



*GURUNANAK COLLEGE OF PHARMACY*  
*NAGPUR*

# *INDOCTRINATE*



**IQAC**

**NEWSLETTER - 18**

**16 December 2018**

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## **EDITORIAL BOARD**

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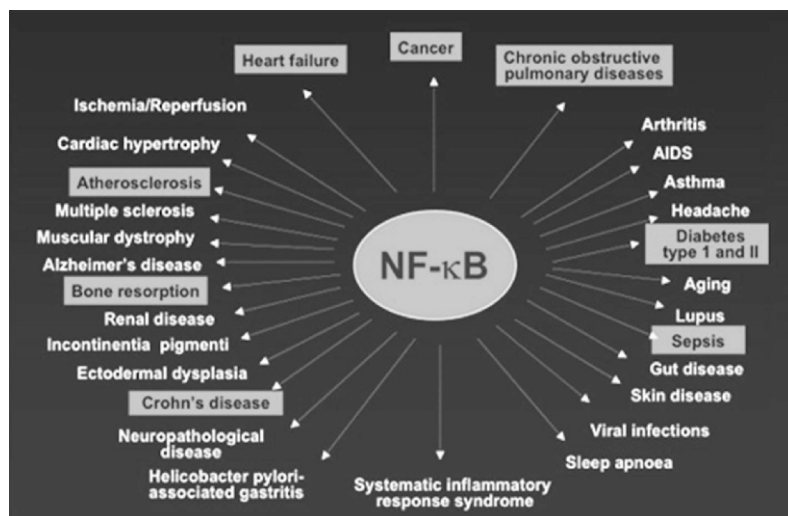
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## Targeting NF- $\kappa$ B as an innovative strategy to overcome disease associated with dysregulated inflammation

*Dr. Sumit Arora  
Assistant Professor*

Nuclear transcription factor (NF $\kappa$ B), discovered by David Baltimore in 1986, is a ubiquitous factor that resides in the cytoplasm but, when activated, is translocated to the nucleus, where it induces gene transcription. NF $\kappa$ B is activated by free radicals, inflammatory stimuli, carcinogens, tumor promoters, endotoxin, gamma radiation, ultraviolet (UV) light and X-rays. On activation, NF $\kappa$ B induces the expression of more than 200 genes that have been shown to suppress apoptosis, induce cellular transformation, proliferation, invasion, metastasis, chemoresistance, radioresistance and inflammation.

The activated form of NF $\kappa$ B has been found to mediate cancer, atherosclerosis, myocardial infarction, diabetes, allergy, asthma, arthritis, crohn's disease, multiple sclerosis, Alzheimer's, osteoporosis, psoriasis, septic shock, AIDS and other inflammatory diseases. NF $\kappa$ B has been linked to this wide variety of diseases is not too surprising because most diseases are caused by dysregulated inflammation.



The transcription factor NF $\kappa$ B has attracted widespread attention among researchers in many fields based on the following:

- ✓ Its unusual and rapid regulation
- ✓ The wide range of genes that it controls
- ✓ Its central role in immunological processes
- ✓ The complexity of its subunits and
- ✓ Its apparent involvement in several diseases.

A primary level of control for NF $\kappa$ B is through interactions with an inhibitor protein called I $\kappa$ B. Recent evidence confirms the existence of multiple forms of I kappa B that appear to regulate NF $\kappa$ B by distinct mechanisms. NF $\kappa$ B can be activated by exposure of cells to LPS or inflammatory cytokines such as TNF or IL-1, viral infection or expression of certain viral gene products, UV irradiation, B or T cell activation, and by other physiological and nonphysiological stimuli. Activation of NF $\kappa$ B to move into the nucleus is controlled by the targeted phosphorylation and subsequent degradation of I $\kappa$ B. Exciting new research has elaborated several important and unexpected findings that explain mechanisms involved in the activation of NF $\kappa$ B. In the nucleus, NF $\kappa$ B dimers bind to target DNA elements and activate transcription of genes encoding proteins involved with immune or inflammation responses and with cell growth control.

Natural products and traditional medicines are rich source of leads for pharmaceutical industry. The compounds derived from medicinal extracts are often stereochemically complex, multi- or macrocyclic molecules and tend to have interesting biological properties. Despite these advantages, the path from traditional medicines/natural products to western pharmaceuticals poses with challenges along the key steps of development such as western discovery, isolation or synthesis of active component, elucidation of molecular mechanism, and pharmaceutical development.

Moreover, the future perspective of NF- $\kappa$ B targeting as an innovative strategy to overcome the various diseases.

**Dr. Subhash Yende**



**Dr. Subhash R. Yende** was awarded PhD in Pharmaceutical Sciences by Jawaharlal Nehru Technological University, Hyderabad. He has completed his research work under the guidance of Dr. Uday N. Harle, Clinical Research Consultant, Mumbai on the topic “Neuropsychopharmacological Evaluation of Some Marine Macroalgae in Laboratory Animals.”

**Dr. Govind Lohiya**



**Dr. Govind K. Lohiya** awarded PhD in Pharmaceutical Sciences by Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur. He has completed his research under the guidance of Dr. Mrs. J. G. Avari, HOD & Professor, Dept. of Pharmaceutical sciences, RTM Nagpur University, Nagpur on the topic “Targeted Delivery of Probiotics: Studies on Processing Parameters towards Viability and Stability.”

**ACCOLADES**

- Science and Engineering Research Board (SERB), a statutory body under the Department of Science and Technology, Govt. of India, sanctioned 48 lakhs for the project under the category Industry Relevant Research and Development (IRRD) titled “To develop and establish medicine printing technology for printing of medicines on Oral Thin Films” submitted by **Dr. Nidhi Sapkal** as a Principal Investigator and **Dr. Vaishali Kilor** as a Co-Principal Investigator on 03/12/2018.
- **Ms. Priya Dule**, Ph.D scholar of GNCP has been awarded 2<sup>nd</sup> Prize in poster competition at Young Scientist Conference, under the theme 'Swastha Bharat', during **India International Science Festival 2018**, held at Lucknow on 5-8 Oct, 2018.
- **Mr. Rajat Pahwa**, M. Pharm II (Pharmaceutics) has been awarded with Consolation prize for his poster on '**Chewable Lozenges Formulation For Alertness During Driving**'; at National Conference on Integrative Approach Towards Ayurved Practice held on 29 - 30 Sep, 2018

**Independence Day Celebration**



GNCP celebrated 72<sup>nd</sup> Independence Day on 15<sup>th</sup> Aug, 2018 with zeal. The national flag hoisting was carried out by Sardar Gurbux Singh Lamba, President of the Sikh Education Society. S. Sarabjeet Singh Kalsi General Secretary and CEO of the Sikh Education Society and other eminent members of The Sikh Education Society were also present on this event.

On this occasion felicitation of Dr. S. R. Yende, Asst. Professor, GNCP, for Nagpur being awarded with Ph. D. and other academic achievers of session 2017-18 was done at the hands of dignitaries. Release of GNCP's first research Booklet and 17<sup>th</sup> issue of newsletter 'Indoctrinate' was also done in the same. The function was followed by cultural programme and refreshment for staff and students.

**SPORTS NEWS**

- Students of GNCP had enthusiastically participated in Intercollegiate various sport activities viz. Football, Table Tennis, Swimming (men), Kho Kho and Chess organized by Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur during session 2018-19.
- GNCP students also participated in Intercollegiate Dr. Panjabrao Deshmukh Krida Mahostav organized by Dhanwate national college, Nagpur dated 18<sup>th</sup> to 20<sup>th</sup> Sep. 2018.

<b>ACADEMIC ACHIEVEMENTS</b> <b>RTM Nagpur University Results 2017-18</b> <b>M. Pharm Result:</b>			<b>PLACEMENT ACTIVITY</b> Following students of B. Pharm and M. Pharm final year 2017-18 are placed in Pharma industry, Academics and Marketing.	
Branch	% Result	Topper (% Score)	No. of Students	Department and Organization placed
<b>M. Pharm - IV Sem.</b>			<b>B. Pharm</b>	
Pharmaceutics	100.0	Ms. Kalyani Khune (78.4) Ms. Deepa Singh (76.6)		
Quality assurance	100.0	Ms. Amandeepkaur Dhillon (80.0) Ms. Kalyani Thombre (81.6)	2	Production, Mylan Laboratories Ltd., Aurangabad
P. Chemistry	100.0	Ms. Payal Shahu (79.2) Ms. Nidhi Jaiswal (75.8)	3	Production, Zim Laboratories Ltd., Nagpur
<b>M. Pharm - III Sem.</b>			1	Pharmacovigilance, TCS Ltd., Mumbai
Pharmaceutics	78.57	Ms. Harshita Jain (74.0) Ms. Kalyani Khune (73.5)	3	Marketing, Sun Pharmaceuticals, Mumbai
Quality assurance	100.0	Ms. Amandeepkaur Dhillon (74.0) Ms. Kalyani Thombre (68.5)	2	Marketing, Lupin Pharma, Mumbai
P. Chemistry	100.0	Ms. Payal Shahu (70.0) Ms. Trupti Waghmare (65.0)	1	Marketing, Tablets India Ltd., Mumbai
<b>M. Pharm - II Sem.</b>			1	Marketing, Gebbs Health Care Solutions, Navi Mumbai
Pharmaceutics	93.30	Ms. Shraddha Shahu (74.92) Ms. Shalakra Sahare (68.15)	2	Marketing, Centercon Pharma Ltd, Mumbai
Quality assurance	100.0	Ms. Rakhi Sarpate (73.07) Mr. Swapnil Dudhkhokar (73.07) Ms. Mansi Kanchanwar (71.38)	2	Hospital Pharmacist at Maya Hospital Ltd and Triveni Hospital, Nagpur
P. Chemistry	100.0	Mr. Mujahid Ansari (69.23) Mr. Swapnil Deshmukh (62.76)	7	Reregistered Pharmacists at various establishments
<b>M. Pharm - I Sem.</b>			<b>M. Pharm</b>	
Pharmaceutics	84.61	Ms. Shraddha Shahu (77.23) Ms. Shubhangi Mohije (69.84)	3	Production, Alembic Pharma Ltd, Vadodara
Quality assurance	100.0	Ms. Rakhi Sarpate (73.53) Mr. Swapnil Dudhkhokar (70.46)	1	Formulation & Development, Oniosome Health Care Pvt Ltd., Mohali
P. Chemistry	33.33	Mr. Mujahid Ansari (64.3)	2	Analytical R & D, Hetero Pharma Ltd., Hyderabad
<b>B. Pharm Result :</b>			1	Pharmacovigilance, TCS Ltd., Mumbai
Year	% Result	Topper (% Score)	1	Pharmacovigilance, Cognizant Ltd., Mumbai
B. Pharm. VIII Sem	84.5	Ms. Farheen Bano (75.54) Mr. Pranav Kulkarni (71.81)	1	Quality Assurance, Dipti Pharma Ltd., Nagpur
B. Pharm. VII Sem	86.11	Ms. Farheen Bano (74.0) Mr. Pranav Kulkarni (70.0)	1	Marketing, Aurobindo Pharma Ltd., Hyderabad
B. Pharm. VI Sem	93.0	Ms. Esha Jain (75.81) Ms. Durga Bansod (74.0)	1	Quality Assurance, Innova Pharma Ltd., Nagpur
B. Pharm. V Sem	80.7	Mr. Hasan Hussain (74.0) Ms. Esha Jain (73.0)	1	Asst. Professor, Modi University, Jaipur
B. Pharm. IV Sem	65.15	Ms. Mavia Hussain (77.63) Ms. Shivani Darbhe (73.72)	<b>Alumni Interaction with Abhishek Sharma</b> An interaction of B. Pharm final year students with Mr. Abhishek Sharma, GNCP alumnus (B. Pharm, 2014-18) was organized on 4 <sup>th</sup> Aug, 2018. He is currently a student of M. Pharm (Pharmaceutical Chemistry), at Institute of Chemical Technology, Mumbai. He also won four gold medals and one prize from RTM Nagpur University, Nagpur. In this interaction he guided students for GPAT preparation and clarified queries raised by the students. Mrs B. A. Jacob made this event successful.	
B. Pharm. III Sem	71.21	Ms. Mavia Hussain (75.81) Ms. Shifa Shiekh (72.90)		
B. Pharm. II Sem	62.5	Ms. Vidhi Dugar (76.68) Mr. Kapil Dholwani (75.58)		
B. Pharm. I Sem	60.7	Ms. Vidhi Dugar (74.07) Ms. Adiba Khan (72.41)		

# EVENTS

## 'IPCS Championship 2018' Vidarbha Level Inter Pharmacy Collegiate Sport Tournament

“IPCS Championship 2018” Vidharbha level Inter pharmacy collegiate sport tournament was organized by Gurunanak college of Pharmacy with Me2We foundation, Nagpur on 2<sup>nd</sup> October 2018. Whooping 104 participants took part in various sport events like Badminton, Carrom, Chess and Table Tennis. Mr. Arvind Agrawal, Dr. P. M. Ballal, Mr. Amalendu Datta, Dr. Vinita Kale from Me2We Foundation and Mr. G. A. Gurunani and Mr. V. B. Pande from Gurunanak College of Pharmacy took efforts for the event in coordination with the staff members of GNCP



Winners of the tournament are as follows:

Name of Event		Name of Student	Name of College
Table Tennis (Mens Singles)	Winner	Harish Kawade	UDPS, Nagpur
	Runner	Abhay Bhosle	UDPS, Nagpur
Table Tennis (Womens Singles)	Winner	Pranita Kale	GNCP, Nagpur
	Runner	Shradha Shahu	GNCP, Nagpur
Badminton (Mens Singles)	Winner	Manmay Makkad	GNCP, Nagpur
	Runner	Akash Vaishnav	GNCP, Nagpur
Badminton (Mens Doubles)	Winner	Manmay Makkad & Swapnil Deshmukh	GNCP, Nagpur
	Runner	Akash Vaishnav & Akshay Loya	GNCP, Nagpur
Badminton (Womens Singles)	Winner	Pratiksha Bramhe	GNCP, Nagpur
	Runner	Chetna Shelote	GNCP, Nagpur
Carom Singles (Men)	Winner	Sushil Shelke	UDPS, Nagpur
	Runner	Dhanraj Dhawade	SSCOP, Koradi
Carom Doubles	Winner	Sushil Shelke & Dinesh Masram	UDPS, Nagpur
	Runner	Yashwant Nadekar & Shubham Arsod	SSCOP, Koradi
Chess	Winner	Sushil Shelke	UDPS, Nagpur
	Runner	Tasneem Ashraf	KRPCOP, Nagpur

## Campus Placement Interview by Genetek Life Sciences Ltd.



The campus placement interview was organized by Training and placement cell and Alumni Institution Interaction Committee, Gurunanak College of Pharmacy in association with Genetek Life Sciences, Wardha.

The interview was conducted by Mr. Rahul Dugane, Production manager, Genetek Life Sciences, Wardha (GNCP Alumnus, B. Pharm 2008-12) for production and quality control departments. Total 10 students appeared for the campus interview and were shortlisted for further recruitment. Dr. S. B. Waikar took efforts to make the event successful.

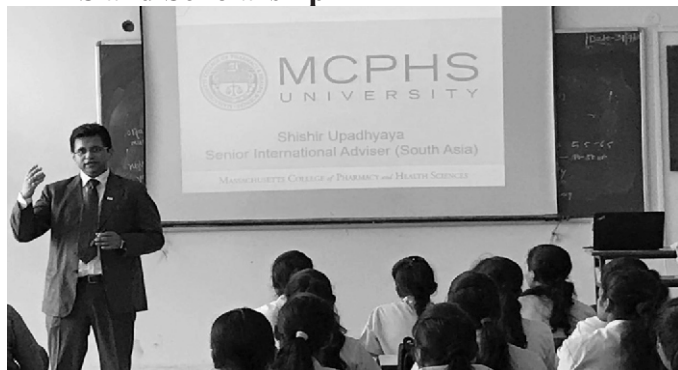
### Seminar on Pharmaceutical Validation and GMP



To upgrade the knowledge of pharmacy students for development of their skill in the field of validation in pharmaceutical industry Gurunanak College of Pharmacy organized one day National Seminar on Pharmaceutical Validation and GMP.

In this event Dr. Rakesh Tirpude, Joint Director, Food and Drug Administration, Nagpur delivered a talk on Pharmaceutical Validation. This was followed by the session on Validation and cGMP by Dr. Shashank Lulay, Experts Club Consultants, Nagpur. Dr. Ravi Wankhede, CEO, MOHAN Foundation, Nagpur and Dr. Samir Jagirdar, Cosmetic Surgeon, Nagpur were also present for the seminar. About 200 delegates from B. Pharm final year and M. Pharm and faculties of central India institutions benefited from this event. The seminar was coordinated by Dr. S. P. Padmane, Dr. M. M. Bodhankar and Dr. S. R. Walde.

### Seminar on 'Study: Abroad Opportunities, IELTS and Scholarship'



Committee for Higher Education and Career Guidance, Gurunanak College of Pharmacy, organized an interactive seminar for final year students on the topic 'Study Abroad opportunities, IELTS and Scholarship' by Mr. Shishir Upadhyay from Massachusetts College of Pharmacy and Health Sciences (MCPHS), Boston on 3<sup>rd</sup> Aug, 2018.

In this special emphasis on IELTS, entry criteria, visa regulations, scholarship options, fees, course options and upcoming courses for students was given by speaker. The program was coordinated by Dr. S. K. Arora.

### Workshop on 'Fluidized Bed Dryer-Coater: Working and Troubleshooting'



A one day workshop on 'Fluidized Bed Dryer-Coater Working and Troubleshooting' was organized for the M. Pharm students. In this event Mr. Pradip Dugane, Production Chemist, Nicholas Piramal India Ltd., Mahad (M.S.) (GNCP alumnus 2012-16, UG and 2016-18 PG) guided hands on training on working and troubleshooting of fluidized bed processor. M. Pharm students of phamraceutics and quality assurance branch were present for the event.

The workshop was coordinated by Training and Placement Cell, Dr. V. V. Kale and Dr. S. B. Waikar.

### GUEST LECTURES

- **Dr. Vilas Patil and Dr. Yogesh Ukey**, from Maharashtra Rural Health Service Organisation, Nagpur delivered the awareness talk on "How to cure chronic illness by naturopathy on 11<sup>th</sup> Jul, 2018.
- **Mr. Mohan Hardas and Mr. Vaibhav Chaudhary** from Job plus Career, have delivered a lecture on 'CPM (Certified Pharma Marketing) Training and PEEP (Pharma Employability Enhancement Program)' on 14<sup>th</sup> Jul, 2018.
- **Shri Bal Kulkarni**, Ex-editor, Punyanagri delivered guest lecture on the topic Self motivation on 28<sup>th</sup> Aug, 2018.
- **Mr. Vaibhav Chaudhary** from Job plus Career, have delivered a lecture on 'Various job opportunities in the field of phamracy after graduation and postgraduation' on 29<sup>th</sup> Aug, 2018.
- **Mr. Parag Charde and Mr. Nitin Dayani**, Project managers at central india clinical research services delivered the talk on Opportunities in Clinical Research on 8<sup>th</sup> Sep, 2018.
- **Mr. Sambhaji Chavan** from PCRA conducted training programme for staff and students on the topic conservation, consumption and reduce dependence of petroleum resources on 3<sup>rd</sup> Oct, 2018.

## Blood Donation Camp



On the occasion of World Pharmacist Day, National Service Scheme Unit, Gurunanak College of Pharmacy, Nagpur conducted 'Blood Donation Camp' in Sardarni Paramjeet Kaur Kalsi Auditorium, GNCP Nagpur on 25<sup>th</sup> Sep, 2018. The event was held in association with Indian Pharmaceutical association (IPA), Nagpur branch and Dr. Hedagewar Blood Bank, Nagpur.

Faculties and students of various pharmacy colleges in region participated voluntarily and 90 units of blood were donated. The occasion was graced by Dr. A. M. Itadwar, Principal, GNCP Nagpur and dignitaries of IPA, Nagpur branch. The event was coordinated by Mr. Vipinchandra Pande and Dr. Subhash Yende.

## Diabetes Awareness and Blood Testing Camp



Diabetes awareness and a blood testing camp was organized by Gurunanak College of Pharmacy, Nagpur on 23<sup>rd</sup> Oct, 2018 at Sugat Nagar Buddha Vihar, Nari, Nagpur. More than 100 persons were examined in this camp. In this blood testing for sugar was carried out and the persons found with higher sugar concentration were counselled by Dr. Ratnakar Walde, General Physician and Surgeon and proper treatment was given. Informative literature about diabetes was also distributed to the needy persons. With support of Secretary, Kapil Nagar Buddha Vihar, Dr. S. R. Walde & Dr. V. V. Kale coordinated for smooth conduction of the camp.

## Vaachan Din Celebration



To commemorate birth anniversary of Former President Dr. APJ Abdul Kalam, Gurunanak College of Pharmacy, celebrated Vaachan Din (Reading Day) on 15<sup>th</sup> Oct, 2018. On this occasion, books on history of Nagpur City like 'Nagpur Nagri, Trishatabdi Granth', and 'Adhunik Nagpur' were exhibited for the students. Mr. D. P. Dharkar delivered an influential talk on History of Nagpur and also motivated students and faculties in audience to read such books.

## Tree Plantation Program



Tree plantation was carried out in Gurunanak College of Pharmacy campus in the third week of July, 2018. In this week 90 plants of medicinal importance were planted at different sites in the premises. Students and staff enthusiastically participated in this event coordinated by Dr. S. B. Waikar

## Swachh Bharat Abhiyaan

On the occasion of birth anniversary of Rashtrapita Mahatma Gandhi and Shri. Lal Bahadur Shastri GNCP celebrated Swachh Bharat Abhiyan. Students and staff enthusiastically cleaned the college campus and nearby area. The program reflected increasing awareness about cleanliness, health and hygiene among students and staff.

Dr. S. K. Tiloo took efforts to make this drive successful.



## Jigyasa - 2018: "Paint My Wall Competition"



Jigyasa - 2018: "Paint My Wall Competition" was held with the theme of 'Hygiene & Sanitation' on World Pharmacists Day i.e. 25<sup>th</sup> September 2018.

The competition witnessed healthy participation with teams from diploma (GNTI), degree as well as post graduation. Total 7 teams prepared posters related to personal as well as hygiene in society, involving social and health related aspects. The posters represented and highlighted current status of general hygiene and sanitation at personal and societal level. The competition was conducted by Mr. K. S. Moharir

The winners of the event are as follows –

Winner	B. Pharm II Year	Ms. Kajal Kesare Ms. Manali Barai Ms. Sakshi rathi Ms. Ekta Tiwari Mr. Sumit Pranjale
	B. Pharm III Year	Ms. Simran Lakhanpal Mr. Tanay Shahu Ms. Ragini Amarnani Mr. Aniket Gawale Ms. Sakshi Rathi
Runner	B. Pharm IV Year	Mr. Abhishek Bapat Ms. Payal Dhande Mr. Nikhil Sonkusare Ms. Tejal Raut Ms. Suhasini Chaurasia
Runner-up	D. Pharm II (GNTI)	Ms. Janhvi Padole Ms. Apurva Gofane Ms. Ankita Pande Ms. Sushmita Hedau Ms. Snehal Dhok

### International Yoga Day Celebration

International yoga day was celebrated with utmost enthusiasm in college auditorium on 21<sup>st</sup> Jun, 2018. Dr. M. M. Bodhankar Briefed about the importance of health and exercise in life to the gathering. She insisted for well being in all directions of health i.e. physical, mental, social and spiritual. The yoga practice was conducted under guidance of Mr. K. S. Moharir. The various 'Asanas' and 'Pranayam' were practiced in this event.

### Induction Programme

In order to welcome the newly admitted students of B. Pharm I yr. students and to make them aware about various college activities and general code of conduct, an Induction program was organized on the very first day of their session i.e. on 1<sup>st</sup> Aug, 2018. In this Dr. A. M. Itadwar welcomed all students and congratulated their parents. He with the faculties of B. Pharm I Year guided students on general code of conduct and other details. Mrs. M. K. Bhurchandi and Dr. S. K. Tiloo coordinated the event.

### Freshers Party

Freshers party was organized for a formal welcome of newly admitted students of B. Pharm I Year, B. Pharm II year (direct admitted) and M. Pharm first year in college auditorium by B. Pharm II and M. Pharm II year students on 9<sup>th</sup> Sep, 2019. In this event new comers introduced themselves to the audience and also group activities and games were arranged for them. Entertainment activity by B. Pharm II year students was also performed in this event. Students with best performance were awarded with Mr. Fresher and Ms. Fresher. The event was coordinated by Mrs. M. K. Bhurchandi in association with Mrs. S. A. Ubgade and Mr. D. P. Dharkar.

### Teachers Day Celebration

Students expressed their sincere gratitude towards their teachers by organizing teachers day on 5<sup>th</sup> Sep, 2019. Teachers were welcomed with flowers and Dr. A. M. Itadwar addressed students about importance of teachers in life and history of Teachers Day. All the faculty members expressed their views on this occasion. In the end cake was cut at the hand of Principal Dr. A. M. Itadwar in presence of all faculty members. Mrs. M. K. Bhurchandi in association with Mrs. S. A. Ubgade and Mr. D. P. Dharkar look after the event for smooth conduction.

### Digvijay Divas Celebration

125<sup>th</sup> anniversary of the day on which Swami Vivekanand delivered a world famous speech at the parliament of world's religion in Chicago was celebrated as Digvijay Divas in college auditorium on 11<sup>th</sup> Sep, 2018.

The program started with traditional lamp lighting by Dr. A. M. Itadwar. Mr. S. R. Manapure delivered a speech on 'life of Swamiji from childhood to enlightenment and contribution of him to Indian society' followed by recitation of Swamiji's speech. Mr. S. R. Manapure coordinated the event.



## RESEARCH & DEVELOPMENT ACTIVITIES

### Book Publication

**Dr. Sumit Arora** and **Dr. Prakash Itankar** published first edition of their book **“Pharmacognosy of Medicinal Plants”**. The book will be good for reference to all pharmacy students, because it is designed through inclusion of feedback and opinion from the students of Pharmacy, especially those who are preparing for various competitive exams such as GPAT, NIPER, etc. This book is also helpful for teachers of Pharmacy Graduate and Diploma institutes.

The book comprises of pharmacognostic account of 54 medicinally important crude drugs belonging to the categories of alkaloids, glycosides, tannins, terpenoids, resins, etc. Special feature of this book which gives it an edge over other available books is special emphasis on cultivation method presented in the form of flowchart, diagrammatic representation labelling all microscopical features in an image form, uses of crude drug along with their mechanism of action shown in the flowchart and different characters for the identification of adulteration.

ABOUT THE BOOK

It gives us an immense pleasure in bringing out the first edition of our book "Pharmacognosy of Medicinal Plants". The book will be good for reference to all pharmacy students, as it is designed through inclusion of feedback and opinion from the students of Pharmacy, especially those who are preparing for various competitive exams such as GPAT, NIPER, etc. This book is also helpful for teachers of Pharmacy Graduate and Diploma institutes. Our book comprises pharmacognostic account of 54 medicinally important crude drugs containing alkaloids, glycosides, tannins, terpenoids, resins, etc. Special feature of this book which gives it an edge over other available books is special emphasis on cultivation method presented in the form of flowchart, diagrammatic representation, labelling all microscopical features in an image form, uses of crude drugs along with their mechanism of action shown in the flowchart and different characters for the identification of adulteration.

ABOUT THE AUTHOR

**Dr. Prakash Rambhauji Itankar, Ph.D., M. Pharm. (Pharmacognosy), D.N.Y.S. (Diploma in Naturopathy and Yogic Science),** presently serving as Assistant Professor (Sl. Gr.) at Department of Pharmaceutical Sciences, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur. He is a recipient of Prestigious "Ethnopharmacology Outstanding Service award 2015" of Society for Ethnopharmacology India (Affiliated to International Society for Ethnopharmacology, UK). He has 06 yrs of Industrial and 18 years of academic experience. He has 52 National and International Publications, filed 04 patents and guided 05 students for Ph. D. He has guided 72 M. Pharm. Students and has Co-Guided M. D. Ayurveda students. He is working for socializing the traditional claims through ethnopharmacology and scientific validation of drugs from natural origin or their formulations. He is also engaged in research for exploring new drug molecules, novel combinations, novel dosage forms, seeking patents, imbibing entrepreneurship, supporting and bridging the gap of scientific ambiguity amongst the traditional practitioners and end users.

**Dr. Sumit Kishan Arora, Ph.D., M. Pharm. (Pharmacognosy),** is presently working as Assistant Professor at Gurunanak College of Pharmacy, Nari, Nagpur. He has total 08 years of teaching experience in diploma as well as degree. He was gold medalist of RTM Nagpur University, Nagpur in B. Pharm and M. Pharm. He completed his Ph.D. under the CSIR scheme from Department of Pharmaceutical Sciences, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur. He has published 10 papers in national and international journals. His main area of research includes standardization and isolation of phytoconstituents. He is also associated with various curricular and co-curricular activities in the field.

Pharmacognosy of Medicinal Plants

Pharmacognosy of Medicinal Plants

Dr. Prakash Itankar  
Dr. Sumit Arora

Dr. Prakash Itankar | Dr. Sumit Arora

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### Research Publications

- **Nidhi Sapkal, Anwar Daud.** Oral Thin Films: Novel Manufacturing Technology & Its Challenges. ; Drug Delivery. 2018; Issue 89: 66-68.
- **Mitali M. Bodhankar and Shubham Chikhale.** Various approaches towards enhancement of bioavailability of Curcumin- A potent Phytochemical, World Journal of Pharmaceutical Research. 2018, 8 (1), 606-626.
- **M K Bhurchandi, A M Ittadwar, J G Chavan;** 'Sub chronic exposure to Radio frequency electromagnetic radiation affects the biochemical, physiological, behavioral functions: A Review.' International Journal of Pharmacy and Pharmaceutical Research. September 2018 Vol.: 13, Issue: 2. 166-183.
- **Tirupati Rasala, Shivani Dani, Shekhar Waikar, Abhay Ittadwar;** 'Formulation and Evaluation of Aloe Vera Gel and Film from Fresh Pulp of the Leaves of Aloe Barbadensis.' American Journal of Pharmacy and Health Research 2018, 6 (11), 1-9.
- **Sumit Arora, Prakash Itankar.** 'Extraction, isolation and identification of flavonoid from *Chenopodium album* aerial parts.' Journal of Traditional and Complementary Medicine 2018 8; 476-482.

## Presentations

- **Priya Dule, Vaishali Kilor, Nidhi Sapkal, Minal Bonde, Anwar Daud; Development of PEO drug loaded filaments using Hot Melt Extruder for 3D printing of pharmaceuticals** presented poster at Young Scientist Conference held during India International Science Festival held at Lucknow during 5<sup>th</sup> to 8<sup>th</sup> Oct, 2018.
- **Priya Dule, Vaishali Kilor, Nidhi Sapkal, Minal Bonde, Anwar Daud. Preparation and evaluation of drug loaded polymer filaments for 3D printing of tablets.** Presented poster at NBRcom -2018, held at Rishikesh on 15<sup>th</sup> Oct, 2018.
- **Vinita Kale, Pooja Yadav, Shalakra G. Sahare, Rajat S. Pahwa\*, A.M. Ittadwar; Chewable lozenges formulation for alertness during driving;** presented poster at National Conference On Integrative Approach Towards Ayurved Practice (29th - 30th Sep 2018).
- **Vinita Kale, Rohini Rakshak, Pradeep Dugane; Modified starch as film forming material for pharmaceutical/ cosmetic application;** presented poster at International Conference On Multifunctional Advanced Material Icmam-2018, organized by Kamla Nehru Mahavidyalaya, Nagpur and Dharampeth M. P. Deo Memorial Science College, Nagpur held at Kamla Nehru Mahavidyalaya, Nagpur during 5<sup>th</sup> to 7<sup>th</sup> October, 2018
- **Vinita Kale, Shubhangi Mohije, Ashish Zanvar; Development of Chitosan- Gelatin composite as film forming excipient** presented poster at International Conference On Multifunctional Advanced Material Icmam-2018, organized by Kamla Nehru Mahavidyalaya, Nagpur and Dharampeth M. P. Deo Memorial Science College, Nagpur held at Kamla Nehru Mahavidyalaya, Nagpur during 5<sup>th</sup> to 7<sup>th</sup> October, 2018

## Guest Lecture Delivered/ Resource Person

- **Dr. Nidhi Sapkal** on "Advances in New drug delivery systems" in NIMACON-2018 organized by Indian Medical Association, Nagpur on 20<sup>th</sup> Oct, 2018
- **Dr. Nidhi Sapkal** delivered a guest lecture on topic "How to make diploma holders employable?" In MSBTE sponsored QIP program at JLC College of Pharmacy, Nagpur on 25<sup>th</sup> Oct, 2018.
- **Dr. Nidhi Sapkal** delivered a guest lecture on "Levocetirizine oral thin films: Benefits over existing products". In CME program of Medical Practitioners jointly organized by CBS Global Pharma and Zim Laboratories Limited in Hotel Ambassador, Tbilisi, Georgia on 17<sup>th</sup> Nov, 2018
- **Dr. Subhash R. Yende** participated as chairperson of paper presentation competition in National Conference on Integrative Approach towards Ayurveda Practice (NIMACONF-2018) held at Hotel Naivedyam Nagpur organized by NIMA Nagpur and Bhausahab Mulak Ayurveda College and research center, Butibori, Nagpur during 29<sup>th</sup> -30<sup>th</sup> Sep, 2018.
- **Dr. Mitali M. Bodhankar** Delivered a seminar on "Business/ Entrepreneurial opportunities in Pharmaceutical field" in Entrepreneurship development program organized by Smt. Kishoritai Bhojar College of Pharmacy, Kamptee (3-31 Dec, 2018) on 10<sup>th</sup> Dec, 2018.

## Seminar/workshop/SDP/QIP/ Training program attended

- **Dr. Vaishali A. Kilor** participated in TEQIP workshop on "3D Printing in Medicine" organized at IIT, Hyderabad on 16<sup>th</sup> -21 Jul, 2018.
- **Mrs. Shobha A. Ubgade** attended three days seminar on hands on training for HPTLC based on phytopharmaceuticals and natural products analysis organized by Priyadarshini J. L. Chaturevedi college of pharmacy from 9-11 Aug, 2018.
- **Dr. Nidhi Sapkal** attended pharma expo CPHI Worldwide held at Madrid on 9-11 Oct, 2018
- **Dr. Nidhi Sapkal** attended pharma expo CPHI India, held at Greater Noida on 12-14 Dec, 2018
- **Dr. Mitali M. Bodhankar** Attended a one day seminar "Nagpur start up fest" on 6th october 2018, held at Kavivarya Suresh Bhat Sabhagruha, Reshimbagh, Nagpur organised by Indian Council For Technical Research And Development.
- **Dr. Mitali M. Bodhankar** Attended one day Skill development program in Dr. G.M. Taori Central India Institute of medical Sciences.

### Digitalized Healthcare At Your Fingertips- Mobile Phone Apps

*Mr. Tanay shahu*  
*B.Pharm III Year*

In today's era of globalization, we are living in electronic age. There are a lot of new technologies invented which have made our life simple and easy going. Mobile phone is a revolutionary step in the field of telecommunication. The greatest advantage of the mobile phone is that it can be used anywhere, anytime. The world has become a smaller place with everything at your fingertips. With the advent of healthcare apps it is easy to reduce the distance between patient and doctor through online consultation. It is easy for husband to take care of pregnant wife with help of app which provides information about pregnancy. It is easy for the busy working woman to keep track of her periods. It is easy to keep track of your health through diet informative apps, Fitness apps etc. The encyclopaedia of healthcare is just a click away.

#### Different Smartphone Applications

##### 1. 1 mg- Medicines, tests & consultation

1 mg app is one of the app which assists common people to search medicines at lowered priced medicine substitutes and save up to 90%. Generics are an effective therapeutic alternative to branded medications and can offer a 30% to 80% cost cutbacks. In the ongoing battle to contain rapidly escalating healthcare costs, switching from brand-name to generic drugs can help patients dramatically lessen their expenses. The app offers other medicine information like treatment uses, side effect, safety and suggestion and answers to patient.

<https://play.google.com/store/apps/1mg>

##### 2. PRACTO-Book doctor's appointment online

Who knew there would be a day where we would be booking doctor appointments online? This app helps you get doctor appointments, book diagnostic tests and order medicines online. It also helps you take care of yourself better by getting an online consultation.

<https://play.google.com/store/appss/practo>

##### 3. ASTHMA TRACKER

Asthma tracker is an app which tackles asthma by actively tracking asthma of the patient and related symptoms in details and by efficiently managing the patient's medication according to their symptoms up-to-date record by making it easy to track the peak flow values and by patient's medication intake. This app also reminds the patient to take daily based medication and to trace the indications.

<https://play.google.com/store/appss/asthamatracker>

##### 4. DIABETES:M

Diabetes is a chronic and widespread disease in the whole world. Management of diabetes is a task. So, here's an app to make it all easy whether you are type 1 or type 2 diabetes have gestational diabetes or just want to help and monitor a family member or friend this is the logbook for you. This app tracks all aspects of treatment and provides with a detailed report it also has an insulin bolus calculator and can analyse data from glucometers and insulin pumps. It also helps you take care of food intake and nutrition as well as exercise.

<https://play.google.com/store/appss/diabetes:m>

##### 5. MY CALENDER-Period tracker

Period Calendar is an extremely chic and easy-to-use application that helps women keep track of periods, cycle, ovulation, and fertile days. The app helps the women about conceiving, birth control, contraception or regularity of period cycles. It also helps to track irregular periods, weight, temperature, moods, blood flow.

<https://play.google.com/store/appss/mycalender>

##### 6. FOODUCATE-Calories counter

This app counts all the calories present in food and will give a categorized breakdown of contents in food consumed or presence in packaged food. Also, if unhealthy food is consumed it will suggest healthier options. The app helps all those food enthusiasts.

<https://play.google.com/store/appss/fooducate>

1. HEADSPACE: Learn to meditate

This app provides a personal meditation guide which is readily accessible along with hundreds of themed sessions on everything from stress to sleep. For busy people it provides bite-sized guides for meditation.

<https://play.google.com/store/appss/headspace>

**News from Entrepreneurship Development (ED) Cell:**

**Guest Lecture on Entrepreneurship and Management Mantras to be implemented in Business**



Ms. Swaima Ahmad, a good orator and an influential personality delivered a guest lecture on Entrepreneurship and Management Mantras to be implemented in Business, taking into consideration the Mumbai Dabbawalas.

In her address she insisted on business communication skills and basic management fundamentals and how to master them. She explained importance of advertisement, complementary services and changing

business plans. She said everyone must think of value he/she wants to create in society. She further insisted on self MBA to be done in areas of Volume Creation, Right

branding/ marketing, Sales, Value Delivery and Finances

Students well received her words and the event was coordinated by Dr. M. M. Bodhankar and Mr. S. R. Manapure

**Awareness Program on Government Policies about Women Entrepreneurship**

An awareness program on changed Maharashtra State Government Policies about Women Entrepreneurship was undertaken on 8<sup>th</sup> Dec, 2019. A detailed information of capital grant, interest rates, subsidies, marketing benefits for micro, small and medium enterprises of various lucrative schemes under skill development were introduced by Dr. M. M. Bodhankar to the students of Entrepreneurship development cell of the college especially from B. Pharm III and B. pharm Final Year. Brief aspects of all benefits were also discussed in a program on 15<sup>th</sup> Dec, 2019 by Maharashtra Centre of Entrepreneurship Development (MCED) and Vidarbha Industries Association (VIA). Dr. M. M. Bodhankar and Mr. S. R. Manapure coordinated the events.



**The Sikh Education Society's**

*Vision: To create globally competent pharmacist*

**GURUNANAK COLLEGE OF PHARMACY**

(NAAC Accredited)

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