



GURUNANK COLLEGE OF PHARMACY
NAGPUR

INDOCTRINATE



NEWSLETTER

Volume: 5

15 June 2012

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Editorial Board

Dr. Vinita Kale (Editor)

Mr. Subhash Yende (Member)

Dr. Sheelpriya Walde (Sub-Editor)

Mr. Govind Lohiya (Member)

Technical Article

BARCODING TECHNOLOGY FOR DETECTION OF COUNTERFEIT DRUG

Industrialized as well as developing countries viz. India faces major problem like counterfeit or fake drugs. Many previous efforts to keep check on this went in vain. Although it is difficult to obtain precise figures, estimates put counterfeits at more than 10 percent of the global medicines market. It is known to affect both developed and developing countries. A WHO survey of counterfeit medicines report from 20 countries between January 1999 and October 2000 found that 60 percent of counterfeit medicines cases occurred in poor countries and 40 percent in industrialized countries.

As a result of these frequent reports of fake drugs, in 2006, WHO established the “International Medical Products Anti Counterfeiting Taskforce (IMPACT)”.

Recommendations of WHO and current scenario prompted Drugs Consultative Committee and DCGI, Govt. of India to introduce barcoding to keep check on fake drugs.

Methodology

Anti counterfeit packaging includes following techniques:

1. 2D Barcodes
2. Holograms
3. Radio-frequency identification (RFID)

1. 2D Barcodes / Mass encryption technology

Barcodes are used in the pharmaceutical industry to identify product throughout the supply chain. Different levels of information can be carried in a barcode, including such items as National Drug Code (NDC), Lot Number, and Expiration Date. There are several different types of bar codes, and the standards for what those bar codes should look like and how they are to be used. These are the Uniform Code Council (UCC) and Health Industry Business Communications Council (HIBCC).

2D Barcodes are present in following formats

- A. Linear format
- B. Scripted format
- C. 2D data matrix format



Encrypted codes in scripted format (top) and 2D Data Matrix format (bottom)



National Drug Code (NDC) and Items Code for pharmaceutical products

In addition to the encryption and decryption of the codes, the software that supports this technology allows brand owners to fully manage their supply chain, i.e., track and trace. A major advantage that mass encryption enjoys over all other currently available technologies is that it empowers the consumer to authenticate a drug. Consumer can send an SMS of this unique code to manufacturer and get the details of drug to know its authenticity

2. Hologram

Holographic technology provides a simplified means for consumers to deduce the authenticity of a drug. The reasoning is that a blister pack or vial that contains a hologram will be seen to be a genuine product that is resistive to tampering.

3. Radio-frequency identification (RFID)

The basic premise behind RFID systems is that you mark items with tags. These tags contain transponders that emit messages readable by specialized RFID readers. A reader retrieves information about the ID number from a database, and acts upon it accordingly.

Remarks

At the end, patient will be benefited from this service introduced by Drugs Controller General of India (DCGI) and Drugs Consultative Committee (DCC) in identifying and accessing genuine medicines.

Mr. Keshav S. Moharir
Deptt. of Pharmaceutics
GNCP, Nagpur

ACCOLADES

- ❖ **GNCP provides consultancy to Zim Laboratories for DSIR project:** Gurunanak College of Pharmacy has signed an agreement with Zim Laboratories Ltd. for providing consultancy for their DSIR supported project namely "Technology development and demonstration of a novel drug delivery system" (Project cost: 352 lakhs). Prof. N. P. Sapkal has been appointed as chief consultant for this project.
- ❖ **AICTE grant under Research Promotion Scheme:** Rs 14.5 Lakhs granted to Dr. Vinita Kale, professor & HOD, Pharmaceutics for the project 'Worm infestation and child health: taste masking of bitter herbs using pelletization technique'.

ACADEMIC ACHIEVEMENTS

RTM Nagpur University Results

M. Pharm Result:

Branch	% Result	Topper
Pharmaceutics	95	Pooja Baheti
Quality assurance	89	Priti Sahni
Pharmaceutics I Chemistry	61	Smita Meshram

B. Pharm Result:

Year	% Result	Topper
B. Pharm. IV	71	Raghvendra Rai
B. Pharm. III	44	Sanket Bhagwat
B. Pharm. II	53	Radhika Ratti
B. Pharm. I	54	Pooja Hemane

RTM Nagpur University Topper:

GNCP has excellent record in university examination and again setting the benchmark by holding top ranks in university.

- ✓ **Priti Sahni** secured second rank in M. Pharm. I (Q. A.).
- ✓ **Raghvendra Rai** secured II rank in B. Pharm Final year.
- ✓ **Pooja Hemane** secured Third rank in B. Pharm I year.
- ✓ **GPAT Result: Raghvendra Rai** secured AIR 1424 in Graduate Pharmacy Aptitude Test 2012.

Faculty Achievements

- ✓ **B. A. Jacob** received 2nd prize for poster presentation at "National conference on Materials: Atom to Molecule" held at Shri Shivaji Education society's Science College, Nagpur on 16 Dec. 2011.
- ✓ **G. K. Lohiya** got registration for PhD in Department of Pharmaceutical sciences, RTM Nagpur University, Nagpur.

PLACEMENT

GNCP students placed in various sector of Pharma industry every year, this year also campus interview was arranged for M. Pharm and B. Pharm students and details are as -

No. of students placed	Name of Industry
21	Glenmark Pvt. Ltd., Goa.
01	Mylan Lab. Ltd. Sinner
01	Sandoz India, Mumbai
01	Unijules, Nagpur



Republic day celebration: College celebrated 63rd Republic day with zeal and zest. The flag hoisting was carried out by Sardar Parshan Singhji Kalsi, Ex MLC and General Secretary of the Sikh Education Society. The function was followed by cultural programme and refreshment for staff and students.

Industrial Visit



Students of PG department of Pharmaceutical Chemistry visited two pharmaceutical industries, Unijules Lifesciences Ltd. and Zim Laboratories Ltd, Kalmeshwar. During their visit they were shown manufacturing and quality control of solid, liquid and semisolid dosage forms; waste water management plant, warehouse, utility section and R & D sections. The students were accompanied by Dr. SK Tilloo, Dr. S. B. Waikar and Dr. N. P. Sapkal.

EVENTS

Zenith 2011-12

The Annual social gathering “**Zenith**” was held in Dec. 2012. Gathering was inaugurated by Sardar Parshan Singhji Kalsi, Ex MLC and General Secretary of the Sikh Education Society and Dr. A. M. Itadwar, Principal, GNCP, Nagpur. During the course of the gathering competitions like debate, quiz, singing, fashion show, treasure hunt, solo dance, group dance, skit, antakshari etc were held. Dr. S. R. Walde proposed the vote of thanks. The gathering ended on a rocking note with students dancing to the beat of live D.J. College published annual Magazine “**Zenith 2011-12**” which reflects the creativity of students and glimpses of past activities.



Winners of Zenith 2011-2012

Event	Winner/Runner up (year)	Names
Cricket (boys)	Winner (B. Ph. III)	Nirav Porkute (captain), Saurab Jaiswal, Dinesh Thote, Akshay Jha, Monish Bawankhode, Mangsh Raut, Mitesh Patel, Divyang Vora, Tushar Gupta, Narendra Kothari, Mrinal Madan, Hitesh kale, Zain Hudani, Sanket Bhagwat.
	R. up (M. Ph. I)	Sameer Asole, Atul Padole, Swapnil Samrutwar, Amit Khandagade, Nishant Jain, Kuldeep Jain, Irfan Beg, Pravin Thosare, Mohd Sheob, Ravi Mane, Prasanna Karade, Bipin Ukey, Nikhil Mahurpawar, Sagar Bhojar.
Cricket (girls)	Winner	B.Pharm III
	Runner	B.Pharm IV
Volleyball	Winner (B. Ph III)	Dinesh Thote (Captain), Nirav Porkute, Saurab Jaiswal, Monish Bawankhode, Mangsh Raut, Narendra Kothari, Hitesh Kale, Mitesh Patel, Akshay Jha
	R. up (B. Ph. IV)	Amit singh(Captain), Rajnikant Shmbhalkar, Rahul Jawarkar, Prashant Gahlod, Rahul Dugane, Pravin Khade, , Vivek Mishra, Akash Amrutkar.
Throw ball	Winner (B. Ph. IV)	Anuja Meshram(Captain), Priya Gupta, Akashara Jambhulkar, Shruti Humane, Kinjal Kanadiya, Sheetal Tathe, Komal Koche, Sobiya Jabeen.
	R. up (B. Ph. III)	Tabassum Naaz, Tanvi Siriah, Anjali Singh, Amrita Bajaj, Supriya Mishra, Roocha Dhote, Shruti Gaydhani, Subhangi Borkar, Gayatri Goupale.
Badminton (Men single)	Winner (M. Ph.II QA)	Harshal Khakse
	R. up (M. Ph.II chem)	Kartik Wadibhasme
Badminton (women single)	Winner (M. Ph.II Chem)	Kumud Mende
	R. up (B. Ph.I)	Roshni Kunte
Carom (Men single)	Winner (B Ph. II)	Tushar Raut
	R. up (B. Ph.I)	Saddam Husain Mulla
Carom (Men double)	Winner (D. Ph.I)	Bhumeshwar Borkar
	R. up (D. Ph. II)	Tushar Raut, Suraj Borkar
Carom (women double)	Winner (B. Ph. IV)	Komal Koche and Pallavi Lonare
	R. up (D. Ph.I)	Swati Wasanik and Apurva Dabhale
Chess (Men)	Winner (B. Ph.III)	Sanket Bhagwat
	R. up (M. Ph.II chem)	Kushal Sahare.

Chess (women)	Winner (B. Ph.III)	Supriya Mishra
	R. up (B. Ph.)	Pragya Thamke
Table tennis (Single)	Winner (B. Ph. III)	Nirav Porkute
	R. up (B. Ph.III)	Divyang Vora
Tug of War (Men)	Winner (B. Ph. III)	Saurab Jaiswal, Dinesh Thote, Mangsh Raut, Divyang Vora, Narendra Kothari, Mrinal Madan, Swapnil Nandkar, Tanveer Razza, Sushil Kewalramani.
	R. up (D. Ph.I)	All boys of D. Pharm I Year
Treasure hunt (Person)	Winner (D. Ph.I)	Jitesh Assudani, Jitesh Mulchandani, Rahul Hirani.
Treasure hunt (object)	Winner (B. Ph.II)	Sanket Bhagwat, Sushil Kewalramani, Tanveer Razza.
Rangoli (Women)	Winner (D. Ph. II)	Vaishnavi Fating
	R. up (B. Ph. III)	Supriya Mishra
Rangoli (Men)	Winner (D. Ph. I)	Abhijeet Shahu
	R. up (D. Ph.) I	Swapnil Deshmukh
Mehandi	Winner (B. Ph. III)	Tabassum Naaz
	1 st R. up (B. Ph. III)	Shabana Anjum
	2 nd R. Up (D. Ph I)	Sweetie Dhaware
Debate	Winner (M. Ph. II chem)	Jockey nakade
	R. up (M. Ph. II ceutics)	Pratik shende
Dance (Men single)	Winner (B. Ph. III)	Ankit Sharma
	R. up (M. Ph. I)	Sammer Asole
Dance (women single)	Winner (M. Ph. I)	Namita Tilgude
	R. up (M. Ph. I & B.Ph. I)	Pradnya Kedar and Meenal Sonule
Dance (Men Group)	Winner (B. Ph. II)	All boys of B.Pharm II year
	R. up (M. Ph.I)	All boys of M.Pharm I year (Quality Assurance)
Dance (Duet)	Winner (B. Ph. III)	Ankit Sharma and Supriya Mishra
	R. up (B. Ph.)	Abhijeet Shahu
Antakshari	Winner (M. Ph ceutics)	Ami Khandagade (Iyr) & Pratik Shende (IIyr)
	R. up (M. Ph. QA & chem)	Mohd. Shoeb, Amit Giakwad, Preeti Sahani, Sweetie Bankar
Elocution	Winner (B. Ph.II)	Himanshu Purohit
	R. up (B. Ph. III)	Tabassum Naaz
Fashion Show	Winner	D. Pharm I and II year students (theme- Mughals)
	R. up (1) (2)	B.Pharm II year students (theme- Mafia) B.Pharm III year students (theme- Occupation)
Champions Trophy - B. Pharm III year		

Think Create -Tech Pharmacist

Department of Pharmaceutics organized the event Think Create -Tech Pharmacist (Love 4 Pharmaceutics), under which Quiz competition, Working model competition and lecture series were conducted.

- In Quiz competition Ms. Ashwini Mahajan (D. Pharm), Ms.Isha Sohale (B.Pharm I) won 1st prize, Ms. Tanvi Manwatkar (D. Pharm), Ms.Archana Pal (B.Pharm I) won consolation prize in level -1, Mr. Vivek Mishra (B.Pharm IV) won 1st prize, Ms. Supriya Mishra, Ms. Tanvi Siriah (B.Pharm III) won consolation prize in level -2 and Ms. Harsha Bhandekar (M.Pharm I) won 1st prize, Ms. Rupali Gandhi (M. Pharm I) won consolation prize in level -3.



- In Working model Competition Ashutosh Kumar, Swapnil Samrutkar, Imtiaz Ahemad (M. Pharm I) won Winner's title. Dinesh Thote, Homeshwar Bawane, Prajwal Bhuyarkar (B. Pharm-III) and Shikha Barve, Heena Kausar (M. Pharm I) won Runner up prizes while Mrinal Madan, Nirav Porkute, Mangesh Raut (B. Pharm-III) and Mujtaba Ahfaz, Shaffaqqat Hussain (B. Pharm-III) won consolation prizes. Competitions were judged and awarded by Mr. B.A. Ballal Asst. Commissioner, FDA, Nagpur and Dr. A. M. Itadwar, Principal, GNCP, Nagpur.
- In Lecture series Dr. Vinita Kale delivered lectures on Validation and Design of experiments and Mr. Govind Lohiya delivered lecture on use of MS office in dissertation writing.

Two days workshop on 'Pharmaceutical Trends and Good Manufacturing Practices'



Two days workshop on 'Pharmaceutical Trends and Good Manufacturing Practices' was organized on 5-6 March 2012. The workshop was inaugurated by Dr. K. P. Bhusari, Principal, Sharad Pawar College of Pharmacy, Nagpur. During this programme, invited speaker Mr. Amit Oza, Manager, Q.A., Aurbindo Pharma, Hyderabad, covered various topics like Good Manufacturing Practices with emphasis on country specific guidelines and recent observations noticed against regulatory standards, Statistical tools used in the industry with their recent trends against current regulations, Describing about aspects of Change Management and its significance to submissions/ Drug Filings, Pharmaceutical Scale Up concept and its implication with respect to development studies to its full scale validation approach and most importantly about Business communications which focuses on the specific soft skills and related improvements to become successful in this field. The workshop was organized by Dr. S. R. Walde, Dr. Vinita Kale and Dr. S. K. Tilloo. Around 150 students from pharmacy and cosmetic colleges of Vidharbha region attended the workshop. In concluding ceremony, Dr. M. J. Umekar, Principal, Smt. Kishoritai Bhoyar College of Pharmacy, Kamptee, Nagpur shared his views on pharma career as an emerging field. Vote of thanks was given by Dr. Vinita Kale.

Educational Tour to Himachal Pradesh

An educational tour for the students was arranged from 19 Dec. 2011 to 27 Dec. 2011 to Himachal Pradesh. 55 students (33 boys and 22 girls) became part of this tour and Dr. S. B. Waikar, Dr. S. R Walde, Mr. V. B. Pande and Ms. S. S. Yadav accompanied them. During this period, students visited various places like Kullu, Manali, Shimla and Chandigarh and enjoyed the natural beauty and scenic views of these places.



Farewell to PG students

A Farewell Party was organized by M. Pharm Ist year students for the outgoing batch of M. Pharm. Dr. A.M. Ittadwar said that real laurels for any institute are its students and not the physical things like infrastructure etc. Prof. S.K. Tilloo advised students to explore every opportunity to the fullest that comes along their way. Prof. N.P. Sapkal wished students all the best and urged them to be in contact of the college always. M. Pharm II year students thanked their juniors for the warm party. The program was attended by faculty members, nonteaching staff and students.



RESEARCH & DEVELOPMENT ACTIVITIES

Students

- S.Y. Mahajan, G.V. Vaidya presented poster in 11th International symposium on advances in technology and Business potential of new drug delivery system organized by controlled release society, Indian chapter, on 9th & 10th Feb, 2012, Mumbai.
- P.D. Thamke, K.S. Sahare, K.B. Singh, K.D. Khalode, K. Mendhe, R. Gawate, B.M. Bokade, R. Dokrimare attended National seminar on Novel approaches in drug design, held at Department of Pharmaceutical Sciences, RTM Nagpur University, Nagpur on 12 march 2012.
- All students of M. Pharm. attended two days workshop on Pharmaceutical trends and Good manufacturing Practices, held at GNCP, Nagpur on 5-6 March 2012.
- P.N. Dhoke, B. Panda, N.P. Sapkal, V.A. Kilor presented poster on Formulation and evaluation of hydrogel thickened peppermint oil micro emulsion of Etoricoxib for transdermal application in Indian Pharmaceutical Congress, Bangalore, Dec-2011.
- Heena Kausar and Dr. Vinita Kale presented poster on to improve class attendance: humor as a teaching tool in Indian Pharmaceutical Congress, Bangalore, Dec-2011.
- P.S. Rahate, P. Prasad, P. N. Dhoke presented poster on Formulation, Optimization and *in vitro* evaluation of fast disintegrating tablet of Telmisartan in Indian Pharmaceutical Congress, Bangalore, Dec-2011.
- H.A. Bhajipale, M.K. Patil, V.V. Kale presented poster on Ipratropium bromide in the form of micronized supercritical fluid for pulmonary drug delivery in Indian Pharmaceutical Congress, Bangalore, Dec-2011.
- N.D. Jain, H. A. Bhajipale presented poster on a Ligand Rosciglitazone for the peroxisome proliferator activated receptor-G, reduces acute inflammation in Indian Pharmaceutical Congress, Bangalore, Dec-2011.

Faculty

Publications

- Anwar S. Daud, **Nidhi P. Sapkal**, Minal N. Bonde. Development of *Zingiber officinale* in oral dissolving films: Effect of polymers on in vitro, in vivo parameters and clinical efficacy. Asian journal of Pharmaceutics, 5 (3), 2011, 183-189.
- Bonde MN, Sohani AC, Daud AS, **Sapkal NP**. Microwave: an emerging trend in pharmaceutical processes and formulations. International Journal of Pharmaceutical Technology, 3 (4), 2011, 3499-3520.
- **M. Patil, V.V. Kale, C. Tapre**. Design and validation of Flomex: an instrument for powder flow measurement. International Journal of Food, Agriculture and Veterinary sciences. 2(1), Jan-Apr 2012, 40-46.
- **Mitali Bodhankar, Vishal Kavade**, Arun Patil. Consequence of Calendula Oil on the In- Vitro Percutaneous Absorption of Diclofenac Sodium. Journal of Drug Delivery & Therapeutics. 2 (3), May-June 2012, 118-120.
- **Mungle AN, Bodhankar MM**, Chandak K. Antidiabetic potential of *Dolichandrane fallata* leaves in alloxan induced diabetic in rat. International Journal of Research in Pharmaceutical and Biomedical Science. 3 (1), Jan-March 2012.
- **Tiloo SK, Pande VB, Rasala TM, Kale VV**. *Asystasia gangetica*: review on multipotential application. International Research Journal of Pharmacy, 3 (4), 2012, 18-20.
- **Tiloo SK, Bodhankar MM, Waikar SB and Pande VB**. Antimicrobial Activity of Formulation Containing Bioactive Extract of Endocarp of *Randia spinosa*. International Journal of Advances in Pharmacy, Biology and Chemistry, 1 (2), Apr- Jun- 2012, 172-175.
- Shah SK, Asnani AJ, Kawade DP, Dangre SC, Arora SK, **Yende SR**. Simultaneous Quantitative Analysis of Olmesartan Medoxomil and Amlodipine Besylate in Plasma by High-performance Liquid Chromatography Technique. Journal of Young Pharmacists, 4 (3), Apr-June- 2012, 88-94.

Presentation

- **Subhash R. Yende** and Uday N. Harle. Marine Macroalgae: potential biological materials with therapeutic use. “National conference on Materials: Atom to Molecule” held at Shri Shivaji Education society’s Science College, Nagpur on 16 Dec. 2011. Abstract No. 48.
- **Subhash R. Yende** and Uday N. Harle. A review on therapeutic potential of *Sargassum*: brown seaweed, “44th Annual Conference of Indian Pharmacological Society, IPSCON-2011” held at Kasturba Medical College, Manipal University, Manipal on 19-21 Dec. 2011. Abstract No. MIS – 26.
- **B. A. Jacob** - “National conference on Materials: Atom to Molecule” held at Shri Shivaji Education society’s Science College, Nagpur on 16 Dec. 2011.

- Minal Bonde, **Nidhi Sapkal**, Anwar Daud, Amrita Sohani. Compressed Powdered Formulation Fortified with Milk Proteins, Folic Acid And Enteric Coated Iron Using Novel Technologies. **11th International symposium on advances in technology and Business potential of new drug delivery system** organized by controlled release society Indian chapter, on 9th & 10th Feb, 2012, Mumbai.
- **S.Y. Mahajan, G.V. Vaidya, V.A. Kilor, N.P. Sapkal**. Formulation development and evaluation of solid self microemulsifying drug delivery system of aceclofenac. **11th International symposium on advances in technology and Business potential of new drug delivery system** organized by controlled release society Indian chapter, on 9th & 10th Feb, 2012, Mumbai.

QIP/ SDP attended

- S.S. Yadav attended AICTE sponsored Quality Improvement Programme on Current trends and future perspective in pharmacology and toxicology, held at K.L.E's college of pharmacy, Belgaum (Karnataka) from 5 March to 16 March 2012.
- V.V. Kale, S. R. Walde, K. S. Moharir, S. R. Yende, P.G. Gondane and S.S. Yadav attended AICTE sponsored Quality Improvement Programme on Drug discovery and Development – Quest for Novel Target, held at Manipal College of Pharmaceutical Sciences, Manipal University, Manipal (Karnataka) from 28 May to 09 June 2012.
- S.P. Padmane and A.N. Mungle attended AICTE sponsored Staff Development Programme on Screening Trends in Herbal and Novel drug delivery system, held at Manoharbhair Patel college of Pharmacy, Gondia, from 4 June to 16 June 2012.



Seminar/Conference/Workshop/ attended

- B. A. Jacob, D. P. Dharkar and S. R. Yende attended **National conference on Materials: Atom to Molecule** held at Shri Shivaji Education society's Science College, Nagpur on 16 Dec. 2011.
- S. R. Yende attended **44th Annual Conference of Indian Pharmacological Society, IPSCON-2011** held at Kasturba Medical College, Manipal University, Manipal on 19-21 Dec. 2011.
- N. P. Sapkal and V.A. Kilor attended **11th International symposium of controlled release society** Indian chapter, 9th & 10th Feb, 2012, Mumbai.
- V.V. Kale, S. R. Walde, M. K. Bhurchandi, S.P. Padmane, G.A. Gurunani, K. S. Moharir and G. K. Lohiya attended **National seminar on Novel approaches in drug design**, held at Department of Pharmaceutical Sciences, RTM Nagpur University, Nagpur on 12 March 2012.
- V.V. Kale attended **Seminar on Life Skill**, held at Department of Biotechnology; RTM Nagpur University, Nagpur in March 2012.
- G.A. Gurunani attended **Seminar on Recent Trends in Chromatography** held at J. L. Chaturvedi College of Pharmacy, Nagpur on 25 Feb 2012.



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