

THE IPA-MSB'S BOMBAY COLLEGE OF PHARMACY- AUTONOMOUS

# CREDENCE

20th edition- 2025



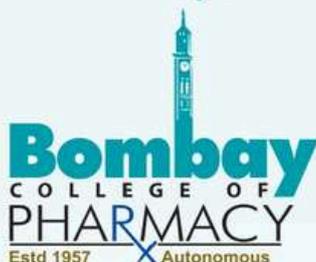
Powering education...Towering Knowledge



Maharashtra State Branch



**The Governing Body of The Indian Pharmaceutical Association - Maharashtra State Branch's  
Bombay College of Pharmacy - Autonomous  
request the pleasure of your company at the**



## **67<sup>th</sup> Annual Day Celebration**

to be held on Vikram Samvat 2081, Magha Shukla Paksha Tritiya,  
Saturday, February 1<sup>st</sup>, 2025 at 5.30 pm.  
at the Bombay College of Pharmacy - Autonomous,  
CST Road, Kalina, Santacruz (E), Mumbai 400 098

### **Chief Guest**

**Dr. Rajeev Singh Raghuvanshi**

Drugs Controller General (I), CDSCO

### **Keynote Speaker**

**Dr. Rajendra Pratap Gupta**

Chairman, Academy of Digital Health Science &  
Former Advisor to Union Health Minister

### **Guest of Honor**

**Dr. Pramod Patwardhan**

VP & Regional Supply Director,  
Glaxo India Global Services Pvt. Ltd

**Captain Naveen Kumar**

26, AD Regt.

### **Presided By**

**Dr. R.N. Gupta**

National President - The Indian Pharmaceutical Association

**Dr. N. Sivaprasad**

President - The Indian Pharmaceutical Association - Maharashtra State Branch  
will grace the occasion

**Dr. Krishnapriya Mohanraj**

Principal In-Charge

**Mr. Nitin Maniar**

Chairman-Governing Body

**Mr. Tejas Gid**

General Secretary, Students Council

**Dr. Alka Mukne**

Students' In-Charge

Programme overleaf

## Programme

- Lighting of the Lamp
- Felicitation of Guests
- Welcome address and presentation of Annual Report by the Principal In-Charge
- Report on students' activities by the General Secretary, Students' Council
- Release of College Magazine-Credence
- Address by the Chairman, Governing Body, Bombay College of Pharmacy
- Address by the President, The Indian Pharmaceutical Association - Maharashtra State Branch
- Address by the National President, The Indian Pharmaceutical Association
- Address by the Guests of Honor
- Address by the Keynote Speaker
- Address by the Chief Guest
- Prize Distribution
- Vote of Thanks by the Students' In-charge
- Cultural program & Dinner

RSVP on WhatsApp No. 98198 74227 (Ms. Anitha Lalwani)

## EDITOR'S NOTE



Welcome to exciting issue of Credence '25! As we step into this new edition, we are reminded of the incredible talent, resilience, and innovation that define our college community. From academic milestones to creative student contributions, Credence is here to celebrate every achievement that makes our institution shine.



In this issue, you'll find a variety of inspiring stories—highlighting not only academic excellence but also the passion and dedication that students bring to extracurricular pursuits. The "Student's Corner" is once again filled with thought-provoking articles, artistic expressions, and personal reflections that give us a deeper look into the lives of our peers.

As we continue to navigate these challenging times, it's more important than ever to honor the hard work, growth, and collaboration that make our campus a dynamic place to learn and grow. Thank you for your continued support, and we hope you find this issue as inspiring and uplifting as the students who contribute to it.

Here's to the spirit of achievement and the journey ahead!

**Happy Reading!**

**Shruti Jadhao and Riya Pandit**

Editor-in-chief

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## TEAM CREDENCE



**Team Editorial** - Shruti Jadhao , Riya Pandit , Aditya Dubey , Girija Sedani , Mrugank Kulkarni

**Team Technical** - Bhumika Mhapankar

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## MESSAGE FROM PRESIDENT, IPA-MSB



Dear Readers,

I am delighted to write this message on behalf of The Indian Pharmaceutical Association-Maharashtra State Branch (The IPA-MSB) for the student magazine of The IPA MSB's Bombay College of Pharmacy, CREDENCE 2025..

I feel proud and glad to mention that The Bombay College of Pharmacy (BCP) occupies a prominent place among the pharmacy educational institutes in the country

The excellent performance of the students in academic and other extracurricular academic programs is testimony to this recognition. It is matter of great pride that the BCP is managed by The IPA MSB. The BCP is a great support for IPA MSB to fulfill one of its key objectives of enhancing and enriching pharmacy education. Our students graduate with not only the skills and knowledge in pharmacy, but also develop positive mindset, sense of service and professional ethics to serve the people. Thus, BCP has been immensely contributing in making available to the industry and healthcare system of the nation, the much needed skilled pharmacists. In addition to the academic activities BCP faculty are deeply engaged in national and international collaborative research where the active participation of students further enhances their technical skills and analytical thinking. Thanks to the Principal and faculty for developing aptitude in students for research

The current trend is that Pharmacy and Pharmaceutical science quickly adapts the new inventions and developments in other areas of science and technology to bring in new dimensions in pharmaceutical research, products and services. For example, 3D printing, 3D cell culture, data analytics, AI, big data, new radionuclides, nuclear imaging, immuno chemistry, receptor avid molecules are some the new areas which are being explored by pharmacists to find solutions to complex problems.

In view of the above, my message to students, on this auspicious occasion of the college annual day, is to keep the mind open to continuous learning from other areas of Science & Technology.

The College magazine CREDENCE 2025 is designed and published by the students and it reflects the ethos, inspiration and enthusiasm of our students. I wish the Annual Day a grand success and congratulate the CREDENCE 2025 Editorial team.

**Dr. N Sivaprasad**

President,

The Indian Pharmaceutical Association- Maharashtra State Branch (IPA-MSB)

## MESSAGE FROM CHAIRMAN - GOVERNING BODY



Dear friends,

I convey my best wishes of 67th Annual Day of The Indian Pharmaceutical Association-Maharashtra State Branch's Bombay College of Pharmacy-Autonomous to Team Credence, Teaching, Non-Teaching Staff and Students!!!

Also, best wishes of back-to-back Amrut Mahotsav of Azadi, Pharmacy Act, and this year of the training course, i.e. The IPA-Bombay (now Maharashtra) State Branch, parent association of BCP started

"Practicing Pharmacist Training Course" inaugurated by Dr.M.D.D.Gilder, Minister of Health, Govt. of Bombay on "1949, 25thSept". (25th Sept' - Now it's celebrated as World Pharmacist Day)

Recently, I got TEDx Talks video from Dr.B.Suresh, Former President, Pharmacy Council of India and The Indian Pharmaceutical Association and thought to share with you for take home message from "I had a Dream: Transforming Pharmacy Education for a Globalized India:

The sun sets to rise again. One dream definitely gives you a ripple, and if you have more dreams, continue to have more dreams, then more ripples, more changes and be sure that the sun will rise again, new dream will be there, new effect will be there, new transformation will be there.

My dear young students, my dear friends, I would like you to firststart with a big dream of your life, you are on the different stages of your career now, the career you would be thinking in particular direction but if you have a larger dream, whatever you wanted to achieve in life would come to you, please dream, dream big and never be afraid of dreaming big."

Likewise I am sharing one of inspiring quote by Padma Vibhushan Dr.Raghunath Mashelkar ji, emphasizing the importance of focusing on "what next" rather than "what best". The mindset is crucial for driving innovation and progress.

We profoundly thank to IPA, Founders, Contributors, Teaching/Non-Teaching Staff, Alumnus, Professionals and Colleague/s at The IPA-MSB for their wholehearted support, cooperation to BCP due to which attained status of premier pharmacy institute in the country.

With warm wishes

### **Nitin N. Maniar**

Chairman-Governing Body, The IPA-MSB's BCP-

Autonomous & Hon. Secretary, The IPA-MSB

chairman@bcp.edu.in / 9594032520

23rd February 2024

## MESSAGE FROM PRESIDENT BCP - ALUMNI ASSOCIATION



Dear Readers,

It is with immense joy and pride that I extend my heartfelt congratulations to our college on the occasion of its Annual Day celebration. This day marks not only a moment of festivity but also a reflection of the countless achievements, tireless efforts, and unwavering dedication of our vibrant college community.

As an alumnus, I can confidently say that the journey we undertake here shapes us for life. The lessons learned, the friendships forged, and the values instilled during our time at this esteemed institution remain with us, guiding and inspiring us long after we leave with memories. Annual Day is a reminder of the legacy we carry forward and the traditions that unite us.

I commend the students for their enthusiasm, creativity, and commitment to excellence and culture, and I applaud the faculty and staff for their relentless dedication to nurturing talent and fostering innovation. Together, you are scripting a story of success that will continue to inspire further students of pharmacy.

On behalf of the Alumni Association, I assure you of our continued support and involvement in every endeavour that contributes to the growth and glory of our college. Let us celebrate this occasion with joy, gratitude, and a renewed commitment to reaching greater heights.

Wishing you all a memorable Annual Day and a artistically curated Credence magazine filled with achievements and cherished memories.

Warm regards,

**Dr. Amita Karnik**

President of the Alumni Association

## MESSAGE FROM PRINCIPAL



Wishing all the students, teaching and non-teaching staff of The IPA-MSB's Bombay College of Pharmacy (BCP) a joyous evening on the occasion of 67th Annual Day Celebrations taking place on 1st February 2025!

It is a momentous occasion to remember the stalwarts who have worked tirelessly for making BCP the sterling institution that it is today. We pay obeisance to Prof Harbans Lal Bhalla who left his mortal coil on 21st October 2024, after many decades of service to BCP and the Pharma profession – catering both to academics and research.

I would like to acknowledge the fabulous contribution to BCP of Prof Krishna Iyer, Professor of Pharmaceutical Chemistry and former Principal in Charge for his nearly 3 decades of service to BCP and from whom I took the reins as Principal in Charge on 1st October 2024.

This academic year saw a string of achievements for BCP by both students and faculty as is clear by the astounding accomplishments mentioned in the annual report. The Natoli-BCP Institute of Industrial Pharmacy and Research established at Bombay College of Pharmacy commenced undertaking projects for the industry and research students too underwent training at its hallowed precincts. The National Facility for Research and Training (NFRT) equipped with LC-MS/MS, HPTLC, HPTLC-MS, ICP-MS, UHPLC and HPLC undertook many projects for industry and academia. Faculty too bagged research funds and industrial consultancy and showcased the calibre of BCP in the research arena.

This year also witnessed magnanimous contributions from alumni and industry especially through Corporate Social Responsibility (CSR) Funds for scholarships and for Equipment Purchase and Maintenance Fund (EPMF). Rubicon Research provided funds of nearly Rs 30 lakh through CSR. BCP is thankful to the alumni and BCP Alumni Association for their efforts to garner funds for the upkeep of equipment.

Special mention for BCP having submitted the Self-Assessment Report to National Board of Accreditation with significant contribution by faculty, nonteaching staff and students.

I take this opportunity to thank the management, faculty, nonteaching staff and students for the support rendered and wishing more joyous days for all at Bombay College of Pharmacy.

**Prof. Krishnapriya Mohanraj**  
Principal  
Bombay College of Pharmacy

## GS's NOTE



Dear Readers,

I feel immense pleasure to address you all through the CREDENCE magazine on the occasion of 67th Annual Day Celebrations of IPA MSB's Bombay College of Pharmacy. First, I'd like to appreciate the efforts of the team behind the CREDENCE for compiling and putting together multifaceted information ranging from the achievements of our faculty and students to the scientific articles, whilst also giving a platform to our creative minds to showcase their artistic and literature skills.

This year has been a great year both in terms of curricular and extra-curricular front. Our students have excelled not only in academics but also in other domains, be it music, art, literature or any platform that tested their overall technical and soft skills. Their passion, perseverance and dedication coupled with the guidance and support of our faculty at every step has helped our students achieve all round development of their personality. Our faculty have always been the torch in the paths of education and research providing motivation to learn, upgrade and master the skills required by the ever-changing pharmaceutical industry.

Speaking about the industry, our college has provided numerous opportunities to connect to and gain more insights about current industry via seminars, workshops and training programs. A special mention also needs to be given to the BCP Alumni Association which has provided great opportunities to the students to build and grow networks through their initiatives like 'Chai pe Charcha' events.

The Students' Council has always promoted the values of unity and equality across the students community. Throughout the year, the council has organized and celebrated events such as the Independence Day, the vibrant and energetic Garba night, and also the Teacher's Day to express our gratitude to the faculty. The annual fest Resonance held in the month of January provided our students to compete and sharpen their skills by participating in different types of events pertaining to technical, cultural, literature, sports and finance. The theme for Resonance this year was 'Resoflix' that highlighted how the media streaming apps like Netflix have started taking a central place in the lives of people, ensuring that creativity in the entertainment industry is accessible to all. Inspiring from this industry, we also wanted to highlight that the creativity that sits in every one of us, just needs a platform to showcase it to the mass.

As I end my note, I wish everyone the best of their health.

I also take this opportunity to express my gratitude to all my fellow students, teaching and non-teaching staff for your continued support towards the betterment of 'Pharmacy' profession either directly or indirectly.

Warm regards,

**Tejas Gid,**

General Secretary

IPA MSB's BCP Students' Council 2024-25.

## GOVERNING BODY OF BOMBAY COLLEGE OF PHARMACY



**Mr. Nitin N. Maniar**  
Chairman



**Dr. Pramod Naik**  
Jt. Director DTE -Member



**Dr. Supriya Shidhaye**  
VC nominee  
Member



**Dr. N. Sivaprasad**  
Member



**Dr. Hemant Mondkar**  
Member



**Dr. Anand Shedge**  
Member



**Dr. Satish Shah**  
Member



**Dr. Krishnapriya Mohanraj**  
Principal/Member  
secretary



**Dr. Harita Desai**  
Member

## FINANCE COMMITTEE OF BOMBAY COLLEGE OF PHARMACY



**Dr. Krishnapriya Mohanraj**  
Principal/Member  
secretary



**Dr. Satish Shah**  
Member



**Mr. Nitin N. Maniar**  
Chairman



**Dr. N. Sivaprasad**  
Member



**Abhay Arolkar**

## COMPOSITION OF ACADEMIC COUNCIL

(Revised w.e.f 07.01.2023)

Sr. No.	Category	Member	Affiliation
1	Principal/Chairperson	Dr. Krishnapriya Mohanraj	Bombay College of Pharmacy
2	HOD (Pharmaceutical Chemistry)	Dr. Premlata Ambre	
	HOD (Pharmaceutical Analysis)	Dr. Vaishali A Shirsat	
	HOD (Pharmaceutics)	Dr. Ujwala Shinde	
	HOD (Pharmacognosy)	Dr. Alka Mukne	
	HOD (Pharmacology)	Dr. Anuradha Majumdar	
3	Five teachers from the college representing different categories of teaching staff by rotation on the basis of seniority of service in the college	Dr. Clara Fernandes	Bombay College of Pharmacy
		Dr. Harita Desai	
		Dr. Mangal Nagarsenker	
		Dr. Mala Menon	
4	Four experts/academicians from outside the college representing such areas as Industry, Commerce, Law, Education, Medicine, Engineering, Sciences etc., to be nominated by the Governing Body.	Dr. Sampada P Patvardhan	Consultant-Medical Writing & Healthcare Services, 1302/ Pristine, Vasant Lawns, Pokhran Road-2, Voltas Compound, Thane (West)-400601, Mob: 9820662080, Email: spatvardhan@gmail.com
		Dr. Rajiv Desai (Lupin)	Executive Vice President, Corporate Quality, Lupin Limited, Kalpataru Inspire, 6 <sup>th</sup> Floor, Off Western Express Highway, Santacruz (East), Mumbai-400055, Mob: 8980803550/022-66402502 Email: rajivdesai@lupin.com
		Dr. S.K. Kulkarni	Emeritus Professor of Pharmacology & Former Pro-Vice Chancellor (DUI) (PU), 404, Queens Court, Apartment, Vaccine Depot Road, Tilak Wadi Belgaum -590006, Karnataka, Mob: 9886203247, Email: skkulkarni46@gmail.com
		Dr. Eswaran Iyer (Law IPR)	IP Consultant A/001, Shiv Sudama Nandan, Plot RM 89, MIDC, Milap Nagar, Dombivili (East), Thane, Dist-421203, Mob: 9820395353, Email: eswaranier@gmail.com
5	Three nominees of the university	Prof. Shreerang Joshi	Professor of Pharmaceutical Sciences and Head, Department of Pharmaceutical Technology, Institute of Chemical Technology, Nathalal Parekh Marg, Near Khalsa College, Matunga, Mumbai-400019. Mob: 9820600226 Email: sv.joshi@ictmumbai.edu.in, shreerangvjoshi@rediffmail.com
		Prof. Rajendra Shinde	Director CIP & Principal, St. Xaviers College (Autonomous), 5, Mahapalika Marg Dhobi Talao, CST Fort Area Fort, Mumbai-400001. Mob: 9819100131 Email: rajendra.shinde@xaviers.edu
		Prof. Sudha Rathod	Principal, Oriental College of Pharmacy Plot No: 3,4,5, Sector-2, Sanpada (W), Navi Mumbai Mob: 9769000309 Email: principal@ocp.edu.in
6	Member Secretary	Dr. Krishna Iyer	Bombay College of Pharmacy

**Term:** The term of the nominated members shall for three academic years (A.Y. 2022-2023 to A.Y 2024-2025)

**Meetings:** Academic Council shall meet at least twice a year.

## COMPOSITION OF THE BOARD OF STUDIES FOR UNDERGRADUATE B.PHARM PROGRAM (UG-BoS)

(w.e.f 07/01/2023)

**A.Y 2022-2023 to 2024-2025**

Sr. No.	Category	Details of Members
1	Principal and Chairman-Board of Studies (BoS)	Dr Krishnapriya Mohanraj
	Head of Department	Dr Ujwala Shinde (Member Secretary)
		Dr. Vaishali A Shirsat
		Dr. Anuradha Majumdar
		Dr. Premlata K. Ambre
		Dr. Alka Mukne
2	Outside the parent University recommended by the Academic Council	Dr. Pratima Tatke, Principal & Professor, CU Shah College of Pharmacy, SNDT Women's University, Juhu Tara Road, Juhu Campus, Santacruz (West), Mumbai,-400049 Mob: 9869430228/9920685857 Email: <a href="mailto:pratima.tatke@cushahpharmacy.sndt.ac.in">pratima.tatke@cushahpharmacy.sndt.ac.in</a>
		Dr. Sadhana Sathaye, Professor of Pharmacology, Institute of Chemical Technology, Nathalal Parekh Marg, Near Khalsa College, Matunga, Mumbai-400019. Mob: 9821272821 Email: <a href="mailto:ss.sathaye@ictmumbai.edu.in">ss.sathaye@ictmumbai.edu.in</a>
3	One recommended by Vice-chancellor from a panel of Six by the college principal	Prof. Dr. Tejal Mehta Professor and Head, Department of Pharmaceutics, Nirma University, Gujarat Mob: 9879357584 Email: <a href="mailto:tejal.shah@nirmauni.ac.in">tejal.shah@nirmauni.ac.in</a>
4	One representative from Industry	Mr. Ashish Babtiwale, Managing Director, Navigo Analytix India, 503, Malvika Tower, D. N. Nagar, Andheri (W), Mumbai-400053 Mob: 9867557858 Email: <a href="mailto:ashish.b@navigoanalytix.com">ashish.b@navigoanalytix.com</a>
5	One postgraduate meritorious alumnus by Principal	Dr. Ratnakar Mehendre Technical Director-Gelnova Laboratories (I) Pvt. Ltd. Door No. C 125, T. T. C Industrial Area, Pawane, Village Pawne, Mahape, Navi Mumbai - 400701 Mob: 9820304839 Email: <a href="mailto:mehendre@yahoo.com">mehendre@yahoo.com</a>

**Term:** The term of the nominated members shall be for three academic years **2022-2023 to 2024-2025**

**Meetings:** Board of Studies shall meet at least twice a year.

## COMPOSITION OF THE BOARD OF STUDIES FOR POSTGRADUATE B.PHARM PROGRAM (PG-BoS)

(w.e.f 07.01.2023)  
A.Y 2022-2023 to 2024-2025

Sr. No.	Category	Details of Members
1	Principal and Chairman (BOS) Head of the Department	Prof. Krishnapriya Mohanraj
		Dr. Vaishali A Shirsat (Member Secretary)
		Dr. Ujwala Shinde
		Dr. Anuradha Majumdar
		Dr. Alka Mukne
		Dr. Premlata K. Ambre
2	Outside the parent University Recommended by the Academic Council	Prof. S. Y. Gabhe, Professor of Pharmaceutical Chemistry, C-1/10, Shivtara Garden Society, D. P. Road, Near Gananjay Society, Kothrud, Pune-411038 Mob: 9766592664 Email: <a href="mailto:sy52gabhe@gmail.com">sy52gabhe@gmail.com</a>
		Prof. Vandana Patravale, Professor of Pharmaceutics, Institute of Chemical Technology, Nathalal Parekh Marg, Near Khalsa College, Matunga, Mumbai-400019, Mob: 9820029314 Email: <a href="mailto:vb.patravale@ictmumbai.edu.in">vb.patravale@ictmumbai.edu.in</a>
3	One Recommended by Vice-chancellor from a panel of Six by the college principal	Dr. S. D. Sawant Principal and Professor of Pharmaceutical Chemistry, Smt. Kashibai Navale College of Pharmacy, Kondhwa Campus, Kondhwa, Pune Mob: 9850067999 Email: <a href="mailto:principal.skncop@sinhgad.edu">principal.skncop@sinhgad.edu</a> <a href="mailto:drdsawant69@gmail.com">drdsawant69@gmail.com</a>
4	One representative from Industry	Mr Prateek Agarwal, Assistant Vice President, Macleods Pharmaceuticals Ltd, Mumbai
5	One postgraduate meritorious alumnus appointed by the college Principal	Dr. Parizad Elchidana, Principal Technical Consultant, ACG, Dalamal House, 10 <sup>th</sup> floor, Nariman Point, Mumbai-400021, Mob: 9769466586/022-50961434 Email: <a href="mailto:parizad.elchidana@acq-world.com">parizad.elchidana@acq-world.com</a>

**Term:** The term of the nominated members shall be for three academic years **2022-2023 to 2024-2025**

**Meetings:** Board of Studies shall meet at least twice a year



## Divisions:



## The Indian Pharmaceutical Association (IPA)

The Indian Pharmaceutical Association (IPA) is the premier professional association of pharmacists in India founded on 23rd December 1939, with a member base of over 10,000, spread across the length & breadth of the nation. IPA operates in India through 21 state branches & more than 46 local branches. The members represent various facets of pharmaceutical profession viz. industry, regulatory, community pharmacy, hospital pharmacy & education. IPA is also actively associated in managing several academic programmes. As member of the Drug Technical Advisory Board, India, IPA is actively involved in advising the government on matters of professional importance. IPA is affiliated to international pharma associations like FIP, FAPA, CPA, AAPS, AAiPS, IPSF & WHO, for carrying out various collaborative professional activities which include organizing training programmes for professionals from industry, academics, regulatory & practice, making representations to the authorities on matters of professional interest & working towards constantly upgrading the standards of professional services offered by the pharmacists.

## Mission

**Mission:** The Indian Pharmaceutical Association (IPA) is the national professional body of pharmacists engaged in various facets of the profession of pharmacy. The IPA is committed to promote the highest professional and ethical standards of pharmacy, focus the image of pharmacists as competent healthcare professionals, sensitize the community, government and others on vital professional issues and support pharmaceutical education and sciences in all aspects

## IPA Students' Forum (IPA-SF)

**IPA Students' Forum (IPA-SF)** is a national forum for pharmacy students under the IPA. It aims to bring all pharmacy students under one umbrella so that their energies can be synergized to make a difference. The forum enables them to become better future pharmacists while abiding with the highest ethical and professional standards. This catalyzes their overall development and facilitates development of their academic, leadership and professional skills for their benefit and in turn the profession and thus health of INDIA. Activities of IPA-Student Forum are guided by esteemed personalities of Pharmaceutical professionals from India and abroad.

## The Indian Journal of Pharmaceutical Sciences

The Indian Journal of Pharmaceutical Sciences is the bimonthly scientific publication of the IPA. The journal publishes original research work in the areas of Pharmaceutical Sciences (Pharmaceutical Technology, Pharmaceutics, Biopharmaceutics, Pharmacokinetics, Pharmaceutical/ Medicinal Chemistry, Computational Chemistry and Molecular Drug Design, Pharmacognosy and Phytochemistry, Pharmacology, Pharmaceutical and bioanalysis, Pharmacy Practice, Clinical and Hospital Pharmacy, Cell Biology, Genomics and Proteomics, Pharmacogenomics, Bioinformatics and Biotechnology of Pharmaceutical Interest). IJPS is indexed by various abstracting agencies e.g. Chemical Abstracts, DOAJ, International Pharmaceuticals Abstracts, Journal Citation Reports, PubMed, PubMed Central, Science Citation Index Expanded, Scimago Journal Ranking, SCOLAR, SCOPUS, SIIC databases & is available online ([www.ijpsonline.com](http://www.ijpsonline.com)) Original research work is published in IJPS either as a Full Research Paper or as a Short Communication. Review Articles on current topics in Pharmaceutical Sciences are also considered for publication by the Journal.

## Pharma Times

Pharma Times is the news magazine of the IPA. It is a scientific journal and in addition to featuring general articles of professional interest, it also publishes proceedings of the Central Executive Council of IPA, the Annual Report and Accounts of the Association, reports on branch activities, proceedings of IPA Convention, notifications of IPA and other information such as articles, advertisements, announcements etc. Pharma Times is indexed by the search engines - Scopus & Embase of the premier scientific publication house Elsevier.





The formal announcement of the commissioning of the 50kw Solar Power-on-grid System at Bombay College of Pharmacy (BCP) campus was done at the programme on 28th May 2015. BCP's Foundation Day and concluding ceremony of the Centennial Birth Anniversary of Padmabhushan Late Shri Amrut Vitaldas Mody (Founder Chairman of the Governing Body of the BCP).



Looking at the success ratio of the 50kv solar power-on-grid system at BCP additional 90kv system has been installed on 4<sup>th</sup> Feb 2017 totaling to 140kv. followed by installation of Net Metering for the optimal utilization of resources

# Sun shines on Kalina college; ₹1.6L saved

**WATT AN IDEA** 453 solar panels, installed across a 13,500 sq ft terrace, generate 15,399 units of electricity every month

**green heroes**  
ECO-FRIENDLY WAYS

**Suchi Chaturje**  
A Delhi-based environmentalist

**MUMBAI** One of the largest rooftop solar power generation systems in Mumbai helps Bombay Pharmacy College in Kalina to power 20% of its electricity requirements from the sun. The college saves Rs1.4 lakh every month in electricity bills by running the 540 kilowatt-power (kW) system that has 453 solar panels installed across a 13,500-sq-ft terrace area. The system generates an average 15,399 units of electricity per month and runs lights, fans, air-conditioners, and lifts across 12 laboratories, seven classrooms, the college administration office area and the canteen. For a comparison, a two-bedroom flat in Mumbai uses 200-300 units of electricity per month. Solar energy, apart from being renewable and free, does not cause pollution unlike power plants that burn coal, gas and oil. Solar energy can be used in remote areas where electricity

## SOAKING UP THE SUN

### WHAT IS SOLAR ENERGY?

Solar energy is a free source of renewable energy.

### WHY IS IT IMPORTANT?

Generation of solar power does not cause carbon emissions that come from burning coal, gas and oil for generation of electricity.

Solar energy can be used in remote areas where electricity from the grid cannot be accessed.

Gadgets like calculators, power lights and other low-power-consuming devices can be powered by solar power.

The potential to harvest solar energy as a natural resource is infinite.

• The 453 solar panels installed across a 13,500 sq ft terrace area.

### HOW TO HARVEST RAINWATER

Rainwater can be harvested in several ways. One way is to avoid concrete to keep into the ground and recharge groundwater levels. In this process, wells will have water for a longer period in the dry season.

Rain water falling on building terraces can be diverted and stored for use in the dry season.



• Students and staff stand near the medicinal garden located near the entry of the college.

### KEEP IN MIND

Rain can be acidic, because it mixes with atmospheric gases, so it needs to be processed before it is used for drinking or cooking. Unprocessed rain water can be used for non-potable purposes like flushing toilets and watering gardens.

Around 800 million litres of water is wasted through leakages in tanks every day, according to the data provided by the BMC. Rainwater harvesting can help save this precious resource.

from the grid cannot be accessed. Nitin Navrotry Maniar, chairman, governing body, Bombay Pharmacy College and special executive officer for the state government, said, "We went for such a large-scale setup because this energy source is

both eco-friendly and cost-effective, and allows us to give something back to the environment." Founded by the Indian Pharmaceutical Association, Maharashtra State Branch in 1967, the college has over 400 undergraduate, postgraduate and PhD stu-

dents along with 90 teachers and staff members. The college is spread across 45,000 sq ft area with one-quarter of an-acre garden that has medicinal plants and a large ground allocated for extra-curricular activities and events.

The solar project was completed in two phases. In the first phase, a 50 kWp setup at a cost of Rs30.5 lakh in May 2015, and in the second phase in February this year, a 90 kWp unit was installed for Rs1.6 lakh. "We expect to recover the entire Rs30

lakh by 2021. We have already received Rs14.28 lakh in the form of subsidy (30%) from the state government. We estimate annual savings of Rs20 lakh from this project," he said.

Prior to the solar installation, the monthly electricity bill for the college was Rs1.25 lakh that fell to Rs1.40 lakh post installation. The campus also uses a net-metering system, which allows surplus power generated through solar panels to be sent back to the grid and any deficiency is imported from the grid.

The college also has a rainwater harvesting system that collects water during the rains for use later. The college estimates that it has saved close to 12 lakh litres of water through rainwater harvesting since 2006. The college complex does not depend on the city body for its non-potable water consumption. The rooftop and common areas act as catchment for rainwater. The water collected is channelled into a well with a capacity of 30,000 litres, and the water is used in the 45 washrooms on campus. "The water is also used in our gardens. Channels have been dug up through the campus that allows water to drain into the well," said Maniar.

## The Indian Pharmaceutical Association, Maharashtra State Branch (IPA-MSB)

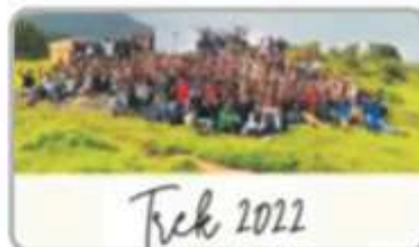
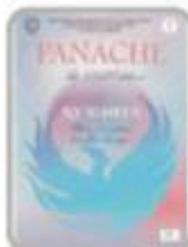
IPA-MSB is a state branch of the IPA initiated in 1941 immediately after the foundation of IPA in 1939. IPA-MSB runs an educational institute, Bombay College of Pharmacy (BCP). The Amrut Mody Research Fund (AMRF), The Research Society of Bombay College of Pharmacy (RSBCP), the Dr. M. K. Rangnekar Memorial Testing Laboratory (MKR), the Academy for Clinical Excellence (ACE), IPA-SF-MSB are other ventures which are governed by IPA-MSB. IPA-MSB is the only state branch of IPA, that has the distinction of getting the BEST BRANCH AWARD constituted by IPA four times i.e. 2004, 2005, 2011, 2012, 2016 and 2017. It has till date 2359 Life members and has active local branches at Pune, Nashik, Aurangabad, Solapur, Nagpur, Kolhapur, Amravati, Dhule and Palghar.

### IPA-Student Forum-MSB (IPA-SF-MSB)

IPA-SF-MSB participates actively under the guidance of IPA-MSB in the organization and conducts the National Pharmacy Week celebrations every year. The Rx Festival, which is a cultural event, is also organized by the Student Forum every year, in which students from all the pharmacy Colleges in Mumbai, Navi Mumbai and Thane region and other parts of Maharashtra participate. The IPA-SF-MSB also publishes a magazine called 'Panache' which is greatly appreciated by the members, industry and academicians.

### Some of the Activities (Symposia/Seminars/Lectures, etc.) conducted by IPA-MSB in recent past

- Material Science Solution to Formulation and Drug Delivery with ObD Perspective - Particle Size
- Rx Festival - Every Year
- Prospects after Pharmacy Education
- Training Program for Community Pharmacy
- Building Concentration Through Stress Management - Nerul, Ulhasnagar, Chembur
- Rational Design of Modulators of Human Follicle Stimulating Hormone
- DOTS TB Training Program
- Continuing Professional Development Program
- Matrix & Metrics - Compliance Mantra
- Drug Discovery and Development
- National Pharmacy week (NPW)
- Advanced Instrumental Analytical Techniques
- Studies on Reactive metabolites leading to Mechanism Based Inhibition of Cytochromes.
- Orientation and future Trends in Pharmacy
- Overcoming Regulatory Compliance Hurdles
- Role of NAT in blood banking
- Monoclonal Antibodies
- To & Thru the Skin
- Training Workshop on 'Regulatory Global Scenario' at Talaja
- International Yoga Day
- Dr. H. P. Tipnis Memorial Lecture
- 'Let's Do NBA Accreditation' i P A - M S B & Konkarn Gyanpeeth
- Free Medical Camp at Karjat organised by Rahul Dharkar College Of Pharmacy, IPA-MSB & Konkarn Gyanpeeth
- Health Check-up Camp at Nagpur by Nagpur Local Branch jointly with IPA - MSB
- Interactive lecture by Dr. R. B. Smarta on Soft Skill
- Lecture on GPAT with Pharmacad
- Asthma Checkup Camp at R.F. Naik School, Koparkhairne - WPD
- Seminar on Nutrition at St. Laureate School, Koparkhairne - WPD
- World Pharmacist Day Celebrations at KEM Hospital by Hosp. Pharmacy Div Of IPA-MSB
- Diabetic Monitoring Camp at Div. of Ashwini Chemist - WPD
- Lecture on Stress Management by Dr. Shantesh Kaushik - WPD
- Medical Health Checkup Camp at BCP - WPD
- World Pharmacist Day Celebrations at SNDT college
- Diabetic Monitoring Camp at Shree Sai Medicals, Koparkhairne - WPD
- World Pharmacist Day at Chemist Bhavan Sanpada - WPD
- Diabetic Monitoring Camp at Health Plus Medicals at Navi Mumbai - WPD
- World Pharmacist Day Celebration at Sailee Hospital at Chani Road.
- Nutrition Awareness Camp at R.F. Naik School, Koparkhairne, Navi Mumbai.
- Program on 'Clinical Trials Regulations in India' on 19<sup>th</sup> Oct. 2017 at BCP
- Half Day Seminar on 'Recent Trends in Science Journalism and Science Communication'
- Principal Meeting to discuss the Action Plan of 'Education Conclave 2018'
- Breath Free Camp held at Ashwini Chemist & General Store
- Interactive meeting with Dr. Khalid and Dr. Giannetti at BCP
- Program held on the Occasion of 56<sup>th</sup> NPW Celebration at R.F. Naik School, Koparkhairne.
- Seminar on Innovation in Pharmaceutical Industry - Drug Development and Chromatography.



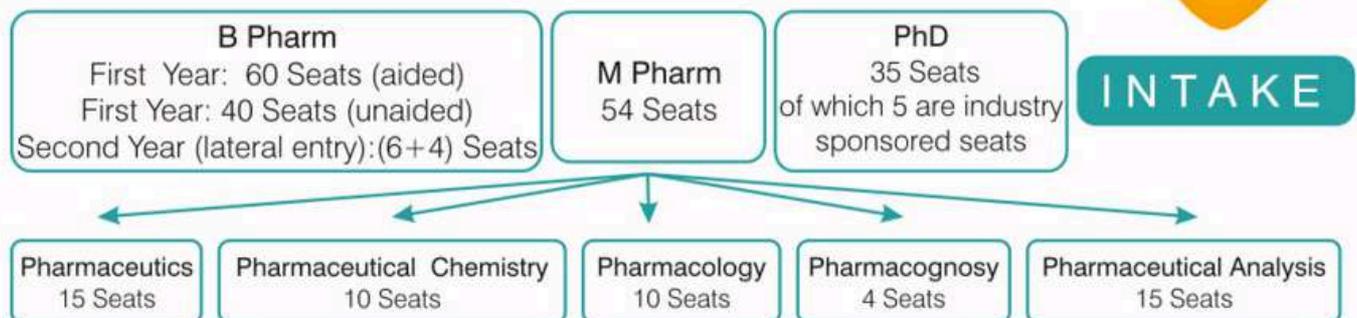
**VISION** 

To Provide Excellence in Transformative and Interdisciplinary Pharmacy Education for Fostering Innovation and Research towards Advancement of Sustainable Global Healthcare.

**MISSION** 

- To Provide Quality Education and Training in Pharmaceutical and Allied Sciences.
- To Engage in Collaborative Translational Research in Healthcare Sciences and Technology.
- To Commit towards Social Responsibilities through Outreach Programs, Inculcate Entrepreneurial Spirit, and Promote Lifelong Ethical Learning.

**Bombay College of Pharmacy (BCP)** is a pioneer institution in pharmaceutical education in India. BCP was founded in 1957 by the Indian Pharmaceutical Association - Maharashtra State Branch (IPA - MSB) with financial assistance from the Government of Maharashtra and several pharmaceutical companies. It is centrally located and well connected by road, rail and air. Since its inception as a college offering a Diploma in Pharmacy, the college has grown in stature and at present offers Bachelors, Masters, and Doctoral programs of study in Pharmaceutical Sciences.



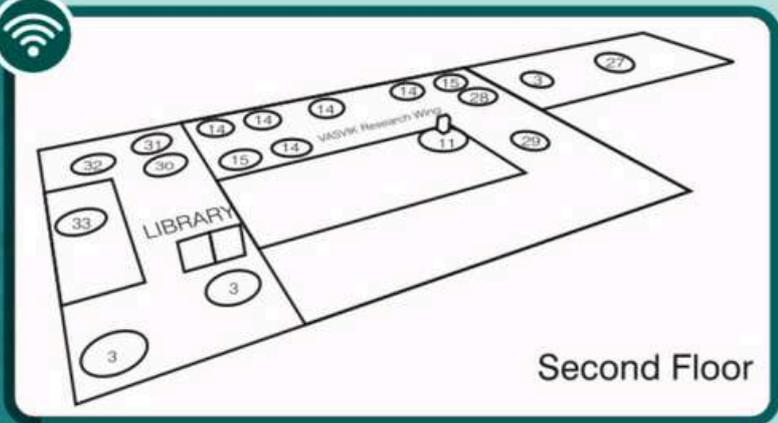
**PROGRAM EDUCATIONAL OBJECTIVES**

- 1 To attain excellence in disseminating knowledge within the realms of Pharmaceutical, Allied, and Healthcare Sciences
- 2 To excel in imparting practical and laboratory skills, along with field and applied knowledge in Pharmaceutical, Allied, and Healthcare Sciences
- 3 To promote and advance applied research through collaborative projects and experiential learning opportunities
- 4 To nurture leadership and team-building capabilities, entrepreneurial spirit, community service ethos, continuing educational pursuits, and professional ethics
- 5 To promote holistic personality development through co-curricular and extracurricular activities

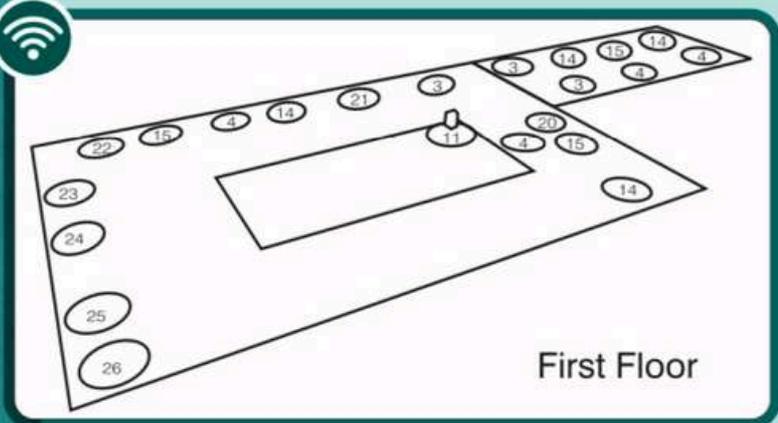


## BIRD'S - EYE VIEW

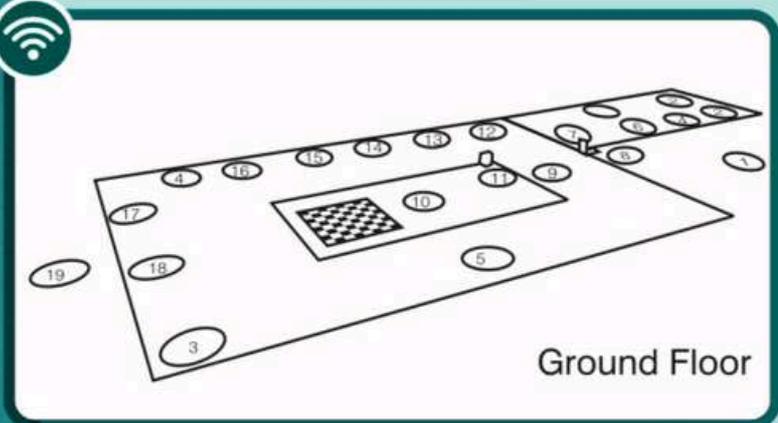
1. Medicinal Plant garden
2. Seminar Halls
3. State- of- the- art class rooms
4. Fully equipped Laboratories
5. Auditorium
6. Aseptic area
7. Distilled water plant
8. Entry for the disabled
9. Canteen area
10. Recreational Area
  - Carrom boards
  - Garden Chess Set
  - Table tennis
11. Lift
12. Girls common room
13. Machine room
14. Research Laboratories
15. Staff rooms
16. Stores
17. RIA laboratory
18. Boys common room
19. 4 Acre Play ground
20. Museum
21. Sophisticated Central Instrument room
22. Administrative office
23. Accounts
24. IPA-MSB office
25. IPA office
26. Conference room
27. National Facility for Research and Training
28. High speed computation facility and server room
29. MKR laboratories
- LIBRARY
30. Thesis /reference section
31. Language Laboratory
32. Books (> 10000 books) reference section and Periodicals
33. High speed network connected latest computer laboratory
34. VASVIK Research Wing
35. Terrace - 140kv solar system



Second Floor



First Floor



Ground Floor

\* Not to scale

\* Free usage of Office 365 suite for bonafide students, staff of BCP



: With 120mbps dedicated internet lease connectivity

## TRAINING AND PLACEMENT CELL

The placement cell of Bombay College of Pharmacy acts as a contact point for pharma and allied industries that wish to recruit students from the BCP. It also organizes pre-placement talks for corporates who wish to visit the campus for recruitment.



Some of our eminent recruiters include:



## INDUSTRY INSTITUTE PARTNERSHIP CELL

The main objective of this cell is to act as a liaison between industries and the BCP. The following are the major activities of the IIP cell :-

- Maintenance, co-ordination & promotion of consultancy services
- Industry study tour programme (ISTP), internship programme & placement of students
- Soft Skill Training for Students
- Industrial training and industrial visits for students
- Industrial exhibitions
- Training of industrial personnel in Bombay College Pharmacy
- Guest lectures
- Skill Development facilities using online platforms
- Hospital Visits



The achievements of alumni of BCP themselves speak of the quality of education and training given here. The alumni are successful entrepreneurs, businessmen, consultants, scientists, administrators and academicians.

Photograph of some alumni functions



## AWARDS AND ACCOLADES OF FACULTY

Few of the Awards and Accolades of Faculty of BCP are listed below :



Prof. Krishnapriya Mohanraj	2024	Bharat Shiksha Gaurav Puraskar for outstanding achievements and remarkable contribution in field of Pharmaceutical Education.	Prof. Mala Menon	2019	Distinguished Professor Award (National Science & Technology Management Informatio System, DST)
Prof. Krishnapriya Mohanraj	2024	Global Chair- Dissolution Research Presentations International (DRPI) by society for pharmaceutical dissolution science.	Prof. Mala Menon	2018	Award for Promising Innovation in Solid Dosage Form (IPA-ACG Sci Tech)
Dr. Alka Mukne	2024	Distinguished Scientist Award American Association of Indian Pharmaceutical Scientists (AAIPS) for excellence in Pharmaceutical Sciences.	Prof. Mala Menon	2018	Best Professor in Pharmaceutics (Dewang Mehta National Education Award)
Dr. Alka Mukne	2023	IPA Prof. M. L. Khorana Memorial Lecture Award	Prof. Mala Menon	2018	IPA-ACG Scitech Innovation Award in Solid Dosage Development
Dr. Anuradha Majumdar	2023	Most Influential Professor Award 30th Edition of Business School Affairs. Anveshan Western Zone Gold in Health Sciences	Prof. Mala Menon	2017	Best Professor of Pharmaceutics (National Education Award)
Dr. Anuradha Majumdar	2023	Most Influential Professor Award 30th Edition of Business School Affairs. Anveshan Western Zone Gold in Health Sciences	Prof. Mala Menon	2017	Distinguished Professor Award Sponserd by NSTMIS a DIVN of DST
Prof. Krishnapriya Mohanraj	2023	Most Iconic Healthcare Leader (Global) Award (World Health and Wellness Congress)	Prof. Krishnapriya M.	2017	First Prize at 8 <sup>th</sup> Indian Youth Science Congress
Prof. Krishna Iyer	2023	First Prize at Asia Pacific International Society for Study of Xenobiotics	Dr. Alka Mukne	2016	Fellowship of Indian Pharmaceutical Association (IPA)
Prof. Krishna Iyer	2022	Consolation Prize at Avishkar Research Convention	Prof. Mala Menon	2016	Dr. P. D. Patil Best Pharmaceutical Scientist Award from APTI Maharashtra
Dr. Harita Desai	2022	Second Prize in 17th Avishkar Inter Institute Research Convention	Prof. Krishnapriya M.	2016	2 <sup>nd</sup> Prize in Avishkar for Poster and Oral Presentation
Dr. M. S. Nagarsenkar	2022	Lifetime Achievement (The IPA MSB-SF)	Prof. M. N. Saraf	2015	Amrut Mody Distinguished Researcher Award
Dr. Alka Mukne	2021	Distinguished Women Teacher (Contas College of Pharmacy)	Dr. Anuradha S. Majumdar	2014	Gold Medal in Avishkar
Dr. Evans Coutinho	2021	Lifetime Achievement (The IPA MSB-SF)	Prof. M.S. Nagarsenkar	2013	Mrs. Manjushree Pal Best Researcher National Award
Dr. Mala Menon	2021	Lifetime Achievement (The IPA MSB-SF)	Prof. M.S. Nagarsenkar	2012	Amrut Mody Distinguished Researcher Award
Prof. Krishnapriya	2020	101 Fabulous Global Health care leader Award (World Health and Wellness Congress & Awards)	Prof. Krishnapriya Mohanraj	2012	Dr. P. D. Sethi Annual Award
Dr. M. S. Nagarsenkar	2019	World top 2% (Stanford University, USA)	Dr. Savita R. Kulkarni	2011	Dr. P. D. Sethi Annual Award
Dr. Ujwala Shinde	2019	Best Professor in Pharmaceutics (Dewang Mehta National Education Awards)	Dr. Alka Mukne	2008	Biographical Listing in Marquis who's who in Science & Engineering
Prof. Mala Menon	2019	Distinguished Professor Award (National Science & Technology Management Informatio System, DST)	Mr. Mushtaque S. Shaikh	2006	Best emerging Scientist Award at Focus India
			Dr. Alka P. Mukne	2006	Outstanding Achievement Award by IPA
			Prof. M. N. Saraf	2004	Best Principal Award by APTI
			Prof. Evans C. Coutinho	1995	Career Award for Young Teachers by AICTE
			Prof. Evans C. Coutinho	1993	PAMDAL Best Teacher Award





**2024**

Ranked 73rd among the Pharmacy institution by National Institutional Ranking Framework, Ministry of Education, Government of India.

**2024**

Exemplary Researcher of the year award under India Higher Education ranking by Education world.

**2023**

Ranked 55<sup>th</sup> among the Pharmacy institution by National Institutional Ranking Framework, Ministry of Education, Government of India

**2022**

Ranked 32<sup>nd</sup> among the Pharmacy institution by National Institutional Ranking Framework, Ministry of Education, Government of India

**2022**

Nominated by DTE, Regional office for Green Campus Award

**2022**

Prestigious Scholarship 'Prime Ministers' Fellowship for Doctorate Research with industry Partner Bliss GVS Pharma Limited under DST, SERB awarded to Ph. D Student 8/12/2021

**2022**

4 Star rating for institution innovation council (IIC)

**2021**

Ranked 25<sup>th</sup> among Pharmacy institution by MHRD National Institutional Ranking Framework (NIRF)

**2021**

Selected as host Institute for Distinguished Chair Professor Scheme of AICTE

**2020**

Ranked 24<sup>th</sup> among Pharmacy institution by MHRD National Institutional Ranking Framework (NIRF)

**2019**

Conferral of Autonomous Status from 2019-20 to 2028-29

**2019**

Presented with National Education leadership Award by ABP News

**2019**

Ranked 24<sup>th</sup> among Pharmacy institution by MHRD National Institutional Ranking Framework (NIRF)

**2019**

FICCI 6<sup>th</sup> higher education excellence award special Jury mention for Excellence in Enabling Research Environment

**2018**

2<sup>nd</sup> Prize-Best Industry Linked Institute in Pharmacy category from AICTE-CII

**2018**

Ranked 8<sup>th</sup> among Pharmacy institution by MHRD National Institutional Ranking Framework (NIRF)

**2017**

Ranked 15<sup>th</sup> amongst Pharmacy institutions of India under NIRF MHRD

**2017**

Accreditation for 5 years by NBA

**2017**

Grant Rs. 5.87 Crores from DST DPRP for National Facility for Research & Training

**2016**

Ranked 6<sup>th</sup> amongst Pharmacy Institutions by MHRD under NIRF

**2015**

IndPact Mentor Award for Best Industry - Linked Pharmacy Institute from AICTE-CII

**2015**

BCP and University of Mumbai fetched First runner up Trophy in national research competition AVISHKAR

**2014**

Best Industry Linked Institute in Pharmacy category from AICTE- CII

**2013**

Best Industry Linked Institute in Pharmacy category from AICTE- CII

**2013**

Ranked Country's 4th Best Pharmacy College by a Survey

**2013**

Inauguration of Radioimmuno-assay Laboratory (RIA Lab)

**2011**

BCP and University of Mumbai fetched Gold Medal(s) and a Trophy in AVISHKAR

**2011**

Postgraduate Course in Pharmaceutical Analysis with intake for 18 students

**2008**

Golden Jubilee Celebrations. An International Symposium "Designing the future New Medicines and New Methods" conducted on 18<sup>th</sup> and 19<sup>th</sup> Jan. 2008 at Hyatt Regency Mumbai

**2008**

Accreditation for 5 years by NBA

**2004**

FIST grant from DST for improving infrastructure

**2001**

Patents Awareness Workshop in Collaboration with TIFAC- Govt. of India

**1998**

Golden Jubilee IPCA Conference Jointly with FAPA Conference

**1995**

Inauguration of "Ramesh Banatwala Memorial Industrial Pharmacy Laboratory" and Permanent Affiliation to University of Mumbai

**1993**

International Symposium on "Update on Bioavailability and Bioequivalence"

**1990-1993**

Foundation and opening of "Bioavailability Centre"

**1987**

The VASVIK Research Wing was inaugurated and an International Symposium on "Controlled Release Dosage Forms" was held and the Staff Quarters for senior faculty members was constructed

**1984**

The Silver Jubilee of the college was celebrated and an International Symposium on "Advance in Drug Delivery System" was held

**1982**

The M.S.D auditorium, with seating capacity of 500 was opened

**1981**

The Research Society of the Bombay College of Pharmacy was formed and registered with the Department of Scientific and Industrial Research (DSIR), Govt. of India

**1977**

The Second Commonwealth Pharmaceutical Congress jointly with the 28th I.P.C.A and the Pharma Expo-77

**1976**

The UNESCO Microbiology workshop

**1973**

BCP was affiliated to the Mumbai University for the M. Pharm & the PhD (Tech) course. The College also received its first research grant from CSIR. Since then several important events have marked the progress of BCP

**1970**

BCP was affiliated to the Mumbai University for the B. Pharm course

**1966**

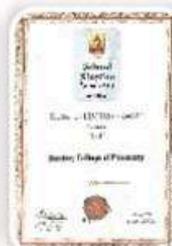
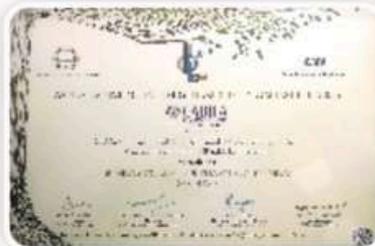
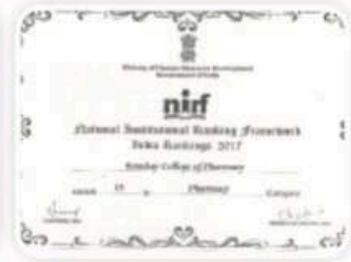
The Building at Kalina was inaugurated and BCP hosted the 18th Indian Pharmaceutical Congress

**1957**

The Diploma course was started and BCP was formally constituted

**1956**

The idea of establishing the Bombay College of Pharmacy (BCP) was formulated under the leadership of the Late Prof. M. L. Khorana in 1956, in the form of a short term course called "Practicing Pharmacists Training (PPT) course "



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-  Consultancy
-  Construction

## DEPARTMENT OF PHARMACEUTICS

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**Shubhangi Aher, Ph.D. (Tech), Assistant Professor**  
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**Bhushan Bhale, M. Pharm, Assistant Professor** (bhushan.bhale@bcp.edu.in)



The Department of Pharmaceutics is dedicated to undergraduate teaching and is actively involved in research at the post graduate (M. Pharm. and Ph.D.) level. The department is equipped with the necessary infrastructure essential for smooth undergraduate teaching. The department also has state-of-the-art facility to support post graduate research activities.

### Key Research areas :

- Novel Drug Delivery Systems-Liposomes, Niosomes, Polymeric micelles, Microparticles, Nanoparticles, & Implants.
- Solubility enhancement technology - Cyclodextrin based systems, Crystal engineering
- Polymeric coatings and Pelletization
- Novel veterinary formulations
- Polymer Synthesis, design of ligands for targeting
- Mucosal vaccine delivery
- Development of analytical methods and validation. *in-vitro* dissolution and permeation methodologies
- Sustained and controlled release systems for oral, pulmonary, nasal, ocular, transdermal and vaginal applications

### The Industrial Pharmacy Laboratory has facilities :

- For solid dosage forms, which include rapid mixer granulator, GMP model compression machine and dissolution test apparatus.
- For novel systems which include probe sonicators, high speed homogenizer, spray dryer, freeze dryer, type 4 dissolution test apparatus, vertical diffusion cells, high pressure homogenizer, DSC, particle size analyzers and HPLC systems.
- For Pulmonary targeted formulation which include Anderson cascade impactor & Twin stage impactor.

### Collaborations

The department also collaborates with pharmaceutical corporate clients for preformulation, formulation development and pilot plant scale up projects. Some of the clients include :

- |                       |                          |                           |                |
|-----------------------|--------------------------|---------------------------|----------------|
| • Abbott India Ltd    | • Hansen Probiotics      | • Naprod life sciences    | • Unichem Labs |
| • ACG Group           | • Inventia Pvt. Ltd.     | • Novartis (I) Ltd.       | • USV (P) Ltd. |
| • Bayer (I) Ltd.      | • Lubrizol Life Sciences | • Pfizer Ltd.             |                |
| • Brassica Pharma     | • Macleods Pharma Ltd.   | • Saifee Vetmed Pvt. Ltd. |                |
| • Famy Care Ltd       | • Marico Ltd.            |                           |                |
| • Gattefosse (I) Ltd. | • Mother Dairy           |                           |                |
| • Glenmark Ltd.       | • M/s Infovot            |                           |                |



Department has established several research international as well as national collaborations in areas of drug delivery research. Department has successfully collaborated with:

- Bristol Myers Squibb, USA
- Centre of Drug Research, University of Helsinki, Finland
- Department of Pharmaceutical Technology, Goethe University, Germany
- Interactual Department of Pharmaceutical Technology, University of Jena, Germany
- Janssen Pharmaceuticals, Belgium
- Lupin Pharmaceuticals, USA
- VLAIO, Belgium
- Yuvan Research, USA



#### National Collaborations :

- Advanced Centre for Treatment, Research and Education in Cancer (ACTREC, Navi Mumbai)
- Agharkar Research Institute, Pune
- Board of Radiation and Nuclear Science (BRNS, Mumbai)
- Bombay Veterinary College (BVC, Mumbai)
- Department of Pharmacy, Tripura University (Central Chemistry)
- GS Medical college and KEM Hospital (Parel, Mumbai)
- Haffkine Institute, Parel
- Institute of Chemical Technology, Mumbai
- Serum Institute of India (Pune)
- Centre for excellence in Basic Science, University of Mumbai



Department also provides services in characterization of drug delivery systems which include:

- Size Determination using Beckmann Coulter, USA
- Zeta Potential using Malvern NanoSizer Series ZS (UK)
- In vitro lung deposition using Andresen Cascade Impactor, Copley Scientific, UK
- In vitro skin permeation studies using Vertical Diffusion Cell, Hanson Research, US
- Differential Scanning Calorimetry Studies using DSC, Mettler Toledo, Switzerland
- Size reduction using high pressure homogenizer
- R&D Scale batches on Spray Drier, Fluid Bed Coater, Freeze Dryer.



#### Publications:

More than 200 publications in high impact factor journals like

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• AAPS PharmSciTech</li> <li>• Carbohydrate Research</li> <li>• Cell Oncology</li> <li>• Dissolution Technology</li> <li>• Drug Development and Industrial Pharmacy</li> <li>• International Journal of Pharmaceutics</li> <li>• International Journal of Biological Macromolecules</li> <li>• Journal of Controlled Release</li> <li>• Journal of Cosmetic Science</li> </ul> | <ul style="list-style-type: none"> <li>• Journal of Drug Delivery and Therapeutics</li> <li>• Journal of Drug Delivery Science &amp; Technology</li> <li>• Journal of Microencapsulation</li> <li>• Journal of Pharmaceutical Innovation</li> <li>• Journal of Pharmaceutical Sciences</li> <li>• Molecular Pharmaceutics</li> <li>• Nanomedicine-Nanotechnology, Biology and Medicine</li> <li>• Nanomedicine -Future Medicine</li> <li>• Respiratory Drug Delivery (Proceedings of Conference)</li> <li>• RSC Advances</li> </ul> |
|---|---|

Faculty has contributed chapters in several books and has acquired patents and trademarks.

Faculty is frequently invited to deliver lectures in field of novel drug delivery systems.

More than 300 posters have been presented by the department in national and international conferences, symposia and seminars.



## DEPARTMENT OF PHARMACEUTICAL CHEMISTRY

### Faculty:

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**Mr. Abhijeet Dalvi, M. Pharm., Assistant Professor**  
(abhijeet.dalvi@bcp.edu.in)  
**Dr. Rachna Kaul, Ph.D., Assistant Professor**  
(rachna.kaul@bcp.edu.in)  
**Mr. Avinash Rangaraju, M.Pharm, Assistant Professor**  
(avinash.rangaraju@bcp.edu.in)  
**Mr. Abhishek Rathod, M. Pharm., Assistant Professor**  
(abhishek.rathod@bcp.edu.in)



### Research Guides from other departments:

**Krishnapriya Mohanraj, Ph.D.(Tech), Professor**  
(krishnapriya.mohanraj@bcp.edu.in)  
**Vaishali Shirsat, Ph.D. (Tech), Associate Professor,**  
Head of Department (Pharmaceutical Analysis) (vaishali.shirsat@bcp.edu.in)

### Areas of Research:

- Multidimensional and multinuclear NMR
- Multidimensional QSAR
- Protein Modeling
- Pharmacokinetics
- Process development for intermediates and bulk drugs
- Waste water treatment
- Molecular modeling and Drug Design
- Drug Metabolism
- Plant xenobiotic metabolism
- Synthetic Medicinal Chemistry
- Stimuli responsive polymer synthesis
- Preparation & evaluation of Polymer Drug Conjugates
- Cell and Molecular Biology

### Facilities available in the department include:

- CEM Discover Microwave synthesizer
- Shimadzu HPLC with dual wavelength UV detector
- Jasco HPLC with PDA and fluorescence detector
- Jasco UV-visible spectrophotometer
- Low temperature synthesizer
- Gel permeation Chromatography with RI detector (Waters - Alliance HPLC)
- Buchi Flash Chromatography with fraction collector C-660 and Buchi pump manager C-615
- Jasco HPLC with UV detector
- CAMAG HPTLC
- Roteva Rotary evaporator
- Molecular modeling software - Amber
- Lovis Ball viscometer (Anton Paar)



#### Extra mural funding:

- All India Council of Technical Education (AICTE-RPS/MODROBS)
- Council of Scientific and Industrial Research (CSIR)
- Department of Science and Technology (DST)
- Spring Bank Pharmaceuticals, USA.
- University of Mumbai
- University Grants Commission (UGC)
- Department of Biotechnology (DBT)
- BASF, Germany
- Bristol Meyers Squibb (BMS, USA)

#### Collaborative Programs:

- Agharkar Research Institute, Pune
- Arati Chemicals, Thane
- Alantast Beck, Pune
- Chandigarh College of Pharmacy, Mohali, Punjab
- Chemworks, Mumbai
- Central Effluent Treatment Plant, Ambarnath
- Department of Chemistry, Saurashtra University, Rajkot
- Department of Molecular Microbiology and Immunology, Bloomberg School of Public Health, Johns Hopkins University, USA
- Haffkine Institute Mumbai
- Indofil Ltd., Thane, Maharashtra
- Institute for Pharmaceutical and Medicinal Chemistry, Henrich-Heine University, Dusseldorf, Germany
- KEM Hospital
- Kingston University, London
- Omshri Labs, Mumbai
- School of Biochemistry, University of Bristol, UK
- Tata Consultancy Services
- Tuberculosis Research Centre, University of Illinois, Chicago, USA
- UM-DAE Center for Excellence in Basic Sciences, Mumbai
- University Institute of Pharmaceutical Sciences, Punjab University, Chandigarh

#### Publications:

More than 200 research publications in high impact factor journals like:

- The Journal of American Chemical Society (Formerly known as Journal of Chemical Information and Computer Science)
- Journal of Organic Chemistry
- Biochemistry
- FEBS Lett.
- Tetrahedron
- Journal of Computer Aided Molecular Design
- Journal of Molecular Graphics and Modeling
- Journal of Molecular Modeling
- Drug Metabolism and Disposition
- Biomaterials
- Journal of Medicinal Chemistry
- Current Drug Delivery
- International Journal of Biological Macromolecules
- Water Practice & Technology
- Journal of Chemical Information and Modeling
- Journal of Computational Chemistry
- QSAR and Combinatorial Science
- Journal of Peptide Science
- Bio-organic and Medicinal Chemistry
- Chemical Research in Toxicology
- Biopolymers
- Water Science & Technology
- Journal of Emerging infectious diseases
- Biomedical Research Journal
- Journal of Biological Macromolecules
- Journal of Biological Chemistry
- The Nucleus
- European Journal of Pharmacology
- PLOS One

Faculty has also contributed chapters in several books and Encyclopedia. More than 350 papers have published and been presented by the faculty in Conferences, Symposia and Seminars in India and abroad besides invited for lectures in Conferences, Seminars, Workshops etc.



## DEPARTMENT OF PHARMACOLOGY

### FACULTY:

**Dr. Anuradha Majumdar, Ph.D. (Tech)**

HOD, Associate Professor & Former Dean, Faculty of Science and Technology, University of Mumbai (anuradha.majumdar@bcp.edu.in)

**Dr. Dimple Jhonsa, Ph.D. (Tech), Assistant Professor**  
(dimple.jhonsa@bcp.edu.in)

**Mr. Amol More, M. Pharm, Assistant Professor** (amol.more@bcp.edu.in)

**Ms. Hiral Surani, M Pharm, Assistant Professor** (hiral.surani@bcp.edu.in)



The Department of Pharmacology, Bombay College of Pharmacy, is reputed for its preclinical research in India. The department offers Master and Ph.D. in Pharmacology. This course is approved by the All India Council of Technical Education, Directorate of Technical Education, Maharashtra State and the University of Mumbai. The department boasts of experienced and renowned faculty and well equipped Pharmacology and Toxicology laboratories. The laboratories are designed to cater to preclinical pharmacological and toxicological evaluations of drugs/herbals/phytochemicals using contemporary in vivo and in vitro tools. The department has been prolific in its outcome of successful completion of several industry and Government sponsored projects.

This programme is approved by the Pharmacy Council of India by the All India Council of Technical Education, Directorate of Technical Education Maharashtra State and the University of Mumbai.

### Some of our Research Expertise:

Pharmacological screening and evaluation in the domain of:

- Inflammation and Immunology
- Cardiovascular and Respiratory disorders
- Cancer
- Cellular and Molecular Biology
- Diabetes and Metabolic disorders
- Neuropharmacology and Behavioural Pharmacology
- Pharmacokinetics
- Safety Pharmacology and Toxicology
- Metalloid toxicity studies
- Herbal and Phytochemical analysis
- Metabolism and Pharmacokinetic studies
- NDDS
- Consultancy in pharmacological and toxicological field
- Medical writing (Publication and Medical Information)
- Network Pharmacology
- Kidney Disorders
- Transdisciplinary research which includes Environmental toxicity due to Microplastics and Nanoplastics.
- Herbal and Phytochemical analysis and Evaluation
- Pharmacovigilance

### Facilities available in the department include:

- CPCSEA approved animal house facility.
- HPLC with PDA and fluorescence detector.
- Intracerebroventricular (i.c.v.) drug delivery and CSF aspiration in rodents using Stereotaxic apparatus and Nanomite pump.
- Real time Polymerase Chain Reaction based Equipments both semi-quantitative PCR and RT-qPCR.
- Zebra fish and Drosophila Experimental facility.
- Physiological data acquisition system like Laser Doppler Flow meter, 8 and 4-channel Power Lab data acquisition system with Spirometry, ECG, NIBP, IBP, NCV, isolated muscle preparation nerve electro physiological measurements etc.



- Protein quantification and characterisation through western blot, gel electrophoresis and gel documentation system.
- Dedicated mammalian cell culture facility for Cell Proliferation and Cytotoxicity studies.
- Other instruments include Roteva Rotary evaporator, Plethysmometer, hot plate, Actophotometer, Rota-rod, Cooks pole climbing apparatus, forced swimming test apparatus, rodent and zebrafish mazes, recording devices etc.
- The biochemical parameter assessment through blood-gas analyzer, auto-analyzer, cell counter, ELISA Plate reader.
- Immuno Histo chemistry, facility for tissues.

**Funding, infrastructural support, collaborative research and industrial projects, consultancy assignments include:**

#### Funding Agency (Government)

1. All India Council for Technical Education (AICTE)
2. Council of Scientific & Industrial Research (CSIR)
3. Department of Science and Technology (DST)
4. Department of Biotechnology (DBT)
5. University Grants Commission (UGC)
6. Indian Council of Medical Research (ICMR)
7. Board of Research in Nuclear Sciences (BRNS)
8. University of Mumbai
9. Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy(Ayush)
10. Department of Biotechnology - Biotechnology Industry Research Assistance Council (DBT-BIRAC)
11. Department of Foreign Affairs & Trade, Australian Government, Australia-India Indo Pacific Oceans Initiative Partnership (AIPOIP)

#### Funding Agency (Industry)

Alembic Ltd., Aurobindo Pharma Ltd., Bharat Serums and Vaccines Ltd., Cipla Ltd., Clinworld Pvt. Ltd., Criticare Laboratories Pvt. Ltd., Elder Pharmaceuticals Ltd., FDC Ltd., Glenmark Pharmaceuticals Ltd., Gufic Healthcare Ltd., Hetero Drugs Ltd., Hindustan Lever Ltd., Ipca Laboratories Pvt. Ltd., Kopran Ltd., Khandelwal Labs Ltd., Lupin Laboratories Ltd., Macleods Pharmaceuticals Ltd., Marico Ltd., Medley Pharmaceuticals Ltd., Micro Labs Ltd., Siro Clinpharm Pvt. Ltd., Sun Pharmaceutical Industries Ltd., Shreya Life Sciences Ltd., Sandu Pharmaceuticals Ltd., Themis Medicare Ltd., Torrent Pharmaceuticals Ltd., Unichem Laboratories Ltd., Yasham P2D Life Sciences, Lamar Group of Companies, Charak Pharma Ltd, Pfizer India Ltd.etc.



**The department also conducts “Technical Developmental Programs” for industry personnel on:**

- Skill development program in animal handling and preclinical pharmacological Evaluation Methods.
- Skill development program for Medical Product Marketing and Sales Representation.

#### Consultancy Services:

- Consultancy Services in the field of Preclinical & Clinical Pharmacology



## **DEPARTMENT OF PHARMACOGNOSY & PHYTOCHEMISTRY**

### **Faculty:**

**Alka Mukne, Ph.D.,** Assistant Professor, I/C Head of Department ([alka.mukne@bcp.edu.in](mailto:alka.mukne@bcp.edu.in))

**Vishwanath Vaidya, M. Pharm,** Assistant Professor ([vishwanath.vaidya@bcp.edu.in](mailto:vishwanath.vaidya@bcp.edu.in))

**Jyoti Kumari Jha, M. Pharm,** Assistant Professor ([jyoti.jha@bcp.edu.in](mailto:jyoti.jha@bcp.edu.in))

**Sonali Dangat, M Pharm,** Assistant Professor ([sonali.dangat@bcp.edu.in](mailto:sonali.dangat@bcp.edu.in))

The Department of Pharmacognosy and Phytochemistry offers Masters and Doctorate in Pharmaceutical Sciences, approved by All India Council of Technical Education (AICTE), Directorate of Technical Education, Pharmacy Council of India (PCI), Maharashtra State University of Mumbai.



The Department of Pharmacognosy & Phytochemistry has a reputation for excellence in research and has experienced and technically - competent faculty with the following areas of expertise:

- Standardization of crude drugs and herbal extracts
- Bio-activity guided fractionation of herbal extracts
- Evaluation of therapeutic potential of crude drugs and their various extracts
- Study of different parameters of extraction of herbal drugs and optimization
- Isolation and characterization of phytoconstituents from herbal extracts
- Evidence based bioactivity evaluation of herbs, Ayurvedic formulations & nutraceuticals
- Solubility manipulations of drugs of natural origin by various techniques
- Development of conventional formulations and Novel Drug Delivery Systems of herbal extracts & Nutraceuticals
- Analytical method development and validation for crude drugs, herbal extracts and herbal formulations by HPLC, HPTLC and other chromatographic techniques
- Stability studies and shelf life study of herbal & Nutraceutical formulations
- Development and evaluation of Ayurvedic formulations, Nutraceuticals and cosmeceuticals



The department is well-equipped with state-of-the art equipment and facilities for conducting first-grade research in the area of herbal drug discovery, development and evaluation. Given below are few of the high-end equipment available with the department:

- Shimadzu HPLC with PDA detector & autosampler
- CAMAG HPTLC with LINOMAT V Applicator and Scanner
- Agilent HPLC with Quaternary pump & PDA Detector
- Supercritical Fluid Extractor
- Buchi Rotary Vacuum Evaporator
- Virtis Lyophilizer
- Esco Class II Biosafety Cabinet
- BioRad ELISA Reader
- Gel electrophoresis
- Esco CO2 incubator
- Air Purifier

The Department has received funding for its research projects from various government funding agencies including DBT, BARC - BRNS, AICTE, CSIR, UGC and University of Mumbai.

In addition, the department has successfully completed projects sponsored by industry including German Remedies, Marico, Zandu pharmaceutical works, Charak Pharma, Anazeal analyticals and Omniaactive Health Technologies. The department has also been engaged in guiding B Tech & MD students of Ayurved faculty regarding the formulations. Many such funded projects also have been completed.

### Medicinal plant garden

The Department has developed a lush, well maintained medicinal plant garden with almost 60 QR - coded herbs of medicinal value. The adjunct literature of the planted medicinal herbs of the garden and Pharmacognosy museum has also been maintained and updated by the department.



## DEPARTMENT OF PHARMACEUTICAL ANALYSIS

### Faculty:

Krishnapriya Mohanraj, Ph.D. (Tech), I/c Principal,

Professor (krishnapriya.mohanraj@bcp.edu.in)

Vaishali A. Shirsat, Ph.D., Associate Professor and

Head of the Department (vaishali.shirsat@bcp.edu.in)

Mr. Prashant Kumar Chaturvedi, M. Pharm.,

Assistant Professor (prashantkumar.chaturvedi.@bcp.edu.in)



### Research guides for M. Pharm. (Pharmaceutical Analysis) from other departments:

Premlata Ambre, Ph.D., Associate Professor, (premlata.ambre@bcp.edu.in)

Alka Mukne, Ph.D., Assistant Professor (alka.mukne@bcp.edu.in)

Established in 2012, the Department of Pharmaceutical Analysis brings another dimension to specialized research arena at Bombay College of Pharmacy. The department is actively involved in training students at undergraduate and postgraduate levels. The department offers Master of Pharmacy Course in Pharmaceutical Analysis which is approved by the All India Council of Technical Education, Directorate of Technical Education, Maharashtra State and the University of Mumbai for an intake of 15 students per year. The Department has state-of-the-art laboratories, supported by good infrastructure and well-trained faculty.

### Distinguished mentors of department:

The department is privileged to have following distinguished mentors who help and guide the department in its various activities including curriculum development, research and resource mobilization.

- Dr. A. J. Vaidya, Director, Analytical Solutions
- Dr. Manish Gangrade, Vice President, Analytical R&D & Regulatory Affairs (API), Cipla Ltd.
- Mr. V. U. Kshirsagar, Director & CEO, TRAC Pharma Consulting

### Some of our research expertise:

- Analytical and Bio-analytical method development and validation
- Spectrophotometric multi-component analysis
- HPLC and HPTLC analysis
- Chiral chromatography
- Stability indicating methods, Impurity profiling
- Metabolism and Pharmacokinetic studies
- Herbal and Phytochemical analysis, Drug-herb interaction studies
- Bioactivity guided fractionation of herbal extracts
- In silico analysis and Computer-aided Drug Discovery
- Bioassays, High throughput assay method development
- Structural elucidation assignments
- Polymer synthesis and their evaluation
- LC-MS/MS, HPTLC-MS & ICP-MS Analysis (both qualitative and quantitative analysis)



### Some Therapeutic areas of interest:

- Antimicrobial: Anti-bacterial, Anti-fungal, Anti-HIV
- Anti-platelet
- Angiogenesis



**Facilities available in the department include:**

- LC-MS/MS - Qtrap (Sciex)
- ICP-MS CAMAG HPTLC, HPTLC-MS
- Agilent LHPLC and HPLC with PDA detector
- Jasco HPLC with UV detector
- Jasco HPLC with PDA and fluorescence detector
- Jasco UV-visible Spectrophotometer
- CAMAG HPTLC
- Gas Chromatography
- FTIR
- Rotary Evaporator
- Molecular Modeling Facility
- Solid Phase Extractor
- Low Temperature Synthesizer
- Nitrogen Evaporator
- Microbiological testing including resazurin microtitre assay (REMA)
- Cell Culture Facility



**Funding, Collaborations and Technology transfer:**

The departmental faculty received substantial funding from government agencies namely All India Council of Technical Education (AICTE), University Grants Commission (UGC), Department of Biotechnology (DBT), Department of Science & Technology (DST), National Medicinal Plants Board, Department of AYUSH and University of Mumbai for research projects and travel.

In 2017, Department of Science and Technology (DST) sanctioned grant of Rs. 5.87 crores for establishment of a National Facility for Research and Training in Integrated Analytical Strategies for Discovery, Development and Testing of Drugs, Pharmaceuticals and Nutraceuticals under the Drugs and Pharmaceutical Research Program. The facility includes sophisticated high end analytical instruments viz. LC-MS-MS, ICP-MS, and HPTLC-MS.

The faculty collaborates with various pharmaceutical industries and academic institutes for infrastructural support, research, consultancy assignments and technology transfer -

- |  |                                       |   |                            |
|--|---------------------------------------|---|----------------------------|
| • Aarti Healthcare                                       | • Analytical Solutions                | • Nerlikar Hospital                           | • Macleods Pharmaceuticals |
| • GlaxoSmithKline Pharma Ltd                             | • S.G. Pharma                         | • Schrödinger                                 | • Nature Pure Extracts     |
| • Shogun Organics  | • Loba Chemie                         | • School of Pharmacy, Kingston University, UK | • Dharmayug Priosciences , |
| • Unichem  | • School of Science, NMIMS University | • Microtracers, USA                           | • ACG World                |
| • T. N. Medical College and B.Y.L. Nair Hospital, Mumbai | • Ambernath Organics                  | • Anshul Life Sciences                        | • IQGEN-X Pharma Pvt. Ltd. |
| • Aventis Pharma   | • Sandu Pharmaceuticals Ltd           | • G S Medical College & KEM Hospital          |                            |

**The department conducts "Technical development programs" for industry personnel on -**

- Analytical skill development
- Chromatographic techniques (Fundamentals, TLC, GC, HPLC, UHPLC)
- Spectroscopic techniques (UV, IR, NMR-1H, 13C, 2D NMR)
- Mass spectrometric and hyphenated techniques (LC MS/MS, GC MS/MS, HPTLC MS, ICP MS)



Amrut Mody Research Fund (AMRF) was created out of a donation from Unichem Laboratories Ltd by Late Shri A.V. Mody to form the corpus of Amrut Mody Research Fund. The main objective of the Amrut Mody Research Fund is to recognize and encourage research carried out in the field of pharmaceutical and allied sciences in the Bombay College of Pharmacy (BCP) and such other pharmaceutical institutions in India.

Late Shri Amrut V. Mody was a visionary industrialist who believed in good health as a basic human need. He was committed to providing medicines, especially to the economically backward sections of the society. In this endeavor he founded the Unichem Laboratory, one of the few earlier domestic pharmaceutical industries in 1944.

He was also committed to quality professional education and research and was instrumental, along with others in establishing and supporting the BCP. The College was to provide trained man power needed for the pharmaceutical industry and the profession. In this pursuit he established Amrut Mody Research Fund in 1972 at BCP to support research and development activities in pharmaceutical and allied disciplines. Service to society always played an important part in Shri Amrut Mody's life. In recognition of his services Shri Amrut Mody was awarded the Padmabhusan in 1972 by the President of India.



#### The aims and objectives of the Amrut Mody Research Fund in addition to those mentioned above are:

- To sponsor doctoral and advanced research in pharmaceutical and allied sciences in the form of scholarships and give grants to the faculty to support the research work of scholars of the BCP.
- To provide/support grants for purchase and maintenance of equipments, books and journals and for creation of such other research facilities to foster research and a research environment in the BCP.
- To promote and encourage scholarly activities of the faculty and scholars of the BCP by providing grants for writing scientific books, monographs, review articles, etc.
- To provide partial travel grants/registration fees to attend and present research findings of the faculty and doctoral students of the BCP at international conferences/seminars, etc once in three years.
- To hold seminars, symposia, conferences and exhibitions for promoting research in pharmaceutical and allied sciences in BCP.
- To arrange lectures or lecture series by inviting eminent scientists and professionals from academia and industry from time to time during each academic year. Amrut Mody Research Fund shall support the honorarium, local travel and such other expenses for the conduct of such activities.
- To carry out all such activities as are incidental or conducive to the attainment of the above objectives or any one of them.

The Amrut Mody Research Fund Distinguished Researcher Award was conferred to Dr. M.S. Nagarsenkar in 2012 and Dr. M. N. Saraf in 2015.

At the occasion of the concluding ceremony of the Centennial Birth Anniversary of Padmabhusan Late Shri. Amrut Vithaldas Mody, his bust was unveiled on the foundation day of BCP i.e 28<sup>th</sup> May 2015.

Some of eminent scientists and professionals from academia and industry who delivered lectures at Bombay College of Pharmacy in recent past:

- Dr. Aditya Das, Consultant at USA & Associated with Cipla
- Dr. Ajaz Hussain, Inside advance & solution LLC
- Dr. Aparna Khanna, Dean, School of Science, NMIMS
- Dr. Archana Krishnan
- Dr. Aruna Khanolkar, Team leader Qbd IPD, Cipla
- Dr. Abhijeet Date, Assistant Prof. Dept. of Pharmaceutical Sciences, The Daniel K. Inouye College of Pharmacy, USA
- Ms. Almas Sayed, PV-SME at Tata Consultancy Pvt. Ltd.
- Dr. Anil Wani, Foundation for innovation & technology transfer, IIT, Delhi
- Dr. Bettine Boltres, Product Manager Pharmaceutical Tubing SCHOTT AG, Germany
- Chris Freeman, Ametek Brookfield



- Col. Nambiar, RMR Retd.OBL Facilitator
- Dr. Daniel A. Heller, Assistant Member at Memorial Sloan - Kettering & Asst. Prof at Weill Cornell Medical College
- Dr. Dhiren Thakker, Ferguson Distinguished Professor and Associate Dean from UNC Eshelman School of Pharmacy
- Dr. Hari Sharma, University Medical Centre, Amsterdam
- Dr. Kalpana Gandhi
- Dr. Kothari
- Dr. Myke Scoggins, Sr. Principal Scientist, Micromeritics Instrument Corpn USA
- Adv. Manali Chitnis, Intellectual Property Lawyer
- Dr. M.S. Kamath, Hon. Secretary, Consumer Guidance Society of India (CGSI)
- Dr. N. R. Jagannathan, Prof. & HOD of NMR & MRI Facility, AIIMS
- Dr. Nancy Pandita, Prof. in School of Science NMIMS University
- Ms. Neha Pandit Tembe, Nutritionist, Founder, Snack-Right
- Dr. Peter Banks, Scientific Director Bio, Tek Instruments Inc.
- Dr. Prashant Karkar, NMIMS
- Dr. R.P. Iyer, Co-founder of Spring Bank Pharmaceuticals Inc, USA
- Dr. Ramaswamy Iyer, Associate Director Bristol-Meyer Squibb (USA)
- Dr. Rodney JY Ho, Prof. University of Washington
- Dr. Shubhada Chiplunkar, Director-ACTREC
- Dr. Stephen Barton, Kingston University
- Dr. Susan Thomas, NIRRH
- Sarita Singh Rajbhar, Strategic Portfolio Management, CIPLA Ltd.
- Dr. S J S Flora, Director, NIPER
- Dr. Suraj Shinde, Officer, Learning & Development Dept. Cytel Statistical Software & Services Pvt. Ltd.
- Ms. Swati Dudhale, Learning Links Foundation
- Seminar on Nutraceuticals
- Dr. T.S. Baganesh, Distinguished Scientist CSIR
- Prof Prasad Bharatam, Dept of Medical Chemistry, NIPER
- Prof. G.N. Sastry
- Prof. Padma Devrajan, ICT
- Prof. Prakash Jha, Central University of Rajasthan
- Prof. Subhash Padhye, ISTR Research Labs. Former HOD of the Dept of Chem University Pune
- Seminar with Royal Society of Chemistry
- Workshop by Mr. Ramandeep Singh, Asst. Manager Technical Services Signet Chemical Corpn Pvt. Ltd.
- Dr. Shashidhar Rao, Rutgers University (USA)
- Dr. Khalid, Duquesne University
- Dr. Giannetti, Duquesne University
- Dr. Rahul Thorat, MVSc Laboratory Animal Facility
- Mr. Abhijit Trimbakkar
- Dr. Siddhivinayak Barve, Dy. Director, The Kelkar Education Trust's Scientific Research Center



**The Research Society of Bombay College of Pharmacy (RSBCP):**

- RSBCP is a scientific society of pharmacy and related profession established in the year 1981 with one of the mandates of promoting and strengthening the pharmacy profession through research collaborations, management & execution of such research collaborations in association with the Bombay College of Pharmacy (BCP) and its faculty members and students.
- RSBCP is recognized by Department of Scientific and Industrial Research (DSIR)

**AIMS AND OBJECTIVES OF THE RSBCP:**

- To promote, organize, sponsor, establish, conduct research and encourage advancement of scientific knowledge in pharmaceutical and allied sciences in the BCP
- To increase the quality and efficacy of research outcome and to develop innovation culture in the BCP
- To finance research projects by providing grants for research and supporting infrastructure, instruments and their maintenance
- To endow research fellowships to support and recognize outstanding contributions of individuals and encourage research scholars to pursue studies & research
- To coordinate and manage industrial research collaborations in the BCP
- To assist the teaching and non-teaching staff of the BCP to develop professional skills.

**SALIENT FEATURES OF THE RSBCP:****INDUSTRIAL RESEARCH COLLABORATIONS/ PROJECTS & SERVICES**

- The RSBCP manages and effectively coordinates number of industrial research collaborations and industrial projects for pharmaceutical and related industries.
- The research projects are executed in the BCP laboratories by the faculty and their student team.
- The main benefit for industry from these academic research collaborations is the access to the research results and innovative methodologies at reduced cost. It is of mutual benefit that the companies offer industrially relevant research problems of their interest to BCP and the faculty and students of the BCP provide the methodology and expertise.
- The RSBCP also caters to industries by providing 'pay as you use' equipment or instrument usage facilities (e.g., Particle size analyzer in  $\mu\text{m}$  and  $\text{nm}$  range, Zeta potential determination).

List of industries for whom research projects have recently been undertaken and consultancy/ services been provided,

- Inventia Healthcare • Panacea Biotec Ltd. • Glenmark • Abbott Laboratories • Marico
- OmniActive Health Technologies • IPCA • Zytex • Enem Nostrum • Shreya Lifesciences • Cipla • GlaxoSmithKline • Ambernath Organics • Sandu Pharmaceuticals • Bristol Myers Squibb • Getz Pharma Research
- Bharat Serum and Vaccines • Evonik Degussa India
- Neon Labs • Piramal Healthcare • Bajaj Healthcare • Naprod Life Sciences • USV
- Vaidya Patankar Pharmacy



•Nerlikar Hospital •Anazeal Analyticals & Research •Gattefosse India •JMB Pharma •Famy Care •Piramal Life Science •Solumics Plantacid Herbaceuticals •Franco-Indian Pharmaceuticals •Cymbiotics Biopharma •Mank Industries •Syngene International •Lamar Group of companies •Ayurchem.

#### Technology Transfer:

- Technology developed through research at the BCP is made available to industries for further development and commercialization. One recent technology transfer to M/s Saife Vetmed Pvt Ltd was for a novel veterinary formulation for prevention and treatment of bovine mastitis. This technology has been developed in Bombay College of Pharmacy (BCP), in collaboration with Bombay Veterinary College (BVC), Mumbai.
- Another technology transfer to LOBA Chemie Private Ltd. has been done for the synthesis of chiral selector (as mobile phase additive) in enantiomeric separation of several Chiral Active Pharmaceutical Ingredients (APIs), by Reverse Phase High Performance Liquid Chromatography (RP-HPLC) using non-chiral columns. The chiral selector had to be imported from Sigma Aldrich. The BCP team developed a cost effective indigenous method for synthesis of the chiral selector with around 150% reduction in cost. The synthesized chiral selector showed better performance for enantiomeric separation than the commercial imported product.

#### Research Projects in Collaboration with Foreign Industries:

- Spring Bank Pharmaceuticals, USA for Expressions, Purification and X-ray structure determination of Plasmid RIG-1
- BASF, Germany for Assessment and development of computational methods for predicting which aminoacids in a target protein binding-site are most likely to mutate in order to generate resistance against specific crop protection agents.
- Bristol Myers Squibb Company, NJ, USA for project on design of novel delivery systems, grant received US dollars 5000/- .
- Gattefosse India on exploring role of Gelucires in bioavailability enhancement. The project included formulating tablets containing a drug from BCS class 2 and Gelucires by melt granulation, in-vitro characterisation, scale up and kinetic evaluation in healthy human volunteers. Total grant received at BCP Rs 15,00,0000/.
- Bristol Myer Squibbs, USA through BMS-Biocon -Research Centre to support Ph.D fellowship for project work related to Drug Metabolism.

#### Infrastructural Development:

- RSBCP provides financial support for infrastructural development necessary for research at BCP, e.g., support for purchase of instruments and accessories and development of laboratories.
- RSBCP has developed Radioimmunoassay (RIA) laboratory. The RIA laboratory has the approval of Atomic Energy Regulatory Board (AERB), Dept. Atomic Energy, Govt. of India. The activities of this laboratory is supervised by AERB authorized Radiation Safety Officers. The RIA laboratory has calibrated radiation detectors (donated by Indian Association of Nuclear Chemistry and Allied Scientists) for assay of gamma ray and beta particle emitting radioisotopes and other equipment to carry out the assays of biological analytes such as rat insulin and estradiol.
- RSBCP welcomes industry sponsorship of laboratories for renovation, upgradation and instrument purchase. Laboratories can also be named to recognize the contribution of the sponsoring industry.



## Key personnel:

Mrs. Manjusha Pimplodkar, Senior Manager

(mkrlabs@gmail.com, manjushamkr@yahoo.com)

Mrs. Anupama Phadke, Assistant Q. A. Manager (Chemical and Instrumentation)

Mrs. Swati Dahibawkar, Assistant Q. A. Manager (Microbiology Department)

## About us :

Dr. M. K. Rangnekar Memorial Testing Laboratory was founded on 2<sup>nd</sup> July 1988 by The Indian Pharmaceutical Association-Maharashtra State Branch`s Bombay College of Pharmacy in the memory of Dr. M. K. Rangnekar, the first commissioner of FDA Maharashtra and past President of IPA-MSB. This is a FDA approved and NABL accredited public testing laboratory complying as per schedule GLP L-1. The Laboratory follows Good Laboratory Practices as specified by the regulatory authorities from time to time.

## Infrastructure:

- Trained qualified and competent technical staff
- 21 CFR compliant software for documentation as well as efficient, reliable and accurate reporting
- Work environment to provide high degree of co-ordination
- Specialization in latest analytical techniques
- Excellent standard of service to customers
- EPABX system, CCTV cameras and biometric systems to maintain laboratory discipline, secrecy and confidentiality

## Categories of Products Tested:

- Analysis of APIs, Excipients and Pharmaceutical Formulations as per IP/BP/USP/ EP or In-house Standards
- Analysis of Cosmetics as per BIS or party's specifications

## Services Provided:

- Analytical method development
- Analytical method validation studies
- APIs, Excipients & Finished product analysis as per pharmacopoeia or in-house specifications
- Stability studies



## Analysis by using the following instruments:

- HPLC
- GC
- FTIR
- UV-Visible Spectrophotometer
- Dissolution apparatus
- Disintegration apparatus
- Potentiometric titrator
- Karl fischer apparatus for moisture content
- Brookfield's viscometer
- Liquid particulate counter
- Digital polarimeter
- Bacterial Endotoxins test
- Particle size analysis (microscopically)
- UHPLC
- HPTLC
- ICP-MS
- LCMSMS



### Microbial analysis:

#### Sterility testing

- Microbiological assay by cup-plate, cylinder-plate and turbidometric methods
- Effectiveness of Antimicrobial Preservatives
- Microbial Enumeration Tests
- Test for specified microorganisms
- Rideal Walker Coefficient test for disinfectants
- Microbial kill rate study
- Minimum Inhibitory Concentration
- Anti microbial activity
- Water analysis



**National Facility for  
Research and Training**

**National Facility for Research & Training  
in Integrated Analytical Strategies for  
Discovery, Development and Testing of  
Drugs, Pharmaceuticals and  
Nutraceuticals under Drug and  
Pharmaceutical Research Program**

**Research grant of Rs. 5.87 crores  
from Department of Science &  
Technology (DST), DPRP Scheme**



LC MS/MS



HPLC & UHPLC



ICP MS



HPTLC MS

## Key Personnel :

Dr. N. Sivaprasad, President, The IPA-MSB

Dr. Anand Shedge, Chairman, ACE & Vice President The IPA-MSB

## About ACE:

The Academy for Clinical Excellence (ACE) is the pioneering clinical research training institute in India established in February, 2002. ACE is an initiative signed jointly by Pfizer alongwith Suven Life Sciences, Bombay college of pharmacy and Indian Pharmaceutical Association Maharashtra State Branch. The academy is located in the Bombay College of Pharmacy campus. The Academy is a one-stop-shop for the training needs of all clinical research professionals. Our Courses will be run on all weekends as classroom sessions.

## The ACE Advantage:

- **Weekend Programs** - For students pursuing further studies and working professionals
- **Curriculum** - Designed by industry experts from Pfizer Ltd., ClinInvent Research, Lambda Therapeutic Research Pvt. Ltd., Novartis India Ltd., Quintiles Spectral, Ranbaxy Research Laboratories, SIRO Clinpharm Pvt. Ltd., Tata Memorial Hospital, KEM Hospital and Wockhardt Ltd.
- **Faculty** - Eminent persons from the industry and academia
- **Quality of course** - Quality of teaching maintained by strict internal checks
- **Placement** - Placement assistance for students.
- **Facility** - Special classes for soft skills and preparation for interview.



## 1. Advanced Diploma in Clinical Research (ADCR) (8 Months)

The curriculum is:

- |                                      |                                      |
|--------------------------------------|--------------------------------------|
| 1. Introduction to Clinical Research | 2. Ethics in Clinical Research       |
| 3. Regulations in Clinical Research  | 4. Clinical Research Methodology     |
| 5. Clinical Research Management      | 6. Biostatistics and Data Management |

## 2. Diploma in Pharmacovigilance (DPV) (6 Months)

The curriculum is:

- |                                 |                              |
|---------------------------------|------------------------------|
| 1. Introduction to PV           | 2. PV operations & Processes |
| 3. Safety Database              | 4. Pharmacoepidemiology      |
| 5. Aggregate Reports            | 6. Project Management        |
| 7. PV Organization & Management | 8. Allied PV Topics          |

- **Eligibility for admission:** Final year Graduating, Graduates and Post Graduates in Life Sciences and Medicine with 50 % aggregate marks
- **Placement:** 100% placement assistance with career opportunities as CRAs, Investigators, Regulatory Managers, Auditors, Data Managers, Medical Writers, QA managers, Drug Safety Officer Etc In top KPO/BPO like TCS, Cognizant, Sciformix, hospitals like Kokilaben Hospital, Tata Hospital, CROs like ICON, SIRO and pharma companies like BI, SunPharma, Sanofi etc.

## 3. Customized Certificate Courses (Specially Designed for Corporate)

ACE offers following Certificate Courses:

- Independent Ethics Committees (IECs)- Composition and Function
- GCP for Investigators
- Fundamentals of Clinical Research and GCP

ACE has successfully done certificate courses for various companies:

- Ramdas Hospital Pune



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**Diploma Course in Health and Integrative Lifestyle**

**B.Sc. (Honours)**

in Integrative Nutrition and Dietetics

**M.Sc.**

in Integrative Nutrition and Dietetics

**Post Graduate Diploma**

in Holistic Nutrition and Dietetics

## **GUEST LECTURES AT BCP 2024-25**

1. Methodologies for Evaluating Talent Compaction by Dr. Rahul Haware on 15th July 2024.
2. Memorial Lecture Under the aegis of Late Dr. J. N. Banerjee & Late Dr. H. P. Tipnis Endowment by Dr. Umesh Shukla , Dr. Abhijit Date and Dr. Ashish Mungantiwar on 20th July 4.00pm.
3. Lecture Series-1 Radiopharmaceuticals by Prof. Savita Kulkarni, Dr. Lakshmi Narayan, Mr. R. Krishna Mohan and Dr. Ashok Chandak on 03rd Aug 2024.
4. Commercialization of An Invention in India- Translational Nightmare or Scientific Shortsight by Dr. Umesh V. Bankar on 17th Aug 2024 .
5. One day Workshop on Basic Cell culture Techniques by Dr. Rachna Kaul coordinator on 31st Aug 2024.
6. Safety Awareness Workshop by Pavankumar Bhoje and Hanumant Dhavan on 31st Aug 2024.
7. Placement Talk “Scientific writing: Foundations and Career Opportunities by Dr. Joginder Singh Paneysar on 221st Sep 2024.
8. Financial Literacy by Mr. Paresh sheth on 05th Oct 2024.
9. Research and Publication Ethics by Dr. Anuradha Majumdar on 25th Oct 2024.
10. Professional Ethics by Dr. Premlata Ambre on 10th Dec 2024.
11. Exploring the Self-Human Body by Dr. Shilpa Lad on 11th Dec 2024
12. Understanding Harmony in Nature by Mr. Manish Shinde on 11th Dec 2024.
13. Understanding Harmony in Society and Power of thoughts by Mr. Ashish Kulkarni on 19th Dec 2024.
14. Building a career in pharma-Opportunities & Pathways by Mr. Agnivesh Shrivastav on 21st Dec 2024.
15. Sustainable Dressings for Wound healing by Ms. Surekha Poddar on 03rd Jan 2025.
16. Understanding harmony in the Human Being-exploring human consciousness by Mr. Subhash Kelkar on 04th Jan 2025.

## **ANNUAL REPORT 2024-25**

In the academic year 2023-2024 BCP continued its legacy of collaborations, awards, and accolades. **BCP** was ranked **73rd** as per **NIRF** ranking 2024 (Among top 100 Pharmacy institutions in India), published by Ministry of Education, Government of India.

BCP has been awarded **Exemplary Researcher of the year** award under India Higher Education rankings 2024-25 by Education World.

BCP was awarded **Certificate of Merit** ‘Overall Championship (First Ranking) in the **18th Avishkar**: inter collegiate Research Convention by the Honorable Vice-chancellor of Mumbai University.

### **Infrastructure**

1. The Undergraduate Pharmacology labs have been successfully renovated and are now fully operational, offering enhanced functionality and compliance with academic and regulatory standards.
2. Animal House Renovation as per CPCSEA guidelines.

### **Skill-based courses were conducted for students like:**

- Certificate course in ‘Data Analytics in Healthcare’ in association with Navigo Analytics is conducted and presently 18th batch is going on.
- Soft skill development course for M.Pharm students is currently running.
- Microsoft Excel course in association with Navigo Analytics.
- The Certificate course on Universal Human Values (UHV) was successfully completed by T. Y. B. Pharm students. The course was conducted in collaboration with Jeevan Vidya Mission.
- BCP-TCS certificate course in Clinical DrugDevelopment was conducted for 32 students of Final year B.Pharm.
- Two months online course ‘Pharmaceutical Intellectual Property Rights’ by Pharma Literati in collaboration with Bombay College of Pharmacy was conducted.
- Flow chemistry and NMR workshops were conducted by Pharmaceutical Chemistry department by experts from industry and academia.

- From 1st February 2025, we will be starting Professional development program in 'Digital Health Sciences for Pharmacists' in collaboration with Academy of Digital Health Sciences.
- A two day comprehensive training course on "Lyophilization Technology -The Theory and Practice of Freeze Drying of Pharmaceuticals" was successfully conducted by Dr Madhav Kamat (BCP alumnus) for pharma professionals working in the field of Lyophilization.
- 'Natoli-BCP Institute for Research & Industrial Pharmacy Training (NBIRIPT)' referred to as Natoli-BCP Lab was formally inaugurated which will augment research in pharmaceutical sciences. Various industrial projects are being undertaken.
- IPA in association with FIP conducted 'Train the Trainer on Vaccination ' a special program for pharmacists with faculty from University of Sydney at BCP.
- BCP has signed MoU with APG Pharma Research Lab LLP to foster research in Deuterium Chemistry.

Extramural research funding received this year from Government and Corporate funding agencies for different research projects were to the tune of Rs. **92,94019**. BCP received donations for **Rs 32,69002** in total from **corporate social responsibility (CSR)** and alumni funding for Equipment Purchase and Maintenance fund. **Rubicon Research** has contributed close to **Rs thirty lakhs** through CSR.

In a span of one year, several of BCP faculty members have published over 20 research papers in peer-reviewed, high impact factor journals like International Journal of Pharmaceutics, ACS applied Biomaterials, Drug Development and Industrial Pharmacy, Biomedicine and Pharmacotherapy, Journal of Ayurveda and Integrative medicine, Separation Science Plus, Expert opinion in Drug Delivery to name a few. Few faculty members have published book chapters in books published by CRC Press/Springer Link.

BCP faculty members have acted as resource persons at various conferences and FDPs.

Two patents were filed by our faculty members and three were granted.

Several of our faculties have successfully completed **Swayam/NPTEL** course and/or attended various FDPs and workshops to upgrade their knowledge.

All the faculties have worked extensively for submission of **SAR for NBA** with Dr **Vaishali Shirsat** as coordinator and filing of SIF for PCI with Dr Vaishali Shirsat as coordinator **Mr Prashant Chaturvedi** and **Dr Dimple Shah** as co-coordinators. The NBA inspection is tentatively scheduled in March.

Some of the achievements of BCP faculty in the last year are as follows:

- **Dr Krishnapriya Mohanraj**

1 .Delivered invited lecture at Savitribai Phule Pune University sponsored National Level Workshop on “**Implementation of National Education Policy 2020 – Research and Development**” at Smt. Kashibai Navale College of Pharmacy on 3rd and 4th February 2023.

2. Chief Guest for Award ceremony of **Sotax Scholarship Program** for Maharashtra and Gujarat Region on 2nd October 2024 10 am to 1 pm (online)

3. **Expert for Selection Committee** for recruitment of Principal, Professor, Associate Professors and Assistant Professors for **SIES School of Pharmaceutical Sciences**, Navi Mumbai on 27th and 28th August 2024.

4. **University Nominee** on the Academic Council of **Aldel Education Trust's St. John Institute of Pharmacy and Research** (Autonomous), Palghar. 24th May 2024.

5. Member of Research Advisory Committee for 2 doctoral students of Nirma University 1. Shikha Patel and 2. Ms. Mansi Patel – Meeting on 21st May 2024.

6. Panel member for **Career Advancement Scheme (CAS)**

Interviews of Quality Assurance Subject for SVKM's Dr. Bhanuben Nanavati College of Pharmacy on 19th July 2024 .

7.**Member of Board of Studies** – BSc and MSc including

Integrated course on Bioanalytical Sciences- Ruia College Autonomous. Meeting on 22nd February 2024.

8. **Member of Board of Studies** – BSc with Apprenticeship- Ruia College Autonomous. Meeting on 19th April 2024

9. **Domain expert** and member of Departmental Research Committee of Pharmaceutical Analysis Department for PhD presentation and Interview at Nirma University on 19th December 2024 (online mode).

10. Research project Investigation of Colour Change in Amoxicillin and Clavulanic Acid (Co-Amoxiclav) Suspension Formulations by Spectrophotometric Technique Sponsor: Aristo Pharma, Rs. 1,00,000.

- **Dr Anuradha Majumdar**

1. Elected as Hon' **Editor, Pharma Times (2024-26)**, Official publication of Indian Pharmaceutical Association (IPA).
2. Granted BRNS-DAE CRP Project '**Exploring Herbal Bioactives and Extracts: Integrative Approaches in Treatment of HSCT TATMA and HVOD**' for **Rs 47,82,800/-**
3. Delivered lecture on "**Hands-on Training in Computational and Animal Modeling Tools for Design and Discovery of Drugs for Neurodegenerative Disorders**" organized by Department of Pharmaceutical Chemistry and Department of Pharmacology, Shobhaben Pratapbhai Patel School of Pharmacy and Technology Management, SVKM's NMIMS Deemed to be University, Mumbai from 2nd-6th July 2024.
4. Invited talk at the Indian Pharmaceutical Association (Kerala State Branch), Discussion Group, Drug Design and Drug Discovery on "**Integrating Network Pharmacology as a Vital Tool in Bioinformatics: A Deviceful Approach in Drug Discovery**" on 14th December 2024.
5. Literature review and safety reporting as Toxicology Consultant at **Allwin Medical Device**.
6. Intellectual Consultancy on **Wysolone DT** and **Consultant Speaker at Pfizer Ltd**.
7. Engaged as Invited Faculty at I2 Course viz. Integrative and Interdisciplinary Course in Pharmacology and Pharmacokinetics at IISER, Trivandrum for BS-MS sem VIII students in the academic year 2023-24.

- **Dr. Ujwala Shinde**

1. Appointed as **Venu officer** for the MAH-B.BCA/BBA/BMS/BBM CET 2024 Examination conducted on 29 May, 2024.
2. Appointed as **member** of staff interview panel, **Kokan Gyanpeeth-Rahul Dharkar College of Pharmacy and Research Institute, Karjat** by University of Mumbai. (21st September
3. Served as **Reviewer** and referred research articles for several Elsevier, Bentham and Science Direct journals.
4. **Organized guest lecture** on "Methodologies For Evaluating Tablet Compaction" speaker Dr. Rahul V. Haware Director of Scientific Support and New Business Development on Natoli Scientific, 100 Emlen Way, Telford, PA, USA on July 15, 2024.
5. **Organized two months online course** Pharmaceutical Intellectual Property Rights Pharma Literati in collaboration with Bombay College of Pharmacy, from 24/05/2024 to 09/09/2024.
6. **Attended two days conference** on Biopharma Conclave on Biosimilars organized by Informa Markets in collaboration with CPHI, at Sahara Star, Mumbai on 3rd – 4th September, 2024.

- **Dr Vaishali Shirsat**

- 1 . Judged research presentations for 19th Inter-Collegiate/ Institute/ Department **Avishkar Research Convention 2024-25** for Final Round on 19th December 2024 at Vivekanand Education Society's College of Pharmacy, Chembur, for C6 (Medicine and Pharmacy) categories and UG, PPG final rounds.
2. **Member of Board of Studies**, Sanjivani College of Pharmaceutical Education and Research, Kopergaon.
3. **Coordinator** for A National Webinar on “**Cyber Hygiene for Women**” organised by APTI Women's Forum and BCP - A Special Webinar on the eve of International Women's Day , 7 March, 2024.
4. **College Coordinator** for the process of submitting the Self Accreditation Report (SAR) for NBA Accreditation

- **Dr Premlata Ambre**

- 1 . Appointed to inspect the newly developed college by the Directorate of Technical Education / DTE at **Dyanganga Education Trust**, near Hypercity Mall, Kasarvadavali Naka, Near Ghodbandar Road, Thane 400615 on 12th Feb 2024.
2. Successfully Conducted **UHV audit course** for Third Year BPharm students (120 students).
3. Appointed to **inspect** newly developed college by the **Directorate of Technical Education DTE at Dyanganga Education Trust**, near Hypercity Mall, Kasarvadavali Naka, near Ghodbunder Road , Thane 400615 on 12th Feb 2024.
- 4 . Attended one day **conference on Women in Leadership** organised by Wesleyan College , USA on 4th May,2024.
5. Invited as a **Subject Expert** in the Screening cum Evaluation/Selection Committee for CAS (Career Advancement Scheme) promotions of faculty members of Dr. L. H. Hiranandani College of Pharmacy on 5th December 2024 at HSNC Board
6. Appointed as **vice chancellor's nominee** on Board of studies, St. John Institute of Pharmacy, Palghar (21st May 2024-2027)
7. Appointed as **Domain Expert** for Life Science division at Tata Institute of Social Science in association with School of Vocational Education (1st July 2023-31st May 2025)

- **Dr Alka Mukne**

1. Dr. Alka Mukne was awarded the prestigious **2024 AAiPS Distinguished Scientist Award by the American Association of Indian Pharmaceutical Scientists** (AAiPS), to recognize her remarkable contributions to pharmaceutical sciences and education as well as her sterling efforts in advancing the standards of Pharma Times, IPA's official publication.
2. Was elected National Hon. **Treasurer** of Indian Pharmaceutical Association in October 2024. Prior to this, she has officiated as **Editor of Pharma Times**, the official publication of Indian Pharmaceutical Association from April 2010 upto September 2024.

- **Dr Rachna Kaul**

1. Conducted three workshops in 'Basic cell culture techniques' in which participants were from industry, hospitals and other colleges.

Some of awards and the honours received by the students of BCP are as follows:

1. **Ms. Siddhi Nakashe** has secured the **Second Prize** in Symphoria 2025, 13th National Level one day Symposium organized by St. John Institute of Pharmacy and Research.
2. **Gaurav Bhave** and **Parag Gawali** from M.Pharm have been selected for the final round of the **19th Avishkar Research Convention**, organized by the University of Mumbai under the Medicine and Pharmacy (PG Level) category.

More than **30 guest lectures** were organized under the aegis of **IQAC, AAPS, ISPOR, ACS** during which renowned and eminent national and international personalities from industry and academia shared their knowledge with students and faculty at BCP.

Lectures on Mental Health, Financial Literacy, Gender equality, Self-Discovery, Entrepreneurship, Women's Health, Molecular and Cell Biology, Career Guidance, GPAT/NIPER entrance coaching, foreign education etc. were conducted by esteemed speakers.

Twenty-three students are currently pursuing PhD. **Ms Shivangi Patel** and **Ms Kavita Raikumar** successfully defended their thesis and were awarded PhD degree by Mumbai University.

**Twenty-one students** from final year AY 2023-24 batch and **one student from Third year** qualified All India **GPAT examination** and **NIPER entrance test**. **Krish Mistry** scored **3rd rank** in NIPER MS (Pharm) and **Gauri Pillai** secured **7th rank** in NIPER MTech. Many students of this batch are pursuing higher education in India in premier institutes like IIT, NIPER and abroad.

**Ms. Heeral Jain** received the **Schott Finolax Scholarship** of **Rs. 25,000** from Schott Glass India Pvt. Ltd in association with Schott Glass, Germany for her outstanding academic performance.

All the BCP Students Chapters-ACS, AAPS and ISPOR are moving towards their respective goals with tenacity and excellence embedded in their every event. ACS-BCP even received the Commendable Student Chapter Award. BCP ISPOR student chapter has been featured in the prestigious Fall 2024 issue of the ISPOR Student Network Newsletter.

Shankar Lamle, Malhar Galande, Harshal Kore, Kreeti Maurya, Yogesh Sharma, Saloni Pawar, Sanjana Shenvi, Jenisha Gada, Sonal Shiyani, Sakshi Sonkar, Prajeet Mondal, Roshni Irani, Kreeti Maurya, Aiswarya Kapur, Mayuri Bhandore, Devika Dhawale, Yash Bhosle, Jay Dave, Gaurav Bhave made BCP proud by showcasing their talents at various ex-BCP events organized in the above fields.

In 2024-25, BCP welcomed new faculty members Ms Kusum Mehta, Dr Dimple Shah and Mr Parimal Hadge.

BCP has also conducted **Free Health Check Camps** (for all students and staff) and continues to be social and environmentally responsible by using solar power, generating compost from waste, installing energy conserving electrification methods, encouraging a healthy lifestyle (biking and walking) and minimizing the use of plastics

BCP remains indebted to its alumni and **BCP Alumni Association** for their constant support. Dr. Parvathi Chandrasekharan for providing **Rs. 20,000/-** per student under **LNS Memorial Scholarship** for meritorious girl student, **Dr. Samir Raj Mehta** for providing scholarship to F.Y. B.Pharm student till his/her graduation, **Dr. Umesh Shukla** sponsored under **Dr. H.P. Tipnis Memorial scheme** for student studying in S.Y.B.Pharm until completion of his graduation. **Neha Bhise and Manoj Chiney** sponsored **Late Sanjeev Bhise Scholarship** for final year UG student who seek to pursue research in field in pharmaceutical sciences and all other alumni who have contributed towards Students Mutual Aid Fund (SMAF) and by providing library books. **Smt Shantaben Nagarsenker Award** for M Pharm and PhD students for international presentation.

## THE SCHOTT SCHOLARSHIP

Heeral Jain from T.Y.B. Pharm was selected as the recipient of the prestigious Schott Scholarship where she presented her conceptual framework about Artificial Intelligence in the Pharmaceutical Industry.

## GEOPOLITICAL CHANGES AND THEIR IMPLICATIONS ON GLOBAL PHARMACEUTICAL INDUSTRY

Name: **Heeral Jain**

Class: T.Y. B. Pharm

Bombay College of Pharmacy

The pharmaceuticals industry is one of those that are deeply globalized, with most integrated cross-border flows of production and regulatory environments and market access all intertwining across the globe. Most changes in geopolitics whether due to major trading blocs' policies, political instability, or even war may disrupt the workings of this industry. The convergence of politics, economics, and healthcare is shaping the future of the industry, challenging companies to adapt and innovate in the face of uncertainty.

Geopolitical changes might prompt a drift in regulations hence making the process of drug approval and market entrance even more complex. The U.S. Food and Drug Administration (FDA), the European Medicines Agency (EMA), and the Medicines and Healthcare products Regulatory Agency (MHRA) in the UK are some of the regulatory bodies from different regions. The political realignment between nations can stall the harmonization of regulations which, prior to that, were oriented towards making international drug approval easier, hence delaying market availability for new drugs.

Globalization, once the engine that fuelled the growth of the pharmaceutical industry, has now become a vulnerability. The COVID-19 pandemic highlighted the fragility of global supply chains, with shortages of essential medicines and ingredients becoming a stark reality. China and India, which dominate the production of active pharmaceutical ingredients (APIs), found themselves at the centre of international scrutiny as the world faced severe disruptions. In response, pharmaceutical companies are now rethinking their supply chain strategies. The trend towards "de-globalization" has seen firms diversifying their production bases and investing in regional manufacturing hubs. Many countries have initiated policies encouraging local production to reduce dependency on foreign suppliers, ensuring greater resilience in the face of future crises. This shift represents a move toward "pharmaceutical sovereignty," where nations seek to balance global cooperation with self-sufficiency in critical sectors. Nationalism and protectionism in these countries push over the domestic pharmaceutical industry ahead of foreign competitors.



Also due to Russia-Ukraine war, the supply chains were disrupted. This includes difficulties in sourcing raw materials, active pharmaceutical ingredients (APIs), and finished products, as well as challenges in logistics and distribution. The conflict has hindered transportation routes, leading to delays and shortages in drug production and delivery, especially in Europe and neighbouring regions. This disruption in the supply chain has had a ripple effect on drug availability, pricing, and overall market stability.

Geopolitical changes are not only impacting drug production and distribution but also the way healthcare is delivered. The rise of digital health and telemedicine has accelerated due to the pandemic, offering new opportunities for pharmaceutical companies to innovate in patient care. Countries with robust digital infrastructure, such as South Korea and the United States, are leading the charge in adopting telemedicine and digital health platforms, enabling remote patient monitoring and virtual consultations. This shift is particularly significant in conflict zones or politically unstable regions, where traditional healthcare systems may be disrupted. Pharmaceutical companies are now collaborating with technology firms to develop digital therapeutics, using data analytics and artificial intelligence (AI) to improve patient outcomes. These innovations have the potential to revolutionize healthcare delivery by making it more personalized, efficient, and accessible across geopolitical boundaries. The challenge, however, lies in navigating the regulatory differences between countries and ensuring data security and patient privacy in a highly interconnected world.

Pharmaceutical companies rely on stable and open markets to sell their products. Geopolitical disruptions may reduce access to some of the most important markets, due to reasons such as political turmoil, economic sanctions, or a shift in trade alliances. For instance, the sanctions that have been placed on countries like Russia or Iran have limited pharmaceutical companies from selling their products within these nations—thus cutting off possible clientele in those nations.

One of the most contentious issues in the global pharmaceutical industry is the balance between intellectual property (IP) protection and access to medicines. The ongoing geopolitical debates around IP rights have intensified, especially in the wake of the pandemic. High-income countries, home to major pharmaceutical innovators, often prioritize strong IP laws to protect investments in R&D. Meanwhile, low- and middle-income countries argue for more flexible IP regimes to ensure access to affordable medicines, particularly in times of crisis. The World Trade Organization's (WTO) discussions on waiving patent protections for COVID-19 vaccines highlighted this tension. Some countries, like the United States, eventually backed the waiver proposal, while others, like the European Union, remained hesitant. This geopolitical tug-of-war underscores the need for a more equitable global framework that balances innovation incentives with public health imperatives. As new diseases emerge and antimicrobial resistance grows, the world will need to find innovative ways to foster collaboration between pharmaceutical companies and governments, ensuring both innovation and access.

Post-covid inflation caused shifting of giant companies in small countries like Vietnam and Indonesia. This is because these countries will offer low labour costs and favourable business environment. Also, by relocating or expanding to these countries, pharmaceutical companies can diversify their supply chains, reducing dependency on one region (e.g., China or India) and mitigating risks associated with geopolitical tensions or disruptions.

The world pharmaceutical industry is at a pivotal moment, caught between the forces of scientific innovation and geopolitical uncertainty. In this rapidly changing landscape, pharmaceutical companies must navigate a complex web of political, economic, and social challenges. From ensuring supply chain resilience to balancing intellectual property rights with access to medicines, the industry is being forced to innovate in unprecedented way. Changes in the geopolitical landscape significantly impact innovation within the pharmaceutical sector. A stable political environment and supportive economic policies are crucial for promoting investment in research and development (R&D).

As geopolitical dynamics continue to evolve, so too will the strategies employed by pharmaceutical firms. Collaboration between governments, regulatory bodies, and the private sector will be crucial in shaping the future of healthcare. Ultimately, the success of the world pharmaceutical industry will depend on its ability to adapt to these changes.

The future of the pharmaceutical industry, while uncertain, is filled with opportunities to redefine how medicines are developed, distributed, and accessed, setting the stage for a new era of global health collaboration in the face of geopolitical challenges.

## **KUDOS TO BCP**

- **Dr. Alka Mukne** (Head, Dept. of Pharmacognosy & Phytochemistry) BCP, received the prestigious Prof M L Khorana Memorial Lecture Award from the Deputy CM of Telangana, Shri Mallu Bhatti Vikramarka during the inauguration ceremony of the 73rd Indian Pharmaceutical Congress held at Hyderabad.
- **Dr. Alka Mukne** was elected National Hon. Treasurer of Indian Pharmaceutical Association in October 2024. Prior to this, she has officiated as Editor of Pharma Times, the official publication of Indian Pharmaceutical Association from April 2010 upto September 2024.
- **Dr. Krishnapriya Mohanraj** has been elected as the Global Scientific Chair- Dissolution Research Presentations International (DRPI) – a young researcher competition on dissolution related theme across Five regions of the world organized by Society of Pharmaceutical Dissolution Science (SPDS), for 3 years. (2024-2027).
- **Dr. Anuradha Majumdar** is the Hon' Editor, Pharma Times (Oct 2024- Sept 2026), Official publication of Indian Pharmaceutical Association (IPA).
- **Dr. Premlata Ambre** has been Appointed as Editorial Advisory Board (EAB) for the Elsevier Journal of Pharmaceutical Sci® for a three-year term (January 1, 2025-December 31, 2027).
- Bombay College of Pharmacy has won the **Public Health Office (PHO) Shield**
- To add to the success our college has also earned  
**Best Innovative Campaign**  
**Best Neglected Tropical Diseases Awareness Campaign**  
**First runner-up in World Health Day Campaigns**

### **IPA-MSB SF achievements:**

- Bombay College of Pharmacy got 1st runner up for Best College 2023- 2024.
- Roshni Irani got Best Dressed in Garba Competition organized by IPA.
- Bombay College of Pharmacy got 1st Runner up for the Best Cultural Trophy.
- Saloni Pawar, Sanjana Shenvi, Jenisha Gada, and Sonal Shiyani secured 2nd Prize in Debate Competition organized by IPA.
- Bombay College of Pharmacy got 2nd Runner up for the Best Editorial Trophy.
- Student of the Year Trophy was awarded to Ms. Richa Singh.
- Bombay College of Pharmacy got the 1st Runner up for the Marketing Splashdown Event.
- Bombay College of Pharmacy got the 1st Best College Participation 2023-2024.

## **KUDOS TO BCP**

**1.Shankar Hanmant Lamle , S.Y.B.PHARM student** has secured 1st position in monarch inter college competition.

**2. Malhar Galande, S.Y.B.PHARM student has following achievements in year 2024-25**

- He Won 1st prize in Academic and cultural Extravaganza ,Tremors, Hinduja college.
- He Won 1st prize in , Treasure Hunt, Pre tremors at lonavala , Hinduja college.

**3.Harshal Kore , S.Y.B.PHARM student has following achievement in year 2024-25**

- He was the 1st Runner up in Big Brain Event.
- He was the 2nd Runner up in Hangman Havoc Event.

**4.Kreeti Maurya , S.Y.B.PHARM student has following achievement in the year 2024-25**

- She secured 3rd position in duet dancing at Rx event.

**5.Yogesh Sharma, L.Y.B.PHARM student received 3rd prize in literati logo making competition.**

**6.Yash Bhosale, LY.B.PHARM student has following achievements in year 2024-25**

- 1st prize in Bollywood solo singing competition at the Music Festival (Requiem 4.0) of NMIMS college, Navi Mumbai and has received a gift hamper along with vouchers and certificates of merit and appreciation.
- 1st prize in solo singing competition at KES, MH SHROFF COLLEGE, KANDIVALI WEST, Chakravayuha 2024-25 . As a recognition of his achievement, he received a trophy, a certificate, gift vouchers, and a cash prize.

**7.Gaurav Bhawe, S.Y.M.PHARM student has following achievement in the year 2024-25**

- He Got selected in zonal rounds of 19th avishkar.
- He Participated in Final podium rounds of 19th Avishakar.

**8. Parjeet Ashok Mondal and Sakshi Mangesh Sonkar T.Y BPharm** students presented a poster on “**Nano Robots and its Application In Medicine**” secured first prize at the Poster Presentation competition organized by Bharatiya Vidyapeeth.

**9. Roshni Irani, Kreeti Maurya, Aishwarya Kapur, Mayuri Bhandore and Devika Dhawale** our BCP football team secured first position in Ring Football organized by IPA MSB SF.

## **PATENTS AND TRADEMARKS**

- **Dr. Anuradha Majumdar** filed for the trademark "**Creatinometer™**" ( Trademark no 5870400 ) which was granted on 10/03/2024.
- **Dr. Anuradha Majumdar** Filed Trademark "**StriSha™**" in 2023 and Launched Mobile App of Strisha on 9th June 2023. It's a contraceptive pill reminder app available on play store with information to create awareness on contraceptive pills in English, Hindi and Marathi. Trademark no.5804100 granted on 16/06/2024.
- A patent has been granted in South Africa in October 2024 to **Dr.Harita Desai**, Akanksha Kolhe, **Neha Raghuvanshi**, **Bhushan Bhale**, Kiran Mahajan, Poonam Aher, Shashikala Bulgunde, Nitin Kokare, Supriya Bhosale, and Parth Gharat for the title "**Curcumin Nanoemulsion for Anti-Ageing**."
- **Dr. Anuradha Majumdar** Filed for Indian patent dated 19/11/2024, Published 13/12/2024, Application no 202421089415 , Titled "**An iontophoretic system for transdermal delivery of methotrexate gel formulation**".
- **Dr. Anuradha Majumdar** Filed Trademark for "**Health Hamesha™**" for a developed Mobile and Internet App on Health Information for common citizens in English and many Indian native languages

## **PUBLICATIONS FROM BCP**

- Ms. Sonali Dangat, Ms. Komal Sawate, Mr. Rushikesh Ghuge, Ms. Suma Tagadur Sureshchandra, Mr. Anantha Narayana, **Dr. Alka Mukne** ( Head of Pharmacognosy and Phytochemistry ) published research work on "Asarone and Shyobunone Content in Indian Acorus calamus Fresh Plants and Dried Rhizome" samples 2025; 17(1):1-13.
- **Dr. Shubhangi Aher**, Dipti Solanki, Priyanka Yadav, Aparna Jain, Siddhesh Redij published a article “ Timolol Maleate Microspheres. An ingeious Carrier for Sustained Release Antihypertensive Formulations” in the Journal of Drug Delivery and Therapeutics in November 2024.
- **Dr. Shubhangi Aher**, Dipti Solanki, Priyanka Yadav, Aparna Jain, Siddhesh Redij published a article “ Timolol Maleate Microspheres. An ingeious Carrier for Sustained Release Antihypertensive Formulations” in the Journal of Drug Delivery and Therapeutics in November 2024.
- **Dr. Shubhangi Aher**, Prachi Giri presented a topic on “Formulation Assessment of Microspohges Loaded Gel for Reinforced Acne Treatment” in the International Journal of Scientific Development and Research in July 20204.
- **Dr. Vaishali Ashish Shirsat ,Dr. Elvis Martis** from Bombay College of Pharmacy (Autonomous), Kalina, Mumbai along with Mr. Madhur Kulkarni , Ms. Shweta Vibhute from Indira College of Pharmacy, Tathawade, Pune, Mr. Sandeep Kulkarni from Image Provision Technology, Baner, Pune and Dr. Evans Coutinho from St. John institution of Pharmacy, Palghar published a paper titled “Enhanced solubility and oral bioavailability of niclosamide- sulfobytyleneether- $\beta$ -cyclodextrin sodium inclusion complexes : An approach to improve its repurposing potential“ in Materials Today Communications, Vol.39 (June 2024) 109202
- **Dr. Shubhangi Aher**, Munjaji Balasaheb Pitale presented a topic “Mucoadhesive Nanostructured Lipid Carriers based Gel to Treat Vulvovaginal Candidiasis” in the book Systematic Reviews in Pharmacy in June 2024.
- **Dr. Vaishali Shirsat** from Department of Pharmaceutical Analysis, Bombay College of Pharmacy along with Mr.Sudhir Pawar, Mr. Jaisen M Lokhande, Ms. Manasi Rege, Ms. Prajakta Gidde, Mr. Nitin Gavari, Mr. Avishek Mukherjee from Department of Pharmacology, Lokmanya Tilak Municipal Medical College and General Hospital, Mumbai, India published a paper titled “In Vitro quantitative and qualitative analysis of anti hypertensive tablets and comparison between their generic versus branded formulations” in National Journal of Physiology , Pharmacy and Pharmacology , 2024, Vol 14, Issue 7, Pg. 1459-1465
- **Dr. Shubhangi Aher**, Dipti Solanki, Aparna Jain presented a topic on Nanotechnology at Work: Hydrogel Drug Delivery Architectures” in Journal of Drug Delivery and Therapeutics in March 2024.

## **PUBLICATIONS FROM BCP**

- **Dr. Alka Mukne**, Dangat S, Shirodkar P, Sawate collectively published a chapter "K. Herbs for Autoimmune Diseases : In the Role of Herbal Medicines: Management of Lifestyle Diseases 2024 Feb 27 in the book Springer Nature Singapore.
- **Dr. Krishnapriya Mohanraj** , Mr.Aditya Kulkarni, Mr.Arun Prasath, Mr.Surulivelrajan Mallayasamy Kudyar Palvi published a paper titled "A Pharmacokinetic Profiling Study after Single-Tablet Regimen of Camylofin 50 mg and Paracetamol 325 mg in Healthy Participants." in Indian Journal of Physiology and Pharmacology, 2024,68: Page 183-188.
- **Dr. Krishnapriya Mohanraj**, Eram Shaikh, Manasi Ashok Bagul, Anjali Mukesh, Shrutika Wankhade, Sayalee Sanjay Mane, Anandhu Kunnath Shaji, Swapnil Dengale published a paper titled "Stability Indicating High-performance Liquid Chromatography Method for Quantification of Amoxapine and Characterization of Forced Degradation Products Employing Quadrupole-Time of Flight Mass Spectrometry" in Separation Science Plus, 2024, 1-11.
- **Dr. Premlata Ambre**, Mr. Abhishek Mishra, Mr. Aniket Kushare, Mr. Gopal Agrawal (march 2024) published a chapter named " Smart Polymers: Advancement and Applications in Wound Healing" In:Smart Systems in Biotechnology, (Ed.) Munishwarnath Gupta, Publisher CRC Press (Accepted for Publication and Press).
- Munishwar Nath Gupta, **Avinash Rangaraju,Dr.Premlata Ambre**, has published an article on "Sustainable Dressings For Wound Healing" Biotechnology for Sustainable Materials, 2025.
- A. Mishra, A. Kushare, M. N. Gupta, **Dr. Premlata Ambre**, has published an article on "Advanced Dressings for Chronic Wound Management" ACS Appl. Bio Mater., 2024
- **Dr.Harita Desai** along with Md Ali Mujtaba,Anju Ambekar, Ritesh Fule, Shriya Pande, Musarrat Husain Warsi, Gamal Osman Elhassan, Murtada Taha, Khalid Anwer and Tarkeshwar devidas Golghate, has published a research article on "Development of chitosan/sodium carboxymethyl cellulose-based polyelectrolyte complex of dexamethasone for treatment of anterior uveitis", 2024 Biomed Mater receiving an impact factor of 3.9.
- Pragati Ramesh Kumbhar, **Dr. Harita Desai**, Vaibhavi Meghraj Desai, Sakshi Priya, Vikas Rana, Gautam Singhvi,has published a review on "Versatility of emulgel in topical drug delivery transforming its expedition from bench to bedside", Expert Opinion on Drug Delivery, 2025, receiving an impact factor of 5.
- Pallavi M. Chaudhari, Pranav Shah, **Dr.Harita Desai, Neha Raghuvanshi**, and Bhagwat Patil have contributed a book chapter titled "Biosimilars in Clinical Trials" in the book Biosimilars for Cancer Treatment: A Promising Approach (pages 241–264), published by Springer Nature, Singapore.

## **PUBLICATIONS FROM BCP**

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- **Dr. Hemali Savla** has contributed to the publication of chapters 2, 4, 5, 10, and 18 in the Indian adaptation of Hugo and Russell's Pharmaceutical Microbiology, 9th Edition, edited by Brendan F. Gilmore and Stephen P. Denyer, published by Wiley.
- Melroy M. D'Sa, Patel Nrupesh, **Dr. Hemali Savla**, and Shaikh Jahara have contributed the chapter titled "Minimally Invasive Nasal Depot (MIND) Technique for Direct BDNF AntagoNAT Delivery to the Brain" in the book "Targeted Therapy for Central Nervous System" edited by Viral Patel, Mithun Singh Rajput, Jigna Samir Shah, and Tejal Mehta, published by Academic Press, Elsevier (pages 265–284).
- **Dr. Hemali Savla, Bhushan Bhale**, Nisha Sharma, Pradnya Petkar, has published a chapter named "Novel Drug Delivery Systems for Tuberculosis Treatment", In Recent Advancements in Tuberculosis Drug Discovery, CRC Press.
- **Ms. Neha Raghuvanshi** has published a review paper on "Advances In Microneedles" in the book Integrated Perspective In Advances In Bioresearch" (Vol 16(3)/(4)0005).
- **Ms. Neha Raghuvanshi** has contributed a book chapter on 3D Printing titled "A Revolution In Healthcare" in the book Revolutionary Healthcare 6.0 : Advances and Application.
- **Ms. Neha Raghuvanshi** has contributed a book chapter titled "Immunomodulatory NP-Immunostimulatory" (innate and adaptive immune stimulatory) ligands for cell and/or tissue specific drug delivery system in the book Nanomaterials for Management of Infectious Diseases (CPC Press, Taylor & Francis).
- **Ms. Neha Raghuvanshi** has contributed a book chapter titled "Nutraceuticals In Combination Therapies" in the book Nutraceuticals and Obesity: Strategies for Weight.
- **Dr. Anuradha Majumdar**, Mungara AVVP, Satish RG, Kalakata SK Reddy, Varun Sureja, Dharmeshkumar Keni, Vishal Dubey published a paper titled "Efficacy and safety evaluation of Boswellia serrata and Curcuma longa extract combination in the management of chronic lower back pain: A randomized, double blind, placebo controlled clinical study" Explore, 21 (2025), 103099, Impact Factor: 1.9.
- **Mr. Rathod Abhishek**, Bheda DA, Pawar PD, Ranjanguru Avinash publish an article on "Comparative Analysis of Saracantinib, Nilotinib and Dasatinib based on their Safety, Efficacy and Tolerability In Treating Alzheimer's Disease".

## **INVITED LECTURES AND WORKSHOPS**

- **Dr. Krishnapriya Mohanraj** sponsored one-week Faculty Development Program on 'Advances in Pharmaceutical Sciences' from 6th to 11th January, 2025 organized by SNTD Women's University and C U Shah College of Pharmacy.
- **Dr. Krishnapriya Mohanraj** Delivered invited lecture 'Magic of LC-MS/MS' on 9th January, 2025 for Pradhan Mantri Uchchar Shiksha Abhiyan (PM-USHA)
- **Dr. Anuradha Majumdar** was invited to talk at the Indian Pharmaceutical Association (Kerala State Branch), Discussion Group, Drug Design and Drug Discovery on "Integrating Network Pharmacology as a Vital Tool in Bioinformatics: A Deviceful Approach in Drug Discovery" on 14th December 2024.
- **Dr. Alka Mukne** Delivered an invited lecture on "Ethopharmacology: Future Prospects" at the 11th International Congress of Society for Ethnopharmacology, held at CSIR-IIIM Jammu.
- Mr. Lakshya Patil, Sanket Gulbhile, Namrata Rane, **Anuradha Majumdar** gave an oral presentation titled "Promise of nose to brain delivery of bevacizumab substantiated in murine glioma" International Pharmacology Conference - 54th Annual Conference of Indian Pharmacological Society (IPC-IPSCON 2024) held at AIIMS, Delhi, 28th - 30th November 2024.
- Mr. Ratnesh Kumar Verma, Venkatesh Mehendale and Siddhi Kumbhar, **Anuradha Majumdar** delivered an oral presentation titled "Melatonin Exposure attenuates reproductive toxicity of Perfluorooctanoic Acid Contaminated Water on Zebrafish (Danio rerio)" at the International Pharmacology Conference - 54th Annual Conference of the Indian Pharmacological Society (IPC-IPSCON 2024), held at AIIMS, Delhi, 28th - 30th November 2024.
- Ms. Manali Kamble, Dipti Varapgaonkar, **Anuradha Majumdar** presented a poster titled "Potential of Garcinia indica in Retinopathy associated with Hyperglycemia" at the International Pharmacology Conference - 54th Annual Conference of the Indian Pharmacological Society (IPC-IPSCON 2024), held at AIIMS, Delhi, 28th - 30th November 2024.
- **Dr. Anuradha Majumdar** was invited to talk at the international conference IPSCON 2024, at AIIMS, New Delhi on 28th November 2024 titled "Vitamin K2MK7 in Combating ER Stress Associated with Diabetic Neuropathy".
- **Dr. Krishnapriya Mohanraj** was a Speaker and part of organization team at event organized by US Consulate Trade Division in collaboration with Microtracers Inc USA and supported by Bombay College of Pharmacy on Securtracers on 14th November 2024 at the US Consulate, Mumbai

## **INVITED LECTURES AND WORKSHOPS**

- **Dr. Alka Mukne** delivered a lecture on the topic “Pharma 5.0 - The Promise of Health to all” in the 73rd Indian pharmaceutical congress at Hyderabad on July 5th-7th, 2024
- **Dr. Anuradha Majumdar** Delivered lecture on “**Prescription Audit Based Medicine Optimization**” at Fortis Hospital, Mulund, Mumbai for Pfizer Ltd, Consultant Speaker, SEAL Programme for the Pharmacists on 4th May 2024
- **Dr. Krishnapriya Mohanraj** conducted a research project on Research and Development of new Taggants (Tracers) for Security Applications sponsored by Microtracers Inc. USA(USD 15000).
- **Dr. Krishnapriya Mohanraj** Delivered invited lecture on “Fundamentals of  $^1\text{H}$  and  $^{13}\text{C}$  NMR spectroscopy” on 28th April 2023 at DST STUTI (Synergistic Training program Utilizing the scientific and Technological Infrastructure).
- **Dr. Premlata Ambre** Successfully Conducted BCP-TCS certificate course in Clinical Drug Development in collaboration with TCS for Final Year students from 20th Jan to 13th April 2024 (20 students cleared National Qualifying Test for TCS job placements, and 16 were offered job out of 32 students.
- **Dr. Krishnapriya Mohanraj** sponsored a 5 day “Women training program” at Institute of Chemical Technology, Mumbai, entitled “A hands-on training program on Multidisciplinary Sophisticated Instruments” from 27th March to 2nd April 2023.
- **Dr. Vaishali Shirsat** conducted a workshop on Basic Cell Culture Techniques was held on Saturday-1st February 2024, Saturday- 22nd April 2024, 31st August 2024 for faculty and doctoral students. This workshop was conducted by the Cell Culture Facility and Molecular biology Laboratory, under the aegis of IQAC-BCP and Department of Pharmaceutical Analysis. Prof. Krishna Iyer was the convenor and Prof. Krishnapriya Mohanraj was the co-convenor of this workshop. The workshop was coordinated by Dr. Rachna Kaul and co-coordinated by Dr. Vaishali Shirsat.
- **Dr. Vaishali Shirsat, Patil T.**, from Bombay College of Pharmacy, Dhamdhare M., Kulkarni M., from SCE's Indira college of Pharmacy, Dr. Evans Coutinho from St. John Technical and Educational and Vibhute S. from Image Provision presented the topic "Oral Bioavailability Enhancement of Niclosamide to Explore its Repurposing Potential" at the 22nd International Symposium- On Advances in Technology and Business Potential of New Drug delivery systems held on Thursday, 29 February, 2024 and Friday, 1 March, 2024 at Hotel Sahara Star, Mumbai by Controlled Release Society-India Local Chapter.
- **Dr. Premlata Ambre** Successfully Organised the Lecture series-1 on Radiopharmaceuticals for inhouse and other pharmacy colleges students (103 students)
- **Dr. Premlata Ambre** Successfully Conducted Flow Chemistry workshop for MPharm students.

## **BCP - ALUMNI SPEAKS**

### **WHAT HAPPENS IN BCP, STAYS IN BCP !!**



BCP is a dream.

It was a dream for many.

And it will be a dream for many of them to come.

It's been nearly 6 months now that I have graduated from BCP but the memories are still fresh and very close to my heart. It feels like yesterday when my friends & I used to play table tennis, attend lectures, learn & have fun on the campus. I don't think any amount of gratitude would suffice for the love and memories I have for that old piece of an architecture.

I feel overwhelmed to express my gratitude for everything that BCP has given me. Although, due to COVID- 19, we were unlucky to spend only a year and half on campus. Still whatever memories we have are the happy ones. Got some amazing faculty to spend time and experience with, got some amazing lot of idiots & more importantly an absolutely crazy but a genius batch among all other perks.

The biggest thanks I want to give is to Prof. Krishna Iyer, who taught me to be grounded, no matter how much I succeed in life. Apart from his academic learning which is the best I have encountered till date, I gained valuable life lessons from him which is would be grateful for my entire life.

I am also grateful to all of my friends & my seniors who helped us make this journey even more delightful. I recall my days as a member of the BCP Students' Council, working with the BCP-CSR committee, where we had lots and lots of fun in organizing events, my days as the General Secretary of the college, taking part in Rx, our very own 'Resonance' when we used to plan, organise & rehearse for events, Annual Day function and what not. Lastly the best day in BCP was our farewell, which is something that I think no one will forget & no one would want to forget.

I am glad and proud to be a part of the BCP family. I own the tag of being a "BCPian" with utmost respect and pride. No matter wherever I go in life, the knowledge, experiences, values and my friends that I gained from BCP will always stay with me. Those 4 years at BCP were one of the best days of my life!! I want to thank BCP for all the opportunities I was given that helped me transform into the person that I am today.

I have told this many times to my juniors and I will tell it again that, you will never understand the worth of BCP until you graduate from there and it is already too late.

So, cherish every moment while it lasts!!

Thank you.

**REHAN AFTAB HAMDULAY**

B. Pharm Batch ( 2018 - 2022 )

## POETRY SECTION

### NAUSEA & ROSES



Everything around me is sad  
like black petals on a spring day,  
but when there are good things waiting  
it doesn't matter even then.  
Pretty skies are forthcoming,  
but my mind is swirling in gloom.  
Kind people surround me,  
my heat grows warm,  
but the light dies away,  
as soon as it forms.

There's nothing that could give me peace,  
only a sinister quietude that I dread  
lives inside of me,  
Isn't there anything worth loving,  
Isn't there anything worth saving,  
that my life hasn't already taken away from me.

I'm my own enemy,  
crawling in the depths of sea,  
heart shape bottles and bird songs,  
nothing left inside of me.

Things that I like come and go  
and I keep on wondering when I'll be whole.

How are others so free,  
like a band around my head,  
like an orange half-eaten,  
like a bitter song unwritten,  
maybe the rain makes it sweet,  
maybe the skies pray for me,

why do I mishear it?  
why do I turn a blind eye?  
all these stickers of great people  
are meaningless to me.  
I'm giving up so easily,  
feeling nothing.

**-Aishwarya Kapur**  
S.Y.BPharm



## POETRY SECTION

# HEALING HERO'S OF THE GARDEN

In the green pharmacy, where nature's  
Remedies abound,  
Grow the healing herbs, that cure and soothe around

There's Turmeric Tina, with her  
Anti-inflammatory flair,  
And Ginger Gary, who soothes the digestive air

See the Peppermint Pam, with her calming digestive sway  
And Chamomile Charlie, who chases the blues and blacks away

Aloe Vera Alice, with her gel so fine  
And bright,  
Soothes the skin and burns,  
With her gentle healing light

Lavender lily, with her calming  
Peaceful hue,  
Soothes the mind and body, and helps our spirits renew

Let's not forget, about Tea Tree Tom  
So bold,  
With his antiseptic powers, that keep the germs from getting old

Here's our Tulsi Tarina, so holy and fine,  
In Indian Gardens, she's always divine  
The 'Queen of Herb's', the ultimate adaptogen, through and through

Looking to the plants, that heal and seal and mend with care,  
A token of thanks, for the health  
They bring to share.

~ **Dhanashri Jadhav**  
F.Y.BPharm



## POETRY SECTION

### BROKEN

If scars remains from the past  
They have sunken deep into my heart  
They have stained my future  
As if they tainted my past

They make me howl in the night  
As I crawl to slumber at dawn  
They wound me up like a broken clock  
My fate is misaligned with cries

The clocks Tick in a bitter longing  
The candles moan with Bitter Parting  
The moon glows alone at night  
Yet disappears once In a while

Once I saw the sunrise  
My heart longed for something more  
Leaving the tears behind  
I stormed through the darkness

I Had awoken from the nightmare  
My feet danced with the melodies  
They took me to the world  
Where I could be whatever I wanted

Why would you fade away like this?  
I know you hate some days  
I know you gave your best  
I know you have no regrets

For a lifetime I won't leave  
And I could see you smiling at me  
But the battles are long  
I am tired by the loss

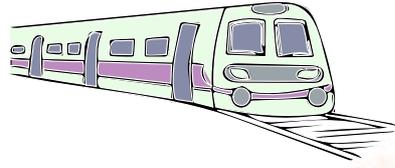
I am regretting everything  
When you are with me  
I have no fear with me  
I am drawn to you and always will be



~ **Amalamary Tomi**  
F . Y . Bpharm

## POETRY SECTION

### AAMCHI MUMBAI!



Kehte hai it's a city of dreams,  
The city which never sleeps,  
Local train ke dhake ab aadat se hogaye,  
Sapne pure karne mein hum sab khogaye,  
Vadapav hai Mumbai ki jaan,  
Gateway of India hai uski shaan,  
Marine lines pe late night guitar bajana,  
Ya Mumbai ke sunsets mein khojana,  
Bass yuhi zindagi ka maza lutna,  
Mumbai is a city which consists of rich , poor & pity,  
Chahe woh ho sabse bade industrialist ka Ghar ya ho  
Asia's largest slum!  
Hajiali ka darga ho ya Siddhivinayak cha Raja,  
Mumbai Darshan karne tu bhi mere saath aaja,  
Chahe woh ho aapki gaadi ya ho kaali peeli mein sawaari,  
Traffic Mumbai cha aahe lay Bhaari!  
Sabko Banna hai khiladiyon ka Khiladi,  
Bhai Bombay Stock exchange dega na saath tumhari,  
Mumbai ke dabewaalo ko bhale kaisehi bhule,  
Wohi toh hai Jo Hume har mushkil waqt mein mile.  
Ghumna khaana Seekhna, girna padna uthna sab sikhati  
hai aamchi Mumbai.. ye kisi maa se Kam nahi.. isiliye toh  
Mumbai mein bhi chupa hai maa ka naam 'Mum' matlab  
mother in English 'Ba' matlab mother in Gujarati aur 'Aai'  
matlab mother in Marathi yahi hai Mumbai yahi hai  
sapno ki maayangari hich aahe aamchi Mumbai, hich  
aahe aamchi Mumbai!



~ **Shravani Hawale**  
S. Y. BPharm

## SCIENTIFIC ARTICLES

# EBOLA VIRUS: A DEADLY OUTBREAKS AND BAFFLING STUDY

### Introduction:

The highly virulent Ebola virus has seen a few major outbreaks since it first appeared in 1976 -- with the worst epidemic occurring in 2014. How does the virus spread, and what exactly does it do to the body? In the summer of 1976, a mysterious epidemic struck two Central African towns, namely, *Nzara, Sudan (now South Sudan) and Yambuku, Zaire (now Democratic Republic Of Congo)*, killing the majority of its victims. Medical researchers suspected the deadly Marburg virus to be the culprit. But what they saw under a carefully observed microscopic image was a totally different pathogen, named after the nearby Ebola River.

### Pathophysiology

Like the Yellow fever and Dengue, Ebola virus starts attacking the immune system cells, neutralizing its responses and allowing the virus to proliferate. Initial symptoms appear within 2-20 days contraction resemble those of a typical flu mainly including aching, high temperature and sore throat. In short, defining a classic case of hemorrhagic fever. These symptoms quickly escalate to severe vomiting, diarrhea and rashes, ultimately spreading to cause failure in organ function, killing the patient. But the virus itself is not what's killing the victims. It's the rapid surge of cytokine storm resulting from dead immune cell overload. These cytokines rupture blood vessels and evince an explosion of complications like excessive fluid loss thereby being fatal within 6-16 days of initial symptoms. However, appropriate care and rehydration therapy can significantly reduce the mortality rates from 90% to 25% in patients.

Ebola is highly virulent virus and the virus family Filoviridae includes 3 genera: *Cuevavirus, Marburgvirus, and Ebolavirus*. Within the genus *Ebolavirus*, 6 species have been identified: *Zaire, Bundibugyo, Sudan, Tai Forest, Reston and Bombali*.

But its contagiousness has several limiting factors. Unlike viruses that spread through small airborne particles, Ebola only exists in bodily fluids such as saliva, blood, mucus, vomit or faeces. In order to spread, these must be infected and transmitted to another's body through passageways like nose, eyes and mouth. Because the virus contagiousness increases directly along with viral load, a person is unlikely to be infected until his first symptoms show.

Ebola then spreads through human-to-human transmission via direct contact (through broken skin or mucous membranes) with:

- Blood or body fluids of a person who is sick with or has died from Ebola; and
- Objects that have been contaminated with body fluids (like blood, faeces, vomit) from a person sick with Ebola or the body of a person who died from Ebola.

## SCIENTIFIC ARTICLES

### EBOLA VIRUS: A DEADLY OUTBREAKS AND BAFFLING STUDY

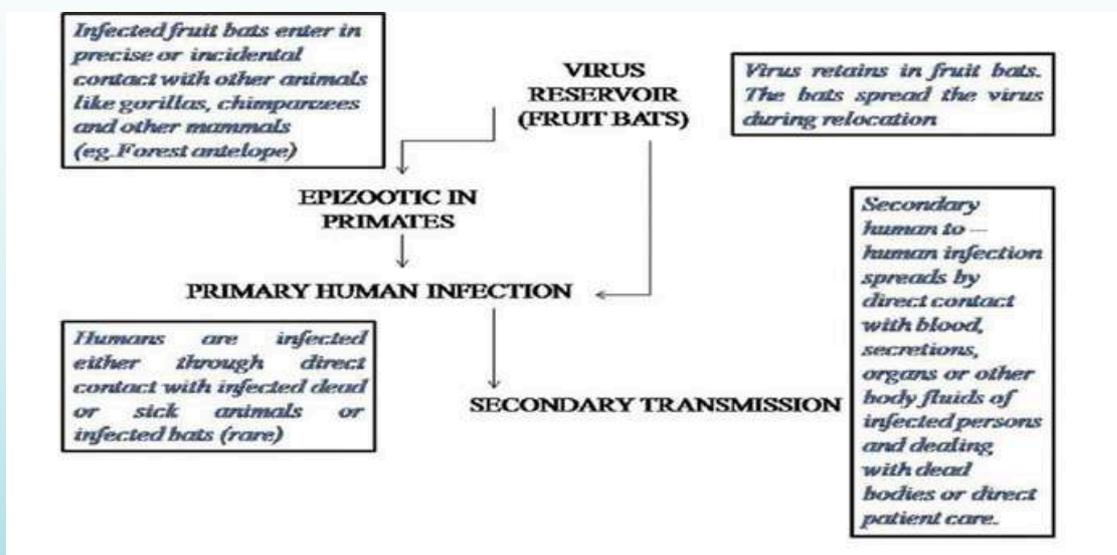
#### Symptoms:

After recovering from Ebola, some people may have symptoms for two years or longer. These symptoms can include:

- **F**eeling tired
- **H**eadache
- **M**uscle and joint pain
- **E**ye pain and vision problem
- Weight gain
- Belly pain and loss of appetite
- Hair loss and skin problems
- Trouble sleeping
- Memory loss
- Hearing loss
- Depression and anxiety.

#### Transmission:

Although Ebola stays longer on surfaces than expected, virtually majority of transmission occur via direct contact with the infected person, with severe risk posed to medical workers who come frequently in contact with Ebola patients. Burial ceremonies that involve direct contact with the body of the deceased can also contribute to the transmission of Ebola.



## SCIENTIFIC ARTICLES

### EBOLA VIRUS: A DEADLY OUTBREAKS AND BAFFLING STUDY

People remain infectious as long as their blood contains the virus. After recovery, there is the possibility of sexual transmission. Pregnant women who get acute Ebola and recover from the disease may still carry the virus in breastmilk, or in pregnancy related fluids and tissues.

This is why despite its severity, Ebola has been far less deadly than other more common infections such as Measles( annual deaths worldwide: 145700), Malaria( annual deaths worldwide: 660000) and Influenza( annual deaths worldwide: 250000). Ebola with annual deaths worldwide being 5459 as of November 2014 outbreak. Once an outbreak is contained, virus does not remain in human population until the next outbreak begins. While this sounds promising, it makes Ebola difficult to study. It is thought that fruit bats of the Pteropodidae family are natural Ebola virus hosts, while its actual source of transmission to humans remains unknown

Theoretically, Ebola is introduced into the human population through close contact with the blood, secretions, organs or other bodily fluids of infected animals such as fruit bats, chimpanzees, gorillas, monkeys, forest antelope or porcupines found ill or dead or in the rainforest.

Furthermore, many countries that suffer from this outbreak exist in conditions of poor sanitation and infrastructure which enables the disease of this virus to spread. The poverty of these regions combined with relatively low amount of cases, means there is little economic incentive for drug companies to invest in research.

#### Diagnosis:

It can be difficult to clinically distinguish Ebola virus disease from other infectious diseases such as malaria, typhoid fever and meningitis. Many symptoms of pregnancy and Ebola disease are also quite similar. Because of risks to the pregnancy and themselves, pregnant women should ideally be tested rapidly if Ebola is suspected.

Confirmation that symptoms are caused by Ebola virus infection are made using the following diagnostic methods:

- Antibody-capture enzyme-linked immunosorbent assay (ELISA)
- Antigen-capture detection tests
- Serum neutralization test
- Reverse transcriptase polymerase chain reaction (RT-PCR) assay
- Electron microscopy
- Virus isolation by cell culture.

## SCIENTIFIC ARTICLES

### EBOLA VIRUS: A DEADLY OUTBREAKS AND BAFFLING STUDY

#### Treatment & Precaution:

As of 2014, there was no clinically established treatment for Ebola. However recent developments show medical intervention and cure spontaneously.

Treatment includes oral or intravenous fluids and medicines provided in the hospital. There is an effective vaccine for the Zaire type of Ebola, which is mostly found in Guinea and the Democratic Republic of the Congo. It is treated with antibodies. These antibody medicines are given intravenously and increase the chances of survival.

Research is ongoing to find vaccines and treatments for other types of Ebola.

For all types of Ebola, supportive treatments save lives and include the following:

- oral or intravenous fluids
- blood transfusions
- medicines for other infections the person may have, such as malaria
- medicines for pain, nausea, vomiting and diarrhoea.

In the 2018–2020 Ebola outbreak in the Democratic Republic of the Congo, the first-ever multi-drug randomized control trial was conducted to evaluate the effectiveness and safety of drugs used in the treatment of Ebola patients.

Personal prevention and control techniques include:

- washing hands
- avoiding touching the body fluids of people who have, or may have, Ebola
- Not touching the bodies of people who have died from Ebola
- getting the Ebola vaccine if they are at risk for the Zaire type of Ebola.

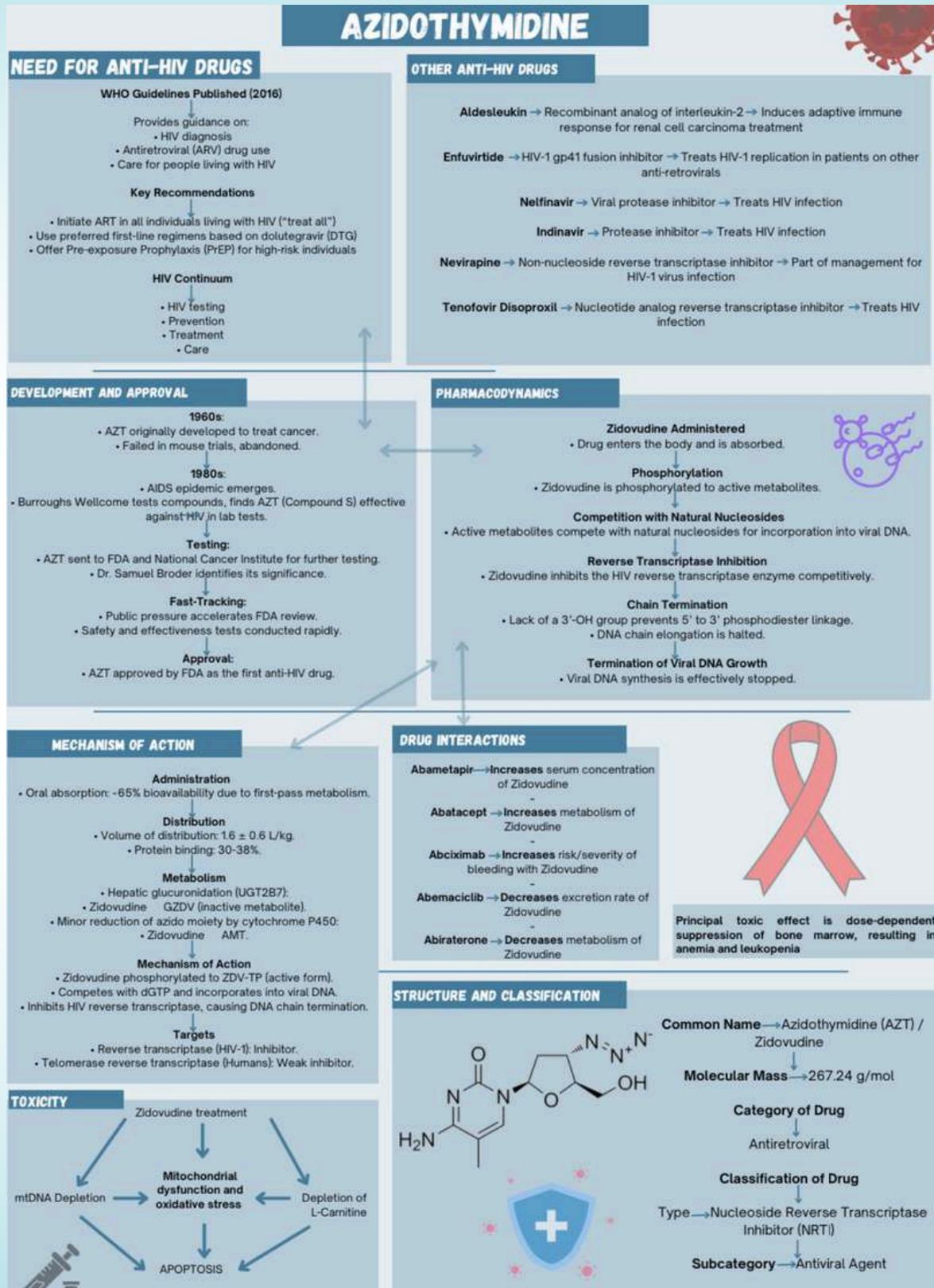
**WHO guidance:** When an outbreak is detected, WHO responds by supporting community engagement, disease detection, contact tracing, vaccination, case management, laboratory services, infection control, logistics, and training and assistance with safe and dignified burial practices.

EVD has emerged as a significant global public health menace due to multiple disease outbreaks in the last 25 years. Recent advancements are being carried out in the form of effective Ebola virus vaccine and anti-Ebola virus drugs. However, rapid geographic dissemination, nonspecific clinical presentation, lack of vaccine, and specific diagnostic test are the possible challenges to combat this dreaded public health menace.

-Aishwarya Kapur  
S.Y.BPharm

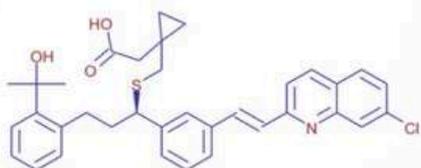
## SCIENTIFIC ARTICLES

# AZIDOTHYMIDINE : A WONDER DRUG



## SCIENTIFIC ARTICLES

# MONTELUKAST



## MONTELUKAST

Leukotriene Receptor Antagonist

Because Every Breath Should Be Effortless!!

### Contact

- +91-800-BREATHE
- everybreathmatters@montelukast.com
- 24, Clear Airways Avenue, Breathing Heights, Lung Valley, 54321

### Objective

To revolutionize respiratory care by offering seamless, once-daily relief from asthma, allergies, and exercise-induced bronchoconstriction—making every breath easier and every day more enjoyable for patients worldwide.

### Certifications

- FDA Approved (1998) for asthma, rhinitis, and EIB.
- EMA Approval: Endorsed by international health organizations

### ? Why Montelukast?

- Simplicity**  
One pill, one day, all-day relief
- Widespread Use**  
Trusted by millions of patients worldwide.
- Pediatric and Adult Use**  
Safe for children (6 months+) and adults.

### Education

- Bachelor of Art of Breathing**  
*University of Respiratory Sciences* 1998  
Smart molecule that targets leukotriene receptors to block inflammation and keep airways clear.
- Mastering the Art of Breathing**  
*Global Pharmaceutical Institute* 2000  
Rigorous studies proving effectiveness and safety in a variety of patient groups.

### Experience

- Breathe Freely**  
Proven to reduce asthma attacks and improve lung function, bringing back the joy of easy breathing.
- Allergy Warrior**  
Offering relief from both seasonal and perennial allergic rhinitis, letting patients breathe easy and live freely.
- EIB Champion**  
Shielding athletes and active individuals from exercise-induced bronchoconstriction, so they can move without limits.
- A Global Reach**  
Trusted in over 100 countries to deliver consistent, life-enhancing results.

### Core Strengths

- Asthma Relief**  
Banishing the struggle for breath by reducing inflammation and airway constriction.
- Allergy Freedom**  
Clearing up congestion, sneezing, and itching with precision and ease.
- Exercise Protection**  
Preventing exercise-induced breathing issues, allowing for peak performance in any activity.
- Universal Support**  
Trusted by both children (6 months+) and adults alike for safe, reliable relief.
- Side Effect-Free**  
Gentle on the body with a reputation for minimal adverse effects.
- Around-the-Clock Relief**  
24-hour action ensures lasting comfort with a single dose.

~ Komal Gawade  
S. Y. Mpharm

## NON-SCIENTIFIC ARTICLES

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### CHILD LABOUR REPORT

#### Introduction

Child labour can be defined as work done by children or adolescents that deprives them from schooling, childhood, their dignity and potential. The labour that is harmful to physical and mental wellbeing that reinforces integration cycles of poverty. Not all work can be considered as child labour some works such as working part time during free time helping financially to the family or working in family business is something of positive to them, such activities helps them build social awareness, development and family well being. Child labour is characterised as employment performed by minors or young adults that robs them of their education, youth, dignity, and potential. the labour that perpetuates poverty cycles by being detrimental to one's bodily and emotional health. However, Not all jobs can be classified as child labour; some jobs, such working part-time during free times to support the family financially or running a family business, are beneficial to the children and help them develop their social awareness as well as their family's well-being. The ILO (International Labour Organisation) and UNICEF data on child labour globally are shown below.

#### Understanding The Problem

##### Origin

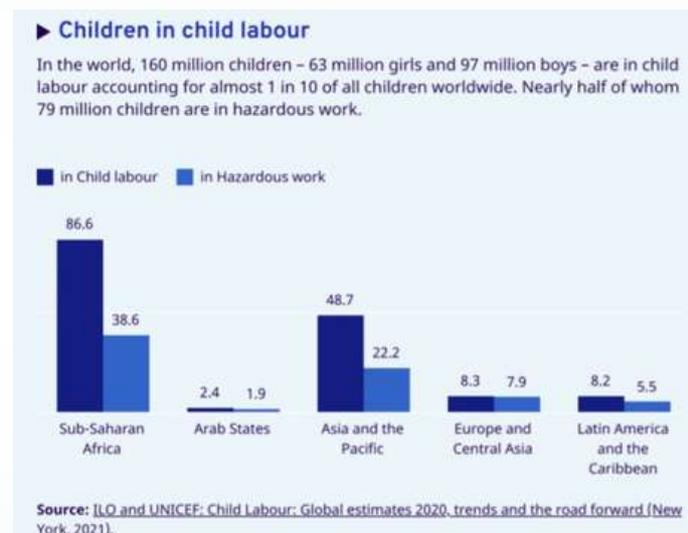
##### Pre-industrial era

In the pre-industrial era there was no such thing as childhood, from the age of 13 the children are considered as adults. They were involved in child rearing, hunting, farming as soon as they get capable. The work of children was important in pre-industrial societies, as children needed to provide their labour for their survival and that of their group. Pre-industrial societies were characterised by low productivity and short life expectancy; preventing children from participating in productive work would be more harmful to their welfare and that of their group in the long run.

Childhood wasn't present in the pre-industrial era; children are regarded as adults as of the age of 13. As soon as they were able, they began farming, hunting, and raising children. Children's labour was vital in pre-industrial societies since it was necessary for their own existence as well as the survival of their community. Pre-industrial societies were marked by poor productivity and short life expectancies; in the long run, it would be more detrimental to children's wellbeing and the welfare of their group to prohibit them from engaging in productive activity.

##### Industrial era

Child labour was exploited throughout the Industrial Revolution in 18th-century Britain due to the country's fast industrial growth and urbanisation. In industries and mines, kids as young as four years old were employed in hazardous environments. Some sold items or performed errands for others. Many families that were struggling financially turned to child labour as a source of revenue. A large percentage of the impoverished in 19th-century Great Britain did not have a breadwinner, forcing their children into the workforce. At the age of twelve, even well-known author Charles Dickens worked as a youngster. This sobering fact led to attempts at social reform, better working conditions, and the implementation of anti-child labour legislation.



## NON-SCIENTIFIC ARTICLES

### CHILD LABOUR REPORT

In india

India accounted for the largest number of minors working illegally in 2015, mostly in agriculture as a result of unemployment and familial poverty. Historical occurrences such as the British East India Company's dominance following the Battle of Plassey in 1757 are the origins of child labour in India. Children were exploited as a result of the need for cheap labour in wealthy areas, a practice that was later continued by global corporations looking for subpar employees. Indian children were particularly susceptible since they were unaware of their basic rights and were therefore exploited for financial gain in order to support their families.

#### Current Solution

1) The National Child Labor Project (NCLP) Scheme was launched in 9 districts of high child labor endemicity in the country in 1988. Under the scheme, funds are given to the District Collectors for running special schools for child labor. It is still in action. This initiative had improved the ratio of kids in school to drop out and helped them to get education.

2) Child Labour Prohibition and Regulation Act (CLPR, 1986): The CLPR Act prohibits employment of a Child in any employment including as a domestic help (except helping own family in non-hazardous occupations). It is a cognizable criminal offense to employ a Child for any work. Children under 14 years old cannot be employed in any capacity. To safeguard all children, certain occupations deemed hazardous are entirely off-limits. For teenagers (14-18 years), non-hazardous work is permitted, but under strict limitations: short daily hours, capped weekly schedules, and a complete ban on night work and overtime. Still this law is not that effective in informal sectors.

#### Consequence of the laws and initiatives

1) Awareness – Due to lack of awareness and education of parents has become a major reason for child labor. Because of illiterate parents, children are considered to be a source of quick income and avoid the importance of education. Therefore spreading awareness is necessary to ensure communities tap growth, education, and employ

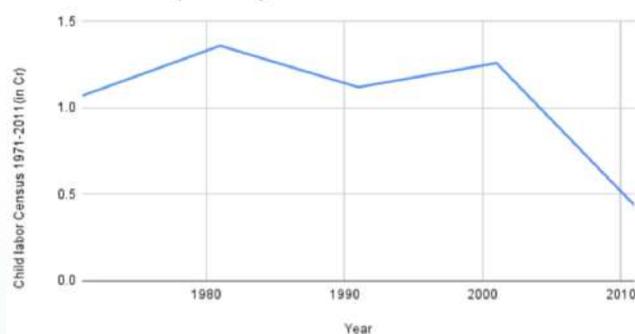
2) Education for Children- most of the Children are early school leavers and not learning at school .To support their Families in income they are forced to work long hours due to which attending school is limited. Now, ensuring the out-of-school children and those who are at a risk of dropping out are mapped and gain to mainstream education. these can be achieved by creating a child-friendly learning environment, an interactive teaching-learning process process at school, and special education support for the slow learner.

3) Review and revision of law for effective implementation- To ensure the legal framework remains effective and relevant, periodic views of child labor laws are needed to adapt to new challenges and changing social and economic landscapes

4)International collaboration-To combat child labor especially when cross-border challenges are prominent, in that cases, strengthening partnerships with international organizations and neighboring nations to exchange best practices, intelligence and resources will have a huge impact.

5)Advocacy for policy change- Advocacy efforts will bring attention to the issue and encourage businesses to adopt responsible practices by aligning with and supporting policies that prohibit child labor. This will create a protective environment that actively works against the exploitation of children in the workshop.

Child labor as reported by census 1971-2011 vs. Year

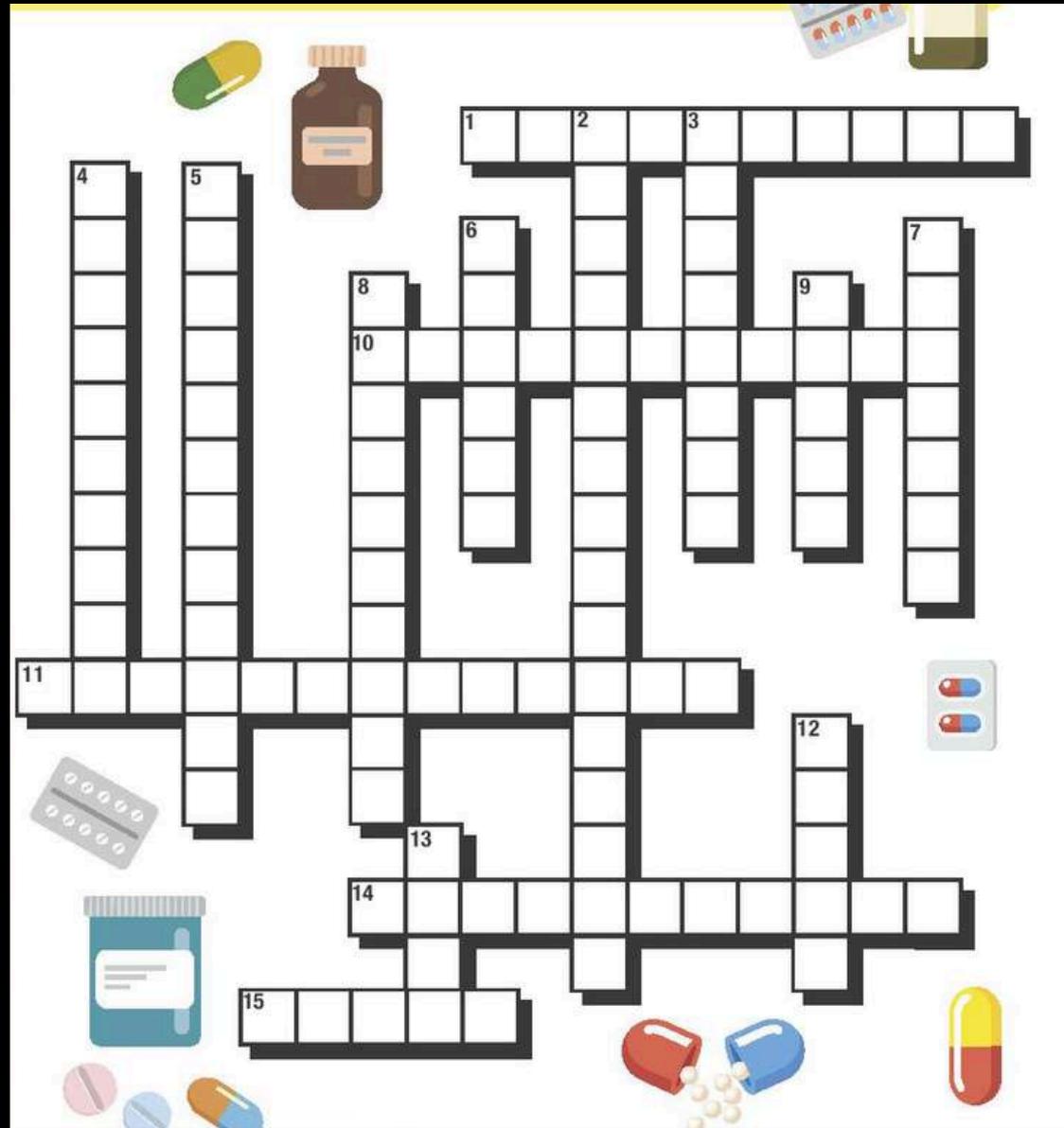


~ **Nikhil Mane**  
L.Y.BPharm

# PHARMACROSSWORD

## DOWN

2. Hypersensitive response of the immune system
3. Government insurance program for older Americans
4. Mixture that must be shaken before use
5. Doctor's instructions for dispensing medication
6. Prescriptions should be kept in their original \_\_\_\_\_
7. A similar medicine that replaces a brand name drug
8. Room where drugs are prepared and dispensed
9. Government law involving patient privacy
12. Class of drugs like ibuprofen or aspirin
13. Amount of medication taken

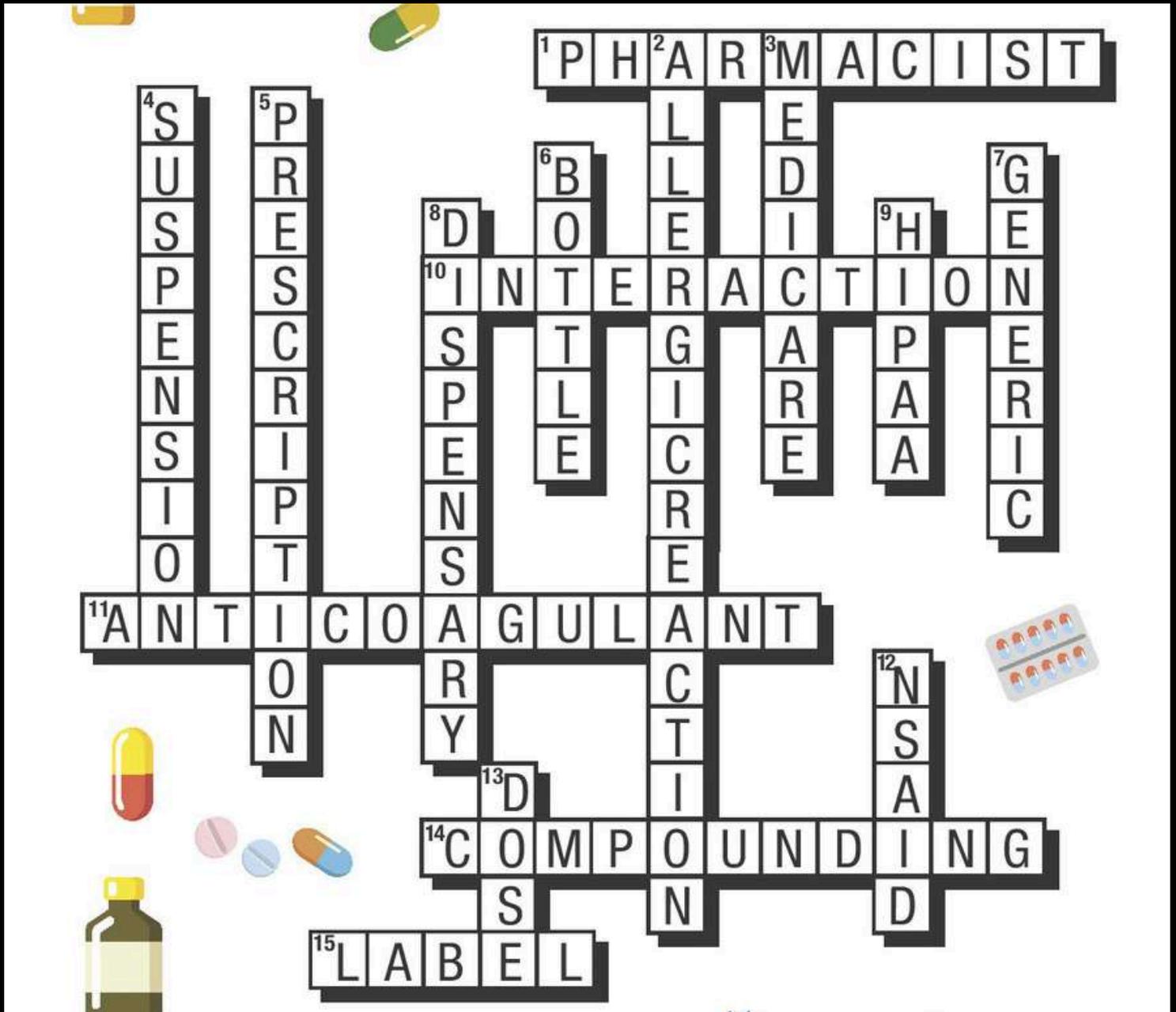


## ACROSS

1. Professional in charge who dispenses medicine
10. Situation when a substance affects a drug's activity
11. Type of drug used to treat blood clots
14. Combining multiple drugs for personalized treatment
15. Where the patient name and instructions are printed

# PHARMACROSSWORD

## ANSWERS





# MEME Page



**Ribosome as soon as it encounters UAG, UGA UAA**



people who take drugs



people who study drugs



Me watching over a titration ...



I'm watching U



I'm watching U

Chemistry daily dose

Just winked my eye



Pharmacy



"Side effects may include hairy lungs, heart giggles, plaid eyeballs, euphoric knees, navel coughing, nostalgia about the future and loss of desire to yodel."



Me studying for a new pharmacy exam

Again? Seriously?



ADME RAAS Fick's law Action potential



YOU DON'T KNOW WHAT YOU'RE DOING, THIS IS THE WRONG MEDICINE



OK WHAT MEDICINE ARE YOU SUPPOSED TO GET?



WELL, I DON'T KNOW THE NAME OF IT



Before recrystallization

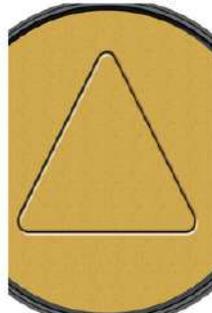


During recrystallization



After Recrystallization

Pharmacology:



Reading from KD Tripathi



During exam



# Student's Bucket List

2025

Once in a while bunk the college and go for a movie, revisit the Sanjay Gandhi National park, Amusement park, Go-Karting, and if possible bungee jumping maybe this year or next year.

To be part of as many Extra curricular activities as possible while doing well in academics, To enhance overall personality development.

Winning the finals of football competition as a captain.

To always learn new sporty games.

To win the best college trophy in Rx.

Participating in a solo event.

To go somewhere with my close friends And To explore Kalina (because i seriously didnt go anywhere near university also 😊).

Winning the TT competition for TYBPharm and carry on the tradition.

**Tables to sit in practicals**

To fully immerse in the college experience may it be academically, athletically or culturally

To graduate with flying colors and find happiness in smaller things and live with gratitude.

To make FY the best class of 2025.

**Avoiding ATKT**

To see BCP finally renovate their auditorium this year.

To go Bungee jumping.

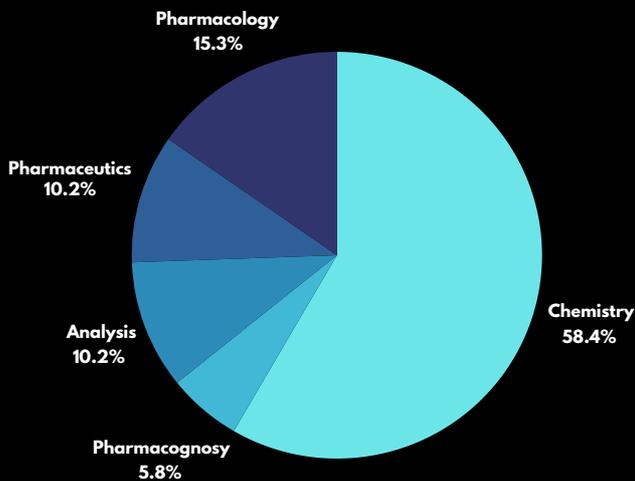
Get decent cgpa. Be more focused and learn a new skill.

**To be a CR.**

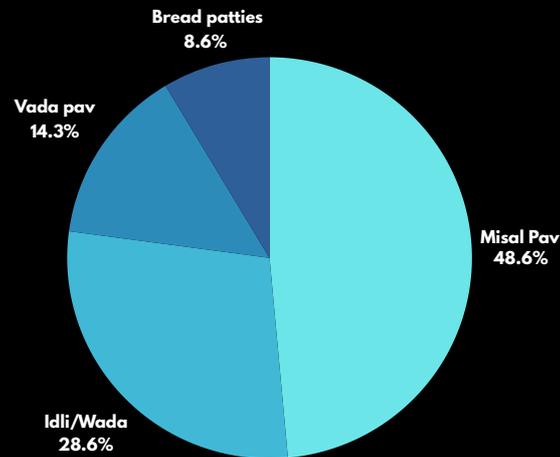
Build a turff behind the college.

# THE BCP POLL

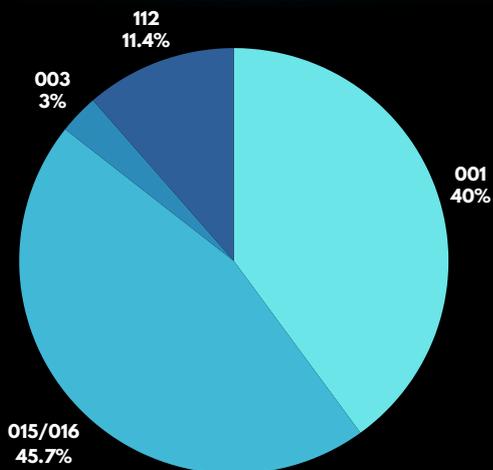
## Favourite lab to work in?



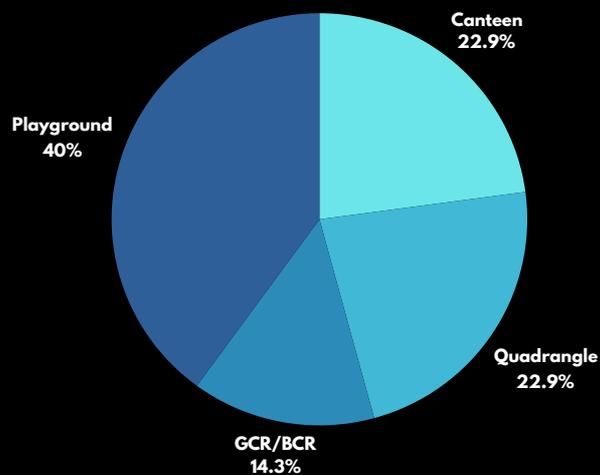
## Favourite canteen snack?



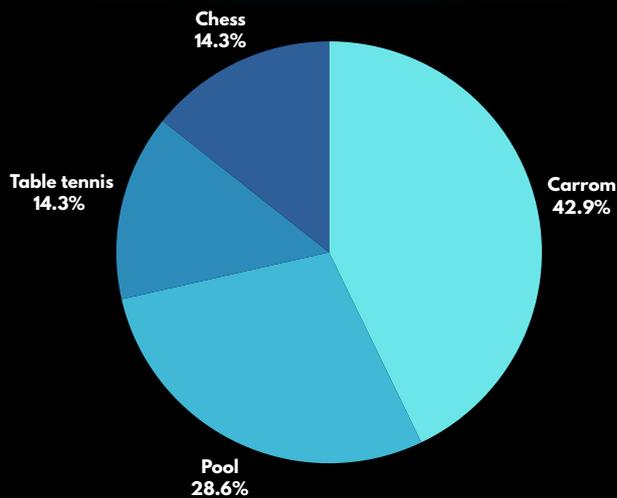
## Favourite classroom?



## Favourite place to hangout?

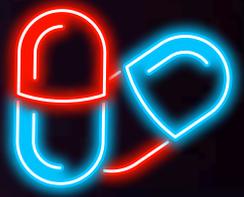


## Favourite sport in college?





# PHARMA-FACTS



1

The first pharmaceutical patent was granted in 1727 in England for the formula of “Godfrey’s Cordial”, a remedy for infants.

The world’s oldest continuously operating pharmacy is located in the Italian city of Padua and dates back to 1211.

2

3

Opium, one of the earliest known drugs, was used in ancient civilisation for pain relief and as an anesthetic.

Only about 1 in 5,000 compounds tested in the lab make it to human use after years of testing and clinical trials.

4

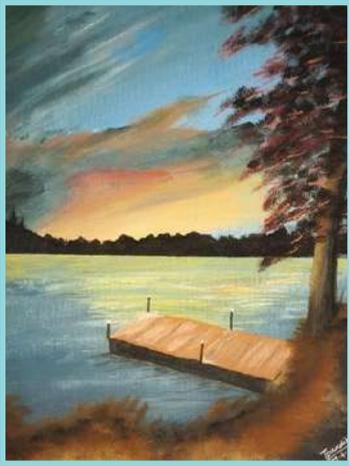
5

The first modern pill was created in 1843 by a French chemist named M. L. De la Sablonnière.

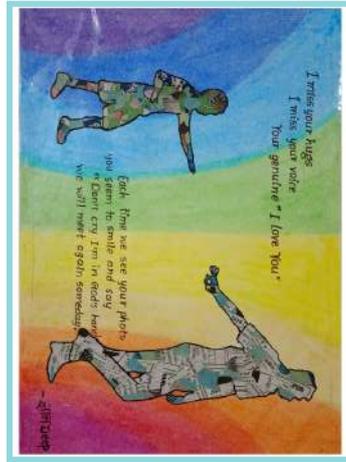
Paul Ehrlich's concept of a "magic bullet" led to the development of targeted therapies, such as antibiotics and chemotherapy.

6

## ARTWORK



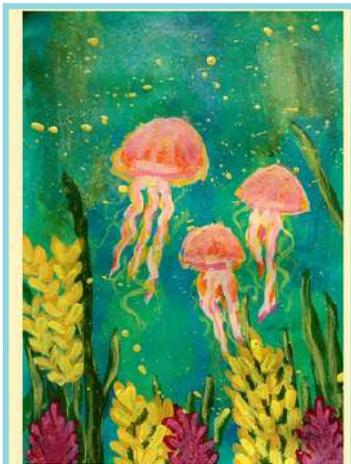
Triisha Pandit  
S.Y.B Pharm



Deep Deshmukh  
F.Y.B.pharm



Shravani Hawale  
S.Y.B.Pharm



Samreen Shaikh  
F.Y.B.Pharm



Reva Girnar  
F.Y.B Pharm



Aditya Meshram  
T.Y.B Pharm



Harshith Shetty  
S.Y.B.Pharm

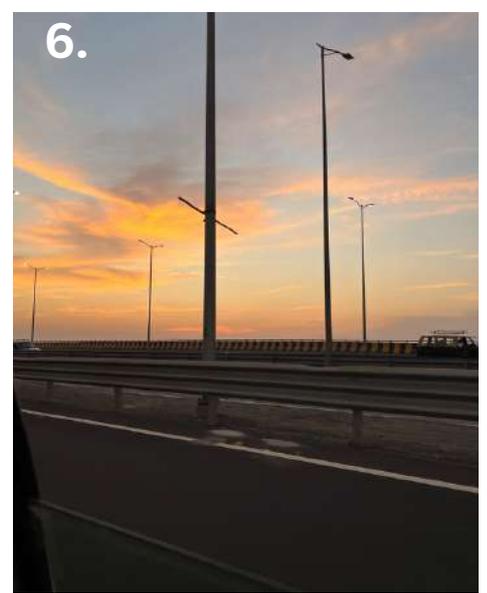
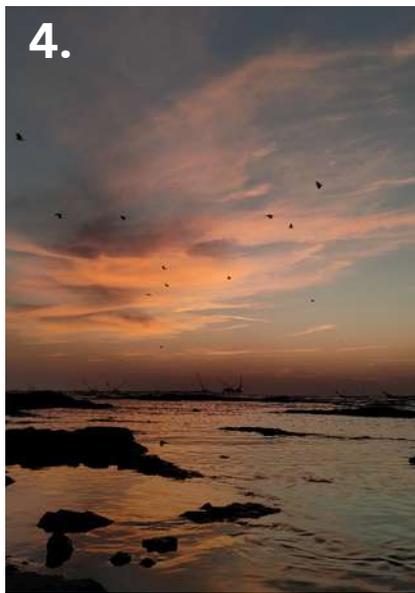


Shraddha Suryawanshi  
L.Y.B.Pharm



Kreeti Maurya  
S.Y.B.Pharm

## PHOTOGRAPHY TALENT WORKS OF BCP



1.Aishwarya Kapur (S. Y. B. Pharm)  
2.Mrugank Kulkarni (T. Y. B. Pharm)  
3.Kaustubh Thakur (S. Y. B. Pharm)

4. Kreeti Maurya (S. Y. B. Pharm)  
5.Bhumika Mhapankar (SY. B. Pharm)  
6.Shruti Jadhao (S. Y. B. Pharm)

7.Bhavesh Raut (S.Y. B. Pharm)  
8.Shraddha Suryavanshi (L.Y. B. Pharm)  
9.Premkumar Makwana(S.Y. B. Pharm)

## **BCP COMMITTEES AND STUDENT CHAPTERS**



**IPA MSB'S  
BCP  
STUDENT  
COUNCIL**

**BCP  
IPA  
MSB  
SF**



**BCP  
CSR  
COMMITTEE**

## **BCP COMMITTEES AND STUDENT CHAPTERS**



**BCP  
AAPS  
STUDENT  
CHAPTER**

**BCP ACS  
STUDENTS  
CHAPTER**



**BCP  
ISPOR  
STUDENTS  
CHAPTER**

## **BCP COMMITTEES AND STUDENT CHAPTERS**

### **IPA PHARMA TIMES**



### **BCP SOCIAL MEDIA CELL**

### **IPA MSB'S EBSB COMMITTEE**



## **BCP COMMITTEES AND STUDENT CHAPTERS**



### **BCP MUSIC CLUB**



### **BCP MVM COMMITTEE**



Dr. Premlata Ambre



Mr. Prashant Chaturvedi



Dr. Shubhangi Aher



Mrs. Anitha Lalwani



Mohd Shahid Altaf



Piyush Suryavanshi



Shagun Sharma



Prathamesh Kudtarkar

### **BCP TRAINING AND PLACEMENT CELL**

## CLASS PHOTOGRAPHS



**F.Y.B.PHARM**



**S.Y.B.PHARM**



**T.Y.B.PHARM**

**L.Y.B.PHARM**



## CLASS PHOTOGRAPHS

**F.Y.M.PHARM**



**S.Y.M.PHARM**

**PHD**



## STAFF

### TEACHING STAFF



### NON TEACHING STAFF



## STAFF

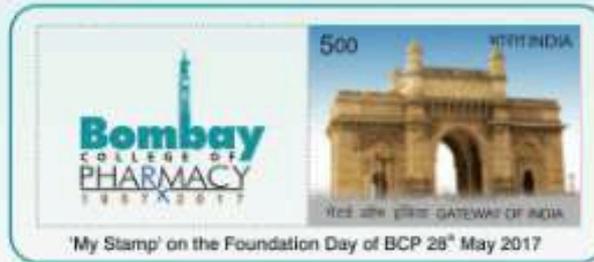
# SECURITY STAFF



# HOUSE KEEPING STAFF



## Ventures of The IPA-MSB



**BCP**  
Dr. Krishna Iyer, I/C Principal

**AMRF**  
Amrut Mody Research Fund

**RSBCP**  
The Research Society of  
Bombay College of Pharmacy

 Dr. M.K. Rangnekar Memorial Testing Laboratory <hr/> Manjusha Pimplodkar, Sr. Manager	 Academy for Clinical Excellence <hr/> Sr. Manager
---	---

**BCP-AA (2023 - 2026)**  
The Bombay College of Pharmacy-Alumni Association

Dr. Amita Karnik, President	Forum Gandhi, Secretary
Dr. Agnivesh Shrivastava, Jt. Secretary	Ashish Babiwale, Treasurer

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Dr. N. Sivaprasad, President	Dr. Hemant Mondkar, Immediate Past President
Dr. Anand Shedge, Vice-President	Satish Shah, Vice-President
Nitin N. Maniar, Hon. Secretary	K. G. Gadewar, Hon. Joint Secretary
Santosh Ghodinde, Hon. Treasurer	

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Sureshkumar Choudhary	Sahebrao Salunkhe	Umesh Tiwari
Vidya Sawakhande	Vijaykumar Ghadge	Dr. Zarine Khety

**Co-opted Members**

Gurudatta P. Tirodkar	Dr. (Ms) Saraswathy Padmanabhan	Ashish Babiwale
-----------------------	---------------------------------	-----------------

**Invitee**

Dr. Vijay Bambulkar	M.G. Kekatpure	Prof. P. R. Vavia
Ram Banarase	Satish Rajkondawar	

**Divisional Chapter Chairpersons**

Anita Bhisikar (Community Pharmacy)	Dr. John Disouza (Education)
Sheetal Chandan (Hospital Pharmacy)	Sandip Shah (Industrial Pharmacy)
Girish Hukare (Regulatory Affairs)	

