they chose a graft material - an elastic polymer called PGS - that is resorbed quickly by the body, graft porosity and selected parameters that allow immediate cell infiltration. It was then wrapped with a fibrous sheath to trap the cells. They required a coating for the grafts that would reduce blood clotting and bind many growth factors, so they used heparin, a molecule that does just that. Finally a porous and suturable graft was produced. These stents being polymers are degraded by action of enzymes in the body to carbon dioxide and water. Patients with left main coronary artery disease who prefer a minimally invasive approach can now rest assured that stent is as effective as bypass surgery and safer, with fewer complications from the procedure. The procedure remains similar to normal stenting but the incision is much smaller than the traditional technique. It was also analyzed as to what happened to the patients in the first 30 days after treatment, when serious complications are most likely to occur. Within that period, stent patients had a significantly lower

incidence (4.9 percent) of death, stroke, heart attack, or revascularization than those who had bypass surgery (7.9 percent). In addition, fewer stent patients had major bleeding, infections, kidney failure, or severe abnormal heart rhythms compared to those treated with surgery. The blood clot risk falls off fairly steep after the procedure. Since the stent disappears, it eliminates the cause of potential inflammation that can lead to late-stent thrombosis and restenosis. Once the stent dissolves, it restores the vessel to a natural state of vasoconstriction and vasodilatation. The disappearance of the device also leaves open all options if future interventions are needed. Dissolvable stents may be a future game-changer for the way we treat coronary artery disease and heart attack.



Collected by :
- **Manvi Kalia**
S.Y.B. Pharm

Fish Oil for the Treatment of Cardiovascular Disease



ABSTRACT

Omega-3 fatty acids, are found abundantly in fish oil, exert pleiotropic cardiometabolic effects with a diverse range of action. These are very effective in primary and secondary prevention of cardiovascular diseases. It is also showing anti platelet activity improving heart failure and improving vascular function in diabetes. It is clear that fish oil, in clinically used doses (typically 4 g/d of eicosapentaenoic acid and docosahexaenoic acid) reduce high triglycerides. However, the role of omega-3 fatty acids in reducing mortality, sudden death, arrhythmias, myocardial infarction.

MECHANISM OF ACTION OF OMEGA-3 FATTY ACIDS

It have great effect on atherosclerosis, it can alter the plaque inflammation. It can ultimately increase arrhythmic threshold, reduce blood pressure, improve arterial, and endothelial function, reduce platelet aggregation, and favorably affect autonomic tone. Omega-3 fatty acids inhibit platelet TXA₂ synthesis and acts as antagonists of the pro-aggregatory TXA₂/PG H₂ receptor in human platelets. These are resolvins, and protectins are directly involved in blocking neutrophil migration, infiltration.

EFFECTS OF OMEGA-3 FATTY ACIDS

Anti-arrhythmic effects : It incorporated into cell membranes and affect the ion-channel function of myocytes. Omega-3 fatty acids inhibit voltage-gated Na⁺ channels, prolonging relative refractory period and increased voltage that are required for membrane depolarization. Anti-arrhythmic effect of omega-3 fatty acids may be mediated in part by their effects on autonomic control, especially by an increased vagal tone. Hence it prevent ventricular

tachyarrhythmias, and sudden cardiac death.

Triglyceride-lowering effects : Omega-3 fatty acid have important role in regulation of genes that are critical for controlling lipid homeostasis. It decrease VLDL assembly and secretion, resulting in diminished triacylglycerol production, through a decreased activity of sterol receptor element-binding protein-1c, also it stimulates beta oxidation leading to reduction of fatty acids.

Plaque stabilization: Omega-3 fatty acids supplementation substantially increases tissue levels of EPA and DHA and decreases macrophage infiltration and thickened fibrous cap in human carotid arteries, causes the plaque stabilization. It help in inflammation modulation, by blocking neutrophil migration, infiltration, and recruitment, as well as in blocking T-cell migration and promoting T-cell apoptosis.

CONCLUSION

Omega-3 FA is a healthy diet and appears to be safe when used for the primary and secondary prevention of CAD. It exert pleiotropic, cardiometabolic effects. Its benefits are not only restricted to cardiac diseases but also it work on many other diseases.



Collected by :
- Mohd. Shafat Sayyed
T.Y.B.Pharm

10 botanicals are absolute favorites for heart-health blends, both physical and emotional. You'll find some of them in the heart tonic shrub recipe . Top 10 herbs for heart health are...

HAWTHORN	Hawthorn is the primary heart health herb. It's indicated for almost every kind of heart-related ailment, improve circulation, balances blood pressure, regulates cholesterol and heartbeat, and generally strengthens and tones the heart. It's wonderful for any kind of emotional or energetic issues that are being manifested in pain or sadness carried in the chest area as well.
MOTHERWORT	Motherwort is a Mint family herb that contains heart-healthy flavonoids and glycosides. It can be a bit bitter, so it's usually taken as a tincture made from the aerial parts of the plant. Motherwort helps to improve circulation and regulate the heartbeat. It works very well for people who tend toward nervousness and carry a lot of tension in the body.
TURMERIC	Turmeric is an anti-inflammatory herb that helps to prevent heart ailments and supports the body when dealing with them. It helps with improved circulation and cholesterol levels, boasts anticoagulant properties and has been shown to protect against heart disease.
HIBISCUS	Hibiscus flowers are added to Hawthorn tea and they are an ingredient in heart tonic herbal shrub recipe. They are rich in heart-protective antioxidants and have been shown in studies to balance blood pressure, heart rate and cholesterol levels.
ROSE	Tinctures made from Rose can have an analgesic, anti-inflammatory effect and are especially useful when we are feeling physical pain caused by an emotional wound. Rose extracts also show potential for their ACE-inhibiting action and potential for blood pressure regulation. Rose essential oil has been widely used in aromatherapy to help comfort and uplift the hurting heart and to bring a sense of calm when one is feeling nervous or ungrounded. The essential oil and the hydrosol have anti-inflammatory effects which indicate that, energetically, they can be used to help us let go of the things that are inflamed (causing pain) in our hearts. Rose's antispasmodic activity further helps us to let go of the tension associated with the pain. Rose is an exemplary emotional healer for issues of the heart.
GARLIC	Garlic helps promote healthy circulation and may help regulate blood pressure and cholesterol levels. It is said to have a blood-thinning effect and has traditionally been used to help prevent heart ailments.
GINGER	A digestive herb, Ginger has been found to be able to reduce blood sugar, triglycerides, cholesterol levels and to have an anti-inflammatory effect. It's especially efficient at keeping energy flowing and increasing circulation.
ROSEMARY	Rosemary has been found to be effective for use when dealing with heart ailments. It has a pronounced anti-inflammatory effect and possesses antioxidant properties that help protect the heart as well. It has been found to reduce oxidative stress and regulate cholesterol levels.
CINNAMON	Cinnamon is a yummy, spicy herb that is commonly used to flavor food, but it can also help protect against heart diseases and has abundant anti-inflammatory constituents. It also shows promise for balancing blood pressure and cholesterol and boasts antioxidant protection
NETTLES	Nettles are incredibly rich in minerals that are necessary for the heart to function properly. Furthermore, it shows antioxidant activity, anti-inflammatory effects combined with cholesterol regulation and a decreased risk of heart issues in certain cases. Nettles have traditionally been used to help balance blood pressure as well.

Collected by :
- **Aqsa Siddique**
T.Y.B.Pharm



HEART DISEASE IS A DISEASE OF POVERTY, NOT LUXURY

Heart disease used to be an ailment of the rich. But it's now striking the world's poor people.

Heart disease is technically a subset of cardiovascular disease (CVD), but the two are often used interchangeably to refer to a handful of conditions that affect the heart. The deadliest involve narrowed or blocked blood vessels or arteries that can lead to heart attack or stroke, which cause the vast majority of global deaths from heart disease. In 2016, an estimated 1 million people died of HIV/AIDS, 445,000 people died of malaria, and 1.7 million died of tuberculosis. Nearly 18 million died of heart disease. And more than three-quarters of those deaths occurred in the developing world.

Heart disease, which is still thought of as a lifestyle disease of wealthy Americans who

In addition, there are medications to lower blood pressure and cholesterol that are relatively inexpensive. If the disease advances, still it is treatable with methods like stent insertion to expand arteries or heart bypass surgery when arteries are blocked.

Theoretically, eliminating behavioral contributors to heart disease, like smoking or eating fatty foods, is the best public health intervention against heart disease — but that's a lot easier said than done.

The reason is that changing people's behavior is really difficult, especially when it comes to health.



are eating more, exercising less, and living longer, is now very much a disease of the world's poorest. What's more, in poor countries, those deaths are happening earlier. In wealthy regions like the US and Europe, heart disease tends to burden the elderly (only 15 to 20 percent of deaths from heart disease are under age of 70). But in poor countries today, more than half of people who die from heart disease are under 70. Those people are also the poorest in those countries; wealthier people have access to preventive medicine and lifestyles that keep the disease at bay. And the problem is only projected to get worse: In Africa, deaths from chronic diseases, almost half of which are from heart disease, are forecast to increase by a third in less than a decade.

What makes heart disease so deadly?

Heart diseases is a subset of CVD which can lead to heart attack or stroke and severe complications , still heart disease is actually very treatable and, more importantly, preventable — if caught early. It can be prevented, and even reversed, with lifestyle changes like eating more fruits and vegetables and less sugar, quitting smoking, consuming less alcohol, and getting more physical activity.

Moreover, focusing on behavioral changes obscures how much the deck is stacked against people, particularly the poor. In some countries around the world, soda is cheaper than bottled water, making it a growing mainstay in the diets of adults and children alike in poor countries. Air pollution is worst in the world's poorest cities: Living in a place like Mexico City is equivalent to smoking 6.5cigarettes a day, and living in New Delhi, India, is Equivalent to smoking 25 a day.

But while fighting heart disease in hard, it really may not be as hard as other global health challenges we've successfully met. As Thomas J. Bollyky , the author of *plagues and the Paradox of Progress*: why the world is getting healthier in worrisome ways, pointed out to me, getting over 21 million people on antiretroviral (ARV) treatment for HIV wasn't easy either.

HIV treatment involves taking a cocktail of medications every day for the rest of patient's life. The medications have side effects, such as fatigue and nausea, and have to be taken with adequate nutrition, which is particularly difficult in some place in rural Africa. Despite all of this, new HIV infection rates have almost been cut in half since

1996- in no small part because so many people are on ARVs that, if taken correctly, make it almost impossible to pass on the disease. There is no reason we couldn't make the same progress against heart disease.

Factors contributing to heart diseases in developing countries and poor countries:

1. Lack of proper preventive care health facilities: under developed countries don't have the kind of preventive care that helps stop heart disease long before it's advanced enough to result in heart attack or a stroke. It is driven by poverty and inequity and lack of access to medical tools that exist in high-income countries.
2. Medications unavailable to the needy: managing heart attacks with low-cost drugs produces \$25 in health and economic savings for dollar of investment. Even aspirin, which costs a little over a dollar for a month's supply, can reduce the risk of heart attack in people who have already had one increase survival rates if taken right after a heart attack. It could save thousands of lives if it were always stocked in clinics across the developing world. But while medications are cheap and effective, getting those medications to the people who need them can be difficult.
3. Lack of doctors and nurses: Another issue is the lack of doctors and nurses to identify who needs these medications. The World Health Organization estimates that remote locations and overburdened health care systems in the developing world are an argument for using community health care workers, an increasingly common strategy for poor countries to address the shortage of health care professionals.
4. Fewer pharmacies: Pharmacies are few and far between in developing countries. Where they do exist, they frequently run out of medication. Getting medication often means taking a day off work to trek to the nearest pharmacy, which involves spending money on transportation and often waiting in a long line. Because medical supplies are irregular in the developing

world, it isn't uncommon for the medication you need to be out of stock by the time you get there.

5. Neglecting signs and symptoms: Think about how many times you get your blood pressure taken: every time you go to the doctor. Frequency of medicine or checkup should increase. High blood pressure puts at risk for heart disease. And if you catch it early, as many Americans do now, blood pressure medication and lifestyle changes, like quitting smoking or exercising more can nip the problem in the bud.

Heart disease is still thought of as a disease of excess, rather than deprivation. That misconception is costing lives – and it will likely cost many more if things don't change. It's also worth noting that the effort to combat heart disease could more than pay for itself. Effective management of high blood pressure alone could save \$100 billion in health care cost per year. It wasn't that long ago that HIV/AIDS seemed as intractable and complicated as chronic diseases do now. AIDS is still a crisis – but it's a crisis that the global community has had some success in tackling because we concentrated our efforts on it. We need to devote that same energy and attention to heart disease. It has been driven by some pretty powerful factors – Urbanization, big tobacco and burger king- but we also haven't tried very hard to fight it at least in the developing world. And that's what needs to change.



Collected by :
- Parth Patel
S.Y.B. Pharm

Time Travel & Black Holes

The best known solution to general relativity containing closed time-like curves in a bounded region of space is the rotating black hole. A black hole is a region of space-time where the gravitational field is sufficiently strong, and space-time is sufficiently warped, that even light cannot escape. The location of the last beams of light, struggling to get away from the black hole but never able to break free, is called the event horizon. (For a non-rotating black hole this is given by the Schwarzschild radius). Inside the black hole the space-time curvature and gravitational forces become so strong that they are infinite at zero radius (at least according to classical general relativity). Anything falling inside the event horizon must reach this "curvature singularity" in a finite amount of (local observer) time. Once inside the event horizon, the observer inexorably proceeds from larger to smaller radius and finally to zero radius. Because the radius exhibits this time-like, unstoppable, "count-down" behaviour, it behaves as a time coordinate, not a spatial coordinate. The curvature singularity at zero radius is thus a moment in time, not a position in space, and it is as unavoidable for the observer trapped inside the black hole as next Tuesday is for those of us outside the black hole. Similarly, inside an (ideal) rotating black hole, there is a region near the curvature singularity where the warping and rotation is so violent that the rotation angle, (J), becomes a time-like coordinate. Because (J) is both time-like and periodic (with a period of $2\pi c$) there are closed time-like curves in this region of the space-time. The closed time-like curve region of the rotating black hole solution, however, is not considered physical for reasons unrelated to the closed time-like curves. First, the curvature singularity lies to the past of the closed time-like curve region. For observers in that region the singularity is visible and boundary conditions for what comes out of the singularity must be imposed by some (unknown) additional physics. In principle anything at all could come out of the singularity and ruin the closed time-like curves. Secondly, and perhaps more importantly, there is an unstable region to the past of the closed time-like curves. It is widely thought that the end-point of this instability is a curvature singularity which

any observer would meet before any closed time-like curves could form. Solutions with negative mass/energy can also be used to support closed time-like curves and evade the theorems proposed by Hawking, Tipler and others. While there is no known classical matter with negative mass, it can be produced from quantum effects without too much effort. The simplest example of this is the Casimir force between two uncharged conducting plates (or molecules).

This force, which is distinct from and weaker than the van der Waals force, was

predicted in 1948 and confirmed in 1958, and is caused by vacuum fluctuations of the electromagnetic field due to the Uncertainty Principle. The fluctuations are smaller in the presence of the conducting plates than they are in free space, which leads to an attractive force. Furthermore, the energy density between the plates is negative compared to that in free space. In flat space-time, this negative energy is not enough to maintain closed time-like curves, but in space-time with gravitational curvature (as in our Universe) there are currently no known obstacles, in principle, to creating enough



negative energy to gravitationally support closed time-like curves. Mike Morris and Kip Thorne at Caltech and others use this negative energy to create closed time-like curves using wormholes to connect one region in space-time to another directly. Without negative energy to support a wormhole, general relativity predicts that it will collapse in even less time than it would take light

to cross the wormhole. The repulsive nature of the gravitational field arising from

negative energy matter is what supports the wormhole. The two regions

connecting the wormhole

need not be widely separated in space,

indeed if one can arrange for

the two ends to be separated narrowly in space, but distantly in time, this is precisely what we need for a time machine. Conceptually, the easiest way to make a time machine out of a wormhole is via the twin paradox of special relativity. In this example one twin (Alex) stays at home whilst the other (Brett) zips off at high speed, rejoining Alex at a later time. Due to time dilation, much less proper time passes for Brett than for Alex by the time of their reunion (the arrows in figure 4 connect moments of the same

local time for each twin). If Alex and Brett are clever enough to hold on to the ends of a very short wormhole while they are travelling, they can stay in near instantaneous contact for the whole of Brett's journey by communicating through the wormhole instead of through normal space. Starting at that time, Alex can send a message to Brett at the speed of light through normal space, and then Brett can send the same message back to Alex via the wormhole (almost instantaneously if the wormhole is very short), where it arrives at the same moment it was sent. After that time there are closed time-like curves, as demonstrated by the red path, which close via the wormhole. The worst difficulties in creating a time machine of this type are finding a wormhole, stabilizing it with enough negative energy matter and keeping the ends of the wormhole near the twins. Amos Ori at the Technion in Israel has recently found a new solution to the Einstein equation with several interesting properties. The closed time-like curves evolve from a causally well-behaved past, and the solution is trivially flat and causal at infinity and topologically trivial everywhere (unlike the wormhole time machine). Furthermore, the solution does not require negative energy when the closed time-like curves first form, but it does have negative energy after their formation. However, it is not yet known what would happen if the region where negative energy is used has positive energy matter put in its place. It is also not yet known whether this solution is stable against the classical field (infinite) build-up described earlier.

If this is true then the movie *Interstellar* is the best example of this theory. And might we find the Cooper station for us.



Collected by :
- **Almas Shaikh**
T.Y.B.Pharm



What do we know about the four people who actually founded Hogwarts?

According to Professor Binns, Godric, Helga, Salazar and Rowena 'built this castle together, far from prying Muggle eyes'. For the most part, the four worked on creating Hogwarts in harmony, but it wasn't long before Salazar Slytherin's troubling views on the wizarding world caused an almighty rift.

But what of the founders' individual stories? Lets see.

Godric Gryffindor

'Bold Gryffindor, from wild moor' dwelled at Godric's Hollow, the future home of many well-known Harry Potter characters, from Bathilda Bagshot to the Potters themselves.

Much like the Hogwarts house he founded, Gryffindor, Godric was known for his bravery and his skills as an accomplished dueller. He even had a special sword created for him by Ragnuk the First, the finest of the goblin silversmiths. The sword was 'gleaming silver' with 'rubies the size of eggs'. The sword was so beautiful that Ragnuk tried to take it back, accusing Godric of stealing it. Thankfully, Godric was not one to be trifled with, and eventually took back what was his from the goblin community. This didn't stop the goblins creating a 'fake myth' of Gryffindor theft, however, legend has it that Godric was also the man who gave Hogwarts the Sorting Hat, a sentient piece of headwear that soon became the one to sort the school's students into houses long after Godric and the other founders

were gone. The hat contains the intelligence of all founders, so it can pass on their intuition on each Hogwarts student forever.

Godric will always be known for his accomplished skills in battle, and his fight against Muggle discrimination in the wizarding world. In fact, it was a serious argument between Godric and Salazar that finally made the Slytherin founder leave Hogwarts. Godric was a man, certainly, ahead of his time.

Helga Hufflepuff

Helga, 'from valley broad', was the founder of the house which valued those that were 'just and loyal'. According to the Sorting Hat, Helga vowed to 'teach the lot' – and didn't judge certain students over others, no matter how much talent they had or what families they came from.

At Hogwarts, Hufflepuff was known for her talents in Charms, and used her remarkable skills for preparing food – a specialty of hers – to create splendid feasts that were enjoyed by all. Her talent would bring the whole school together in harmony.

Helga Hufflepuff's fantastic recipes are still used in the Hogwarts kitchens to this day and her portrait can be found in the Hufflepuff common room, toasting her students with her golden cup. No wonder the Hogwarts feasts are always so triumphant and bountiful.

And as for that golden cup? Well, that very cup would be passed down to Helga's descendants, eventually falling into the hands of one

The Stories of Hogwart's Founders

Hepzibah Smith, a 'distantly descended' witch with a penchant for possessing valuable trinkets. Unluckily for her, a young fellow called Tom Riddle was well aware of this, and once he had hold of it, Helga's trusty cup engraved with a badger would become one of Lord Voldemort's Horcruxes.

Salazar Slytherin

For many years, all was well among the four founders. Yet when shrewd Salazar Slytherin, 'from fen', suggested that only those from magical families deserved to come to Hogwarts, his three friends stood against him.

Salazar Slytherin left the school. Before he did however, he built a secret room inside the castle with a great statue of himself and a monster inside that only he could control.

The chamber would remain a secret, until Salazar Slytherin's heir came to Hogwarts, ready to finish his ancestor's work. Slytherin also left behind a golden locket, which would become a treasured family heirloom, and eventually a Horcrux of Lord Voldemort too.

Despite his flaws, Salazar was a talented wizard, skilled in Legilemency and Parseltongue, and his twisted legacy and talents lived on through many members of his bloodline, specifically Lord Voldemort. Thankfully, his hostile nature towards Muggle-borns was something that not many of the wizarding community agreed with. And not Salazar's entire legacy was bad. A very distant descendant of his, Isolt Sayre, would go on to found Ilvermorny School, and Salazar's wand would eventually be buried in the school's grounds, turning into a snakewood tree with leaves with

restorative powers.

Rowena Ravenclaw

'From glen', was the most brilliant witch of her time, but her story is one of tragedy. Known for her wit and love of learning, she wore a diadem that was said to grant wisdom to the wearer.

However, Rowena's own daughter grew jealous of her mother's incredible intelligence. Helena Ravenclaw stole her mother's diadem and ran away, a fact that Rowena kept hidden from her fellow founders even when she fell ill.

Desperate to see her daughter one last time, Rowena sent a man to bring Helena home. Unfortunately, that man was the Bloody Baron, who was head over heels with Helena, and stabbed her in a rage when she refused to come home. After Helena was tragically killed, legend tells us that Rowena Ravenclaw died of a broken heart. No wonder Helena's ghost, that became Ravenclaw's house ghost, would often roam the corridors in silence



Collected by :
- **Supriya Pathak**
S.Y.B.Pharm



Dr. Tabassum Khan

MBBS, DNB (Medicine) & (Cardiology)

- 1. What are the unique skills needed as a cardiologist?**
 - Passion and determination towards your specialty (be it any field of medicine).
- 2. What do you think as a cardiologist, is the main reason for increasing prevalence of heart patients all over the world?**
 - Stress for a better living is the main reason for prevalence of heart patients.
- 3. What is the most common form of cardiac disorder you have come across and which age group is most affected?**
 - Myocardial Infarction (Heart attack).
 - Age 30-45 years.
- 4. Are there any early detection techniques for cardiac disorders?**
 - Regular health checkup in the form of blood tests and non - invasive cardio testing like 2D Echo, stress test, etc.
- 5. What do you think is the major misconception in cardiac patients?**
 - Young patients usually neglect the symptoms or warning signs and land up in major problem later. So, I would suggest be careful about your health.
- 6. What is the role of patient counseling in treating a cardiac patient?**
 - Counseling is very important in any disease. In cardiac disease it is a part of rehabilitation program. Counseling of family members also needs to be done.
- 7. What are the new advancements possible in the field of cardiology in the near future?**
 - New advancements are expected in field of heart transplantation, having artificial heart or artificial devices which act as a bridge to transplants. Also stem cell therapy is an upcoming branch.
- 8. What do you think is the major role of pharmacists in helping the cardiac patients?**
 - Since cardiac patients are on lifelong medications, pharmacists must make sure that the quantity of drug is not compromised, and secondly the cost of these medications needs to be average.
- 9. What according to you could be the bridge between a pharmacist and a doctor?**
 - Bridge between pharmacist and doctor is definitely patient satisfaction.
- 10. What could be an effective method to spread awareness about cardiac disorders?**
 - Media, health camps, posters in colleges and corporate offices to create awareness in the young people.
- 11. What are the major medications used by majority of doctors for the treatment of cardiovascular disorders?**
 - Anti platelets, anti hypertensive, lipid lowering agents, etc.
- 12. What is your message for young generation?**
 - Be careful about your health and never ignore even minor symptoms as it may risk your life.

Game of Life

When things go wrong, as they sometimes will
When the road you are trudging seems all uphill
When the funds are low and the debts are high
And you want to smile but have to sigh
The goal is often nearer
But surrounded with barrier
A faltering man would certainly give up
But a man on mission would strongly back up
The life is a game with many challenges
Each advancing level would bring in positive changes
The thing we should remember is
That winners never quit
And Quitters never win



Collected by :
- **Omkar Mendon**
FY.B.Pharm

THE REST

Hey listen.....,
One more thing....,
Life is the happiest if you think....!
Now don't cross your lane...
Because, not all who are travelling are in the same train...!
Feeling alot , in a Bit....,
Moments matters if you thank for it....,
Smile because you exist....,
At least you are completing your list....!
Dreams count...,
It's just that we are concerned about amounts....!
Today or Tomorrow...!
Ohh stop considering that , it will only bring sorrow!
Travelling wrong...?
Thik hai na ,
it will help you to desing
Lyrics for your own song....!
Sometimes there are U-turn,
Let the day be darkest , sun still remembers to burn...!
Make your life "THE BEST"
Luck may look after "THE REST"



- Nishi Mishra
FY.B.Pharm

Sky

Sky,
is the supreme
who has enormous mood swings.
Ocean,
that has nothing to wear,
But that long distant best friend
always used to share.
No wonder,
Ocean is an amazing listener,
The minute sky sheds a tear,
Ocean hugs it, without any fear!
They share an extreme emotion,
Don't you believe Sky and Ocean
Have their own equation?

Collected by :
- Shreya Patwari
Guest Poem



वो एक दौर था

एक दौर था जहाँ हमको हँसने से कोई नहीं रोकता
बल्कि हमारी हँसी में वो भी हँस पड़ता, हम थोड़ा रो क्या पड़ते, वो हमको मनाने लग जाता,
उटपटान सी हरकत कर दुबारा हँसाने लग जाता,
हमको अपनी नजरो में ना पाकर दुडता चला आता,
हर काम को भूल हमारे साथ कुछ पल गुजारता,
वो भी एक दौर था ।

अनजाने में ही सही बेजान चिजो से बेहद प्यार था.
उनके टुटनेसे हमको दर्द होता उनके खोने से हमारे आँख से आँसु टपकता, वो भी एक दौर था ।

हमारे बारे में सोच कर तो सारा दर्द भुल जाता,
दो पल उसके संग बिता लूँ वही सोच अपना दिल बहलाता वो भो एक दौर था ।
अगर कोई डाटे तो दुसरा हमारा साथ हम एक कदम चलते तो दुसरे कदम के लिए हमको उक्साता,
जब थोड़ा सा भी डगमगाते तो कई हाथ थामने को आते, अगर गिर जाते तो गोद में लिए दर्द भुलाने भी एक दौर था ।
अगर हम से कुछ टुट जाता तो नया आता,
मतलब का रिश्ता कोई नहीं निभाता, ना फायदा ना नुकसान हमे देख सिर्फ होठो पे मुस्कान लाता,
हमारे खाना ना खाने पर सबकी भूख प्यास मिट जाती, हमारे सोते ही सबकी जुबान कही भाग जाती । वो भी एक दौर था.
जिंदगी का दौर, खुबसुरत दौर, हमारे बचपन का दौर ।

- शिवानी राय
Guest Poem

देखा है...

आंख और लब्ज के दर्द को देखा है ।
रात और दिन की दूरियों को देखा है
आंख और लब्ज के दर्द को देखा है
मँझदार में कैसे छोड़ दूँ क्योंकि
दीयो से भी कभी आग लगते देखा है ।
चाँदनी रात तो मुस्कुराई भी मगर
चाँद को भी उस वक्त रोते देखा है ।
चेहरा पानी के छीटों से भीगा है पर
उसमे से मोती जैसे आँसू छलकते देखा है ।
उस शिखा पर तुम्हें कैसे रख दूँ
जिनको हवाओं से भी हिलते देखा है ।
समंदर के बीच तो नहीं मगर
तलाब में खुशीयों के फूल खिलते देखा है ।
राधा-कृष्ण के बाँसुरी के स्वर में से
मैंने बस तुम्हे निकलते हुए देखा है ।

- पंकज यादव
S.Y.B.Pharm



बेटी बचाओ

लाल हुई जमीन, फिर किसी मासूम रक्त से ॥
नन्ही सी जान खूब बड़ी उस बदनाम वक्त से ॥
चीखें उसकी, उन्हे भी, शेरनी की दहाड़ सी लगी होगी ।
बाबजूद उसके, कैसे जिंदा थी वो हिम्मत पहाड़ सी लगी होगी ।
मार दिया कमबख्तो ने दीन, दया, शर्म न आई उन्हे,
मरते मरते भी दुष्कर्म किया, अपनी बेटी नजर न आई उन्हे ॥
नियम-कानून न बदला अगर, ये हैवानियत और बढ़ जाएगी ।
हर तरफ दरिंदो का राज होगा, नन्हें परिंदे को खाता बाज़ होगा ॥
दुष्कर्म की सजा जब मौत होगी, तब मुझे भारतीय होने पर नाज होगा ॥

- नागेश
S.Y.B.Pharm



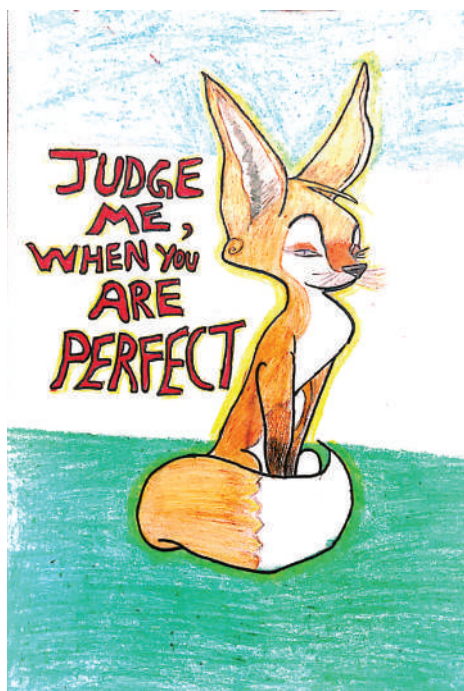
आई वडील आले माझ्या वाटयाला

बंगला गाडी वाटणीत मोठयाला
घरा जवळची बाग मिळाली धाकटयाला
सुपीक शेतीची जागा दिली छोटयाला
किती माझे भाग्य, आई-वडील आले माझ्या वाटयाला...
पंच जमले होते आम्ही वाटणी करताना
आगीत तेल घालत होते आम्ही भांडताना
आम्ही उत्सुक होतो हिस्सा मागताना
त्यांना आनंद होत होता घर विभंगलेले दिसताना
सगळी धन संपत्ती हवी होती मोठयाला
किती माझे भाग्य आई-वडील आले माझ्या वाटयाला...
संपत्ती नावावर करण्याची प्रत्येकाला झाली होती घाई
आम्हाला कोण सांभाळेल या आशेने बघत होते आई बाबा
आई बाबा माझ्याकडे चला म्हणायला पुढे कोणच सरकला नाही
मला कळतच नव्हतं माझ्या वाटयाला येईल काही
दाग-दागिने आईचे दिले पंचांनी धाकटयाला...
सगळे खुश झाले बनून करोडपती
फक्त आई-वडील हीच माझी मोठी संपत्ती
आई वडीलांचा आशीर्वाद येईल माझ्या कामी
किती नशीबवान मी काहीच कमी नाही माझ्या वाटयाला..
किती माझे भाग्य आई-वडील आले माझ्या वाटयाला..
आई वडीलांनी आपल्याला लहानाचे मोठे केले
त्या आई वडीलांना आपल्या पासून दूर करू नका..
कारण आपण जे काही आहोत आज त्यांच्या मुळे.



- श्री. नरेश पेडामकर
फार्मसी ऑफिस

ART Gallery

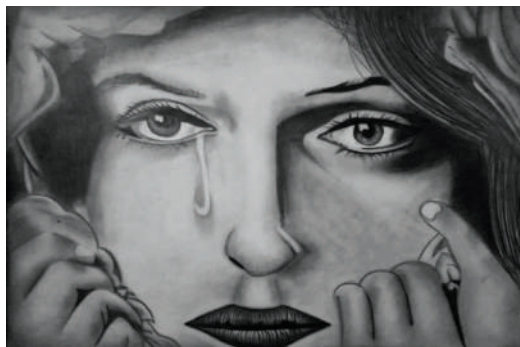


Ashish Jha
F.Y.B.Pharm

Manali Yadav
T.Y.B.Pharm



Shefali Lohar
S.Y.B.Pharm

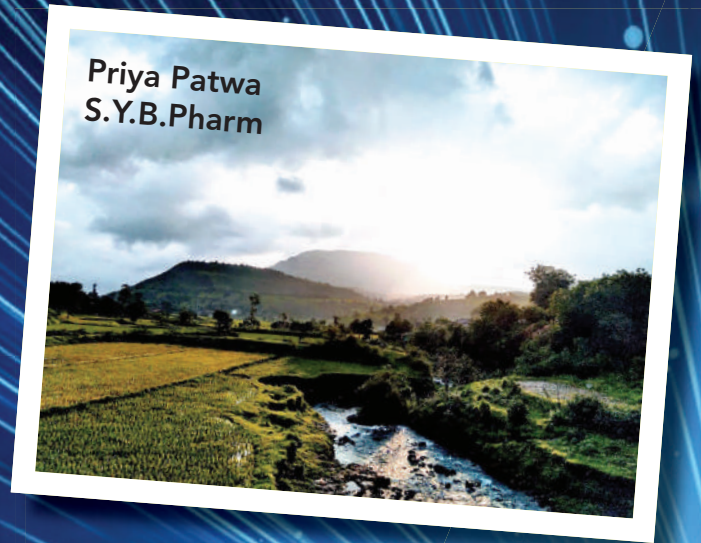
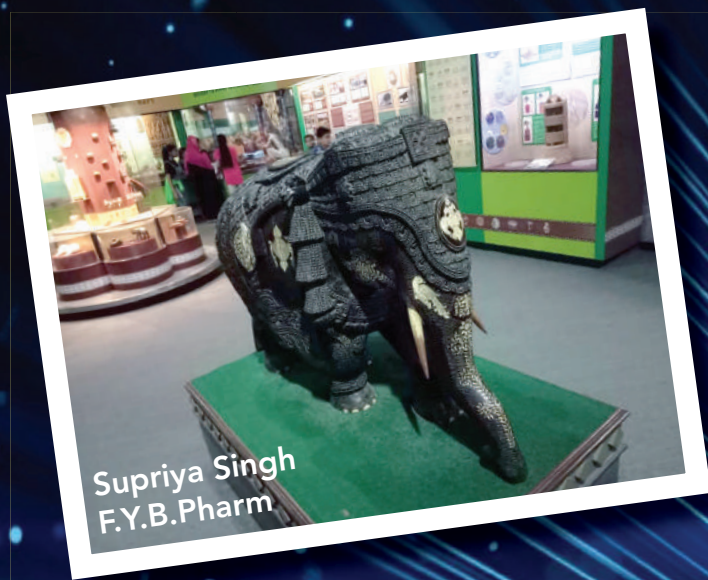


Parth Patel
S.Y.B.Pharm



Ravikesh Prajapati
F.Y.B.Pharm

Photo Gallery





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ROW 2 - Dr. Ritesh Fule, Dr. Mohd. Wais, Dr. Anubha Khale, Prof. (Dr.) VinayKumar Velingkar, Dr. Sheela Yadav



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Dr. Mohammad Wais, Dr. Anubha Khale, Prof. (Dr.) Vinaykumar Velingkar, Dr. Sheela Yadav



Department of Pharmaceutical Analysis and Pharmaceutical Chemistry

L - R : Dr. Arundhati Abhayankar, Dr. Archana Bele

Dr. Mohammad Wais, Dr. Anubha Khale, Prof. (Dr.) Vinaykumar Velingkar, Dr. Anagha Raut





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The Student Council



F. Y. B. Pharm



S. Y. B. Pharm



T. Y. B. Pharm



Final Year B. Pharm



M. Pharm - 1st Year



M. Pharm - 2nd Year