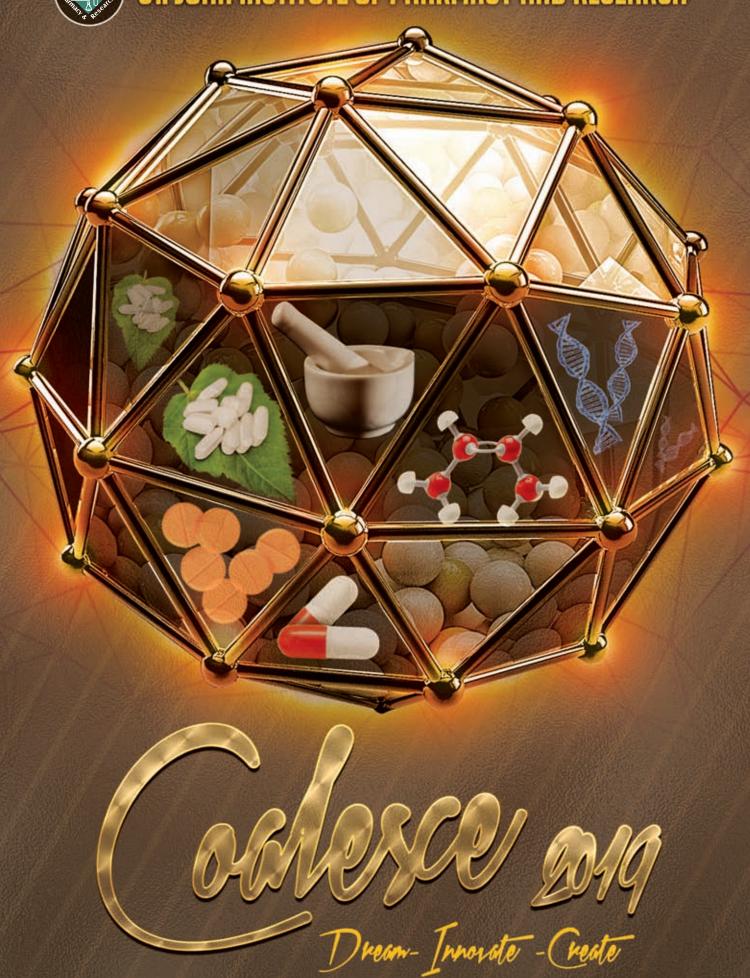


ST. JOHN INSTITUTE OF PHARMACY AND RESEARCH



NAAC ACCREDITED WITH CGPA 2.4 AND GRADE B (2017–22)
NBA ACCREDITED B. PHARM. PROGRAMME (2017–20)





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- M.S. in Sustainable Engineering, Rochester Institute of Technology, U.S.A.













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Principal & Professor of Pharmaceutical Chemistry Bombay College of Pharmacy, Mumbai

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DR. (MRS) SAVITA J. TAURO

Deputy Campus Director, St. John Technical Campus Principal, St. John Institute of Pharmacy and Research Member-Secretary













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Deputy Campus Director, St. John Technical Campus Principal, St. John Institute of Pharmacy and Research Member-Secretary





COALESCE 2019

CHAIRMAN'S MESSAGE



Mr. Albert W. D'Souza Chairman - Aldel Educational Trust's

"If you believe in what you are doing, then let nothing hold you up in your work.

Much of the best work of the world has been done against seeming impossibilities.

The thing is to get the work done." — Dale Carnegie

Greetings for a Happy and Prosperous New Year 2019!

Congratulations to the editorial teams of all the colleges for bringing out the 10th issue of the Campus Magazines. Spectrum, was first released as a combined magazine of the Engineering and Pharmacy colleges in January 2010. Gradually, with the increasing number of programmes, students and faculty, each college has its own magazine, and I am happy that the four magazines, Spectrum, Coalesce, Scintilla & Prism, are

released together at the Campus Annual Day Celebrations.

St. John Technical and Educational Campus, during the last ten years, created an excellent environment for learning and provided opportunities to students from all sections of Society. With focus on 'Teaching—Learning Processes' and 'Student Development' we ensured that the best was available for all. We are proud that our students have excelled in academics, securing ranks at the University, and also performed brilliantly, winning prizes, at several National and International level competitions.

Our next step is to strengthen the Industry Interface through Consultancy and Research. The NABL accredited Civil Laboratories are providing consultancy to the Local Government and Private Construction Businesses while the FDA approved Food and Drug Testing Laboratory will commence shortly to cater to the needs of the local Pharmaceutical Industry. Besides these technical services, an SME Clinic, to provide support to management operations, is also being planned. Our laboratories are being upgraded to focus on collaborative research with Industry.

All the colleges in the campus have NSS units for social outreach activities. Each of the units has an adopted village wherein students and faculty are involved and participate enthusiastically in community service. All these activities reinforce holistic development of students preparing them for the Corporate World.

I assure all the stakeholders of this Campus our continued efforts towards excellence and I invite the Local Industry to collaborate with us towards the development of Palghar District!

"If you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid." – **Albert Einstein**

"The illiterate of the 21st Century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn."- Alvin Toffler

Not too long ago all of us have seen large group of women and men labouring with pick axes, shovels and jamelas working at road and other construction sites. Today one hardly comes across similar sight. The reason being replacement of human labour with machines. This is automation.

With the resurgence of Artificial Intelligence there is great deal of interest in developing Machine

Learning. This effort is leading to development of technologies that replicates human thinking and behaviour. Such developments are leading to business and industry operational environment, popularly known as Industry 4.0.

The expected effect of adoption of Industry 4.0 technologies and practices by all sectors of economy will be on the jobs in the coming years. Many of the jobs as you know will disappear new ones will emerge. Jobs that are repetitive in nature will be automated - this will be unlike anything you have seen and will relate to knowledge work — like for example coding, testing and similar such tasks.

What cannot be replaced by automation is creativity and innovation. Given the fast paced changes that are happening in society the need for innovation in Social Engineering will need skills and abilities - The "Four Cs"

1 Critical Thinking and Problem Solving

2 Communication

3 Collaboration

4 Creativity and Innovation

These are the new 21st century Abilities, Skills and Knowledge which will the new Mantra for Employability.

We the Professors, Heads of Departments, Heads of Institutions and Management at St. John Education Campus have been striving with great deal of passion to create opportunities for engagement for our students' activities that help in developing these new Mantra for employability in our students. Girls and Boys of St. John, let's go for it!

ADVISOR'S MESSAGE



Dr. S. Krishnamoorthy Advisor - St. John Technical & Educational Campus

PRINCIPAL'S MESSAGE



Dr. Savita J. Tauro
Principal, SJIPR

Greetings for a Healthy and Happy New Year 2019

Academic Year 2018-19 marks the beginning of a new decade for St. John Institute of Pharmacy and Research. The last ten years saw SJIPR develop from a fledgling to a mature entity and with flying colours, making a name for itself in the academic world. Great coordination, cooperation and teamwork from all our stakeholders, within the Institute as well as external, resulted in a positive impact with a constructive and encouraging outcome for all.

"If you are walking on the right path and you're willing to keep walking, eventually you'll make progress" — Barack Obama

The Institute has a perspective plan for the next decade which revolves around Research and Industry Interactions. With the accreditation from NAAC and NBA, the Institute was granted approval for the Masters of Pharmacy programme from July 2018 and we have commenced the programme in the specialisation of Pharmaceutical Quality Assurance. With 'Projects' being introduced for UG students in the Choice Based Credit and Grading curriculum of the University as well the 'M. Pharm. Projects', Research and Industry Interactions will take a new turn at SJIPR. Faculty are actively involved in research, having received grants from the University, and now with student research scholars I'm sure they will reach new heights.

Indian Pharmaceutical Industry is globally respected and has grown by leaps and bounds in the last three decades emerging as the World's third largest producer of drugs in terms of volume. This growth assures us of the opportunities available for graduating students, but also indicates quality attributes that these graduates must possess. Holistic development therefore is the necessity to embark into fruitful careers and SJIPR has been consciously working on providing avenues for an all-inclusive improvement in students.

The student community at SJIPR is energetic, enthusiastic and at the same time, disciplined. Our students have excelled in academics and also in extracurricular activities. From Industrial visits to Certification Programmes students are encouraged to build their resumes. Equal emphasis is given to development of Communication Skills, while NSS activities contribute to building in social sensitivity in students.

So while we keep walking on this path of progress, we look forward to the continued support from all our stakeholders and well-wishers, assuring them of another fruitful decade of excellence

FROM EDITORIAL DESK

Dear Readers,

Greetings from the Editorial Team!

Welcome to the Eighth issue of 'Coalesce 2019'. A College magazine is a repository of the heart and soul of the college. It reflects the life and times of the college at various periods in its history and is something that students cherish and treasure in their later years. It records the curricular and extra-curricular accomplishments of the college and provides an opportunity for the students to showcase their talent and explore their creative potential. Along with academics and curricular inputs, co-curricular and extra-curricular activities help shape the overall personality of the student. We are sure that the Coalesce has showcased the creative thoughts and ideas reflecting the all-round development of our students and faculty.

Enjoy every moment you have, because in life, there aren't any rewinds, only flashbacks.

The collection of articles, photographs, and technical information was a hectic task. We are grateful to students and faculty for their contributions and would like to salute the team spirit demonstrated by Coalesce editorial committee towards completion of this tough task. We the editorial team have worked to bring up an exciting flashback of activities, events, and achievements during the session 2018. We are grateful to all our team members for their involvement in bringing out this magazine. We profusely thank the management for giving support and encouragement and a free hand in this endeavor. Last but not the least we are thankful to all the authors who have sent their articles. We truly hope that the pages that follow will make an interesting read.

Good wishes to all. Happy Reading!

Editorially Your's

EDITORIAL TEAM

M

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AKSHARDHARA



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SJIPR ARCHIVES - 2018

St. John Institute of Pharmacy and Research completed 10 glorious years in August 2018, conducting the fouryear full-time Bachelor of Pharmacy course with an intake of 100 students, and the two-year full-time Diploma in Pharmacy course with an intake of 60 students. The 11th academic year began with the commencement of the Post-graduate M. Pharm. programme in Pharmaceutical Quality Assurance with an intake of 15 students. The Institute is affiliated to University of Mumbai and MSBTE with its programs approved by AICTE and DTE (MS). Pharmacy Council of India (PCI) has granted the u/s 12 Approval for both B. Pharm. and D. Pharm. up-to academic year 2019-20 and has granted approval for conduct of course for the M. Pharm. programme. The Institute is also approved u/s 2f of the UGC Act 1956.





The Institute is accredited by National Assessment and Accreditation Council (NAAC) with CGPA 2.40 and Grade B from 2017-22 and has B. Pharm. Programme Accreditation by National Board of Accreditation (NBA) for three years from 2017-20. The Institute is a member of Indian Society for Technical Education (ISTE) and has an ISTE Faculty Chapter with 31 members. The Institute has state-of-the-art facilities with 13 well equipped Laboratories, sophisticated Instrumentation Lab, Machine Room and Computer Centre. The Library has over 5000 volumes, 500+ titles, national and international journals as well as a digital centre.

CO-CURRICULAR & EXTRA-CURRICULAR ACTIVITIES

Induction Programme:

The academic year commenced on Tuesday, 7th August 2018 with Induction and Orientation Programme for First Year B. Pharm. students. Rt. Rev. Bishop Allwyn D'Silva, was the President and Mr. Vinay Raikar was the Induction Officer. Induction and Orientation Programme for First Year D. Pharm. students was held on 1st September 2018. The Students were addressed by Mr. Albert D'Souza, Chairman, Aldel Education Trust, Dr. Savita Tauro, Principal, St. John Institute of Pharmacy and Research & Dr. Gopal Mulgund, Principal, St. John College of Engineering and Management.





Parents Meet of students admitted to First Year B. Pharm. and First Year D. Pharm. was conducted on Saturday, 17th August 2018. Parents were invited for a discussion with the Management and Faculty regarding the curriculum and the other facilities like Mentoring and Counseling available on campus. Parents were addressed by Chairman, Mr. Albert D'souza about the Campus Activities. Principal, Dr. (Mrs) Savita Tauro and faculty briefed the parents on various aspects of the course including the pattern of examinations conducted by the University / MSBTE as well as Academic Calendar, Training and Placement.

Guest Lectures: Following Guest Lectures were conducted during the academic year

- 'Career Options after B. Pharmacy' by Mr. Mahesh Kalsekar, Head Commercial Strategy & BD, GSK Pharmaceuticals Ltd, Mumbai on 10th February 2018.
- 'Quality Risk Management' by Mr. Swapnil Karale, Asst. Manager, QA, Bliss-GVS Pvt Ltd, Palghar on 27th July 2018.
- 'Career Opportunities in Sales and Marketing' by Mr. Heramb Sakpal, Product Manager, Aristo Pharmaceuticals Pvt. Ltd, Mumbai on 4th August 2018.
- 'Preparedness for Placements' by Mr. Vinay Raikar, Founder, Campus Credentials, Mumbai on 7th August 2018.
- 'Higher Studies and Careers in Pharmacy in India' by Mr. Pranav Ganatra Founder, Pharmacad, Mumbai on 8th August 2018.
- 'IPA Pharmacist Development Programme' by Mr. Ayaz Sufi Brand Trainer, Roomi Consultants, Mumbai on on 16th August 2018.
- Mr. Albert W. D'Souza, Chairman, Aldel Education Trust, delivered a 'Motivational Talk' on 3rd September 2018.

'Hospital Management' by Dr. Yogesh Chaudhari, Physician, Dr. M. L. Dhawale Memorial Trust's Rural Homoeopathic Hospital, Palghar on 30th October

2018.



Industrial / Hospital Visits and Workshops:

To give students an exposure to the various applications of the courses in the curriculum, Workshops and Visits to Industries and Hospitals were conducted during the academic year as follows:

- 1. Workshop on "High Performance Liquid Chromatography (HPLC)" by Mr. Hardik Shah, Manager-Technical Sales, C. Abhaykumar & Co. Mumbai, on 17th March 2018 Final Year B. Pharm.
- 2. Workshop on 'Predinical Screening Methods of Drugs' on 31st March 2018 Second Year B. Pharm.
- 3. Enicar Pharma, Boisar, Industrial Visit, 5th April 2018, Third Year B. Pharm.
- 4. Enicar Pharma, Boisar, Industrial Visit, 28th July 2018, Second Year B. Pharm.
- 5. Karuna Hospital, Borivli, Hospital Visit, 10th & 17th Aug 2018, Final Year B. Pharm.
- 6. Impulse Pharmaceuticals Pvt Ltd, Boisar, Industrial Visit, 8th September 2018, Second Year D. Pharm.
- 7. Dr. M. L. Dhawale Memorial Trust's Rural Homoeopathic Hospital, Palghar, Hospital Visit, 12th September 2018, First Year and Second Year D. Pharm.
- 8. Workshop on 'Hands on Training in use of Nanoionisation equipments' at Dr. L H Hiranandani College of Pharmacy, Ulhasnagar, 13th October 2018, Third Year B. Pharm.
- 9. Vimta Labs Ltd & Indian Immunologicals Ltd. Hyderabad, Industrial Tour, 16th 21th December 2018, Final Year B. Pharm





Certification Course by IPM (Institute of Pharmaceutical Management):

St. John Institute of Pharmacy and Research collaborated with Institute of Pharmaceutical Management (IPM) to conduct a workshop on 'Regulatory Aspects and IPR' for the students of Third and Final Year B. Pharm. Mrs. Anagha Maharao, Managing Director, Institute of Pharmaceutical Management, and her team from reputed Pharmaceutical Industries conducted a seven day workshop for our students.

Science Fest: Science Fest — "A Journey from Science to Innovative Technology" was conducted on 25th and 26th January 2018. The event was inaugurated by Superintendent of Police, Palghar District, Mr. Manjunath Singe (IPS), who addressed the participants. The Chairman of Aldel Education Trust, Mr. Albert W. D'Souza, welcomed the Chief Guest, and all the participating institutes for the event. The aim was to familiarize students of High School and Junior College about the transition from basic science to its applications in technology. Faculty and students participated enthusiastically wherein students displayed working models in different fields of Pharmacy to highlight themes on functions of human body systems, drug delivery and a model of Pharma



Industry. They also displayed working models to highlight various routes of drug administration and drug delivery. Banners for awareness on the Pharmacy Profession were also displayed by students. Approximately 2000 people visited the stalls.



World Pharmacist Day: World Pharmacist Day was celebrated on Saturday, 25th September 2018, together with Chemist Association of Palghar District on the theme "Pharmacists: Your Medicines Experts" it was attended by the Presidents and Vice Presidents of both Palghar and Dahanu Chemist Associations. Mr. H. Dhanani, VP of Palghar Chemist Association addressed the students. The formal program was followed by student events - Poster making competition and Pharma Quiz.

NSS: The Institute has an active NSS Unit sanctioned by the University of Mumbai. Several activities were conducted like International Yoga Day, Tree Plantation at Navali, Bhogole Village at Palghar. Students put up skits and posters in the neighbouring areas of Palghar district to sensitize the local tribal population on current issues. Health awareness programmes on Malaria and Dengue were conducted. Other programmes conducted include Cleanliness and Environment protection drives, Anti plastic drive with distribution of Cloth bags, Road



Safety Awareness Rally. NSS volunteers took active part in the rally on Non — Violence and 'Gandhiji's Life and His Work' on the occasion of 150th Birth Anniversary of Mahatama Gandhiji. A visit to Anand Old Age Home at Shirgaon Village, District Palghar created awareness in the present generation regarding the aging inmates in the home and their social problems. The students participated in a residential camp from 21st January to 27th January 2018 at Maalti Baug, Save Farm, Kosbad at Dahanu.



The Sixth Graduation Day: St. John Technical Campus held its 6th Graduation Ceremony on Saturday, 3rd March 2018. Students who had graduated in May-June 2017 from across all institutes in the campus were felicitated and handed over their degrees by Chief Guest, Rt. Rev. Bishop John Rodrigues - Auxiliary Bishop, Archdiocese of Bombay, Chairman, Mr. Albert W. D'Souza and Mrs. Elvina D'Souza, Secretary of Aldel Education Trust, along with the Principals of the respective Institutes. Students from each institute also shared their memories and experiences of their college days.

Annual Sports and Cultural Events: Annual Sports and Cultural Week was celebrated from 8th to 12th January 2018. Sports events were conducted from 8th to 10th January 2018. Outdoor sports included Box-cricket, Football, Volleyball & Tug-of-war for boys, and Dodgeball, Throwball and Penalty-Kick for girls. Indoor events were Carrom, Chess, Badminton and Table Tennis for both boys and girls. Cultural events were organized on 10th & 11th January 2018. Students participated in Nail Art, Mehendi, Rangoli, Singing (Solo and Duet), Dance (Solo and Group), and Minute to win it, Antakshari and Stand-up comedy. The campus celebrated Traditional Day on 12th January 2018.





Annual Day: St. John Technical Campus celebrated its Annual Day on Saturday, 13th January 2018 for all Institutes on campus. Eminent personalities with diversified background graced the occasion. Chief Guest, Rev. Fr. Dr. Praveen Martis SJ, Principal of St. Aloysius College (Autonomous), Mangalore, complimented the students for their academic excellence. The theme for the cultural performances was 'Incredible India'. Students of SJIPR performed a musical skit portraying the Western Part of India with its culture and tradition. The seventh edition of the college magazine, 'Coalesce' was released on this day as part of the Campus Magazine.

Faculty Development Programs (FDP) are conducted regularly to train faculty in various aspects ranging from Technical Skills to Communication and Teaching-Learning Skills. During the last year, several sessions were conducted for all faculty on campus by internal senior faculty and also invited speakers from renowned institutes and industries. Campus FDP for newly joined faculty was conducted from 28th June to 30th June 2018. All faculty on campus attended the FDP on 30th June 2018, for session on "Envisioning the future for St. John" by Fr. Adolf Furtado, SDB.

Indian Society for Technical Education (ISTE) Faculty Chapter: AICTE-ISTE Sponsored One Week Induction Programme was conducted by St. John Institute of Pharmacy and Research, Palghar, from Monday, 7th May to Saturday, 12th May 2018 on "A Comprehensive Induction on Best Practices for Effective Teaching Learning Process". The programme was conducted under the ISTE Faculty Chapter of SJIPR which has 31 Life Members. The faculty visited Bliss Pharmaceuticals, Palghar as a part of the Induction Programme.



National Symposium:

SYMPHORIA: "Symphoria" the annual technical event of St. John Institute of Pharmacy and Research, Palghar, was held on Saturday, 6th January 2018. The theme of the event was "Challenges and Opportunities in Novel Drug Delivery Systems". The symposium was sponsored by Indian Council of Medical Research (ICMR). The symposium was attended by 99 delegates from academia and industry. The annual technical bulletin, 'Symphoria' was released at the inaugural programme. The speakers delivered sessions on the following:

1. Dr. Atmaram Pawar, Professor in Pharmaceutics & Vice-Principal, Bharati Vidyapeeth Poona College of Pharmacy, Pune. Key Note Address on "Anticancer Drug Loaded Nano Cochleates for Cancer Targeting"



3. Dr. Sujata Sawarkar, Associate Professor in Pharmaceutics (HOD), Dr. Bhanuben Nanavati College of Pharmacy, Mumbai.
"Novel Drug Delivery Systems - Commercial Opportunities , Regulatory Aspects and Challenges"



2. Mr. Rahul Aher, Senior Research Scientist, R&D Division, Glenmark Pharmaceutical Division, Nashik. "Quality Risk Management Q9 in the Evolving Indian Pharma Industry"



4. Mr. Pankaj Pathak, Buissness Development Manager, Lubrizol Lifesciences Mumbai. "Liposomal Formulation, Opportunities and Challenges-Industrial Perspectives"



SJIPR ARCHIVES - 2018

Research Grants from University of Mumbai:

- 1. "Molecular docking and comparative studies on conventional and microwave assisted synthesis of fused pyrazolidine-quinoline ring"; Mr. Avinash Barchha, Asst. Professor, Dept. of Pharmaceutical Chemistry
- 2. "Synthesis, antimicrobial activity and molecular docking of novel 1,3 oxazine scaffolds incorporating a chalcone framework"; Ms. Sahaya Asirvatham, Asst. Professor, Dept. of Pharmaceutical Chemistry
- 3. "Optimization of forced degradation by factorial design and development of Liquid Chromatographic method for an antiviral drug"; Mr. Prashant Chaturvedi, Asst. Professor, Dept. of Pharmaceutical Chemistry
- 4. "In vitro interaction of certain antimicrobial agents in combination with plant extracts against some pathogenic bacterial strains"; Mr. Dnyaneshwar Rajgure, Asst. Professor, Dept. of Pharmacology
- 5. "Crystal Engineered Phytoconstituents: Preparation, Characterization and Evaluation." Dr. Bharat Dhokchawle, Asso. Professor, Dept. of Pharmaceutical Chemistry
- 6. "Isolation, characterization and evaluation of *Trigonella foenum-graecum* seeds gum as suspending agent using diclofenac as a model drug for suspension.", Mr. Angel Godad, Asst. Professor, Dept. of Pharmacology
- 7. "Phytoconstituents loaded Nanocochleate: Optimization, Formulation, Characterisation and In-vitro anticancer testing"; Mr. Amol Gholap, Asst. Professor, Dept. of Pharmaceutics.

Publications:

- 1. Abhijeet V. Puri*, Prakash D. Khandagale and Yunus N. Ansari, A review on ethnomedicinal, pharmacological and phytochemical aspects of *Sonchus oleraceus* Linn. (Asteraceae). International Journal of Pharmacy and Biological Sciences 2018; 8(3):1-9.
- Ansari Yunus N*, Puri Abhijeet V. Development and Method Validation of RP-HPLC Method for Simultaneous Estimation and Forced Degradation of Cefoperazone and Tazobactam In Bulk And Pharmaceutical Dosage Form Chromatography, Indo American Journal of pharmaceutical research, 2018; 8(5):1286-95.
- 3. Prakash D. Khandagale*, Puri Abhijeet V, Yunus N. Ansari and Ravindra Patil. Pharmacognostic, Physicochemical investigation of *Caeselpinia Bonducella* (L.)Roxb. International Journal of Pharmacy and Biological Sciences. 2018;8 (3):461-468.
- 4. Puri Abhijeet V* Microscopical Evaluation, Phytochemical screening and HPTLC Fingerprinting of Leaves of *Diospyros montana* (Roxb.) International Journal of Green Pharmacy. 2018;12(3):1-7.
- 5. Meeta Jain* Development and Characterization of Gastroretentive mucoadhesive tablets of riboflavin. Indian Journal of Drugs. 2018;6(2):105-111
- 6. Puri Abhijeet V*. Duranta repens linn. (Verbenaceae): A comprehensive review of pharmacognostic, ethnomedicinal, pharmacological and phytochemical aspects. Asian Journal of Pharmaceutical and Clinical Research. 2018;11(11):91-96.
- 7. Abhijeet V. Puri* and Amol D. Gholap. Comparative evaluation of papaya and banana starch as disintegrant in diclofenac sodium tablet formulation.

 International Journal of Pharmacy and Biological Sciences. 2018;8(3):512-522.
- 8. Karande R*, Gangrade D; Synthesis, Characterization and Evaluation of Schiff's Base Mutual Prodrugs of Naproxen; International Journal of Pharmaceutical Sciences and Research.2018;9(11):1000-07
- 9. Dhokchawle V. Bharat,*, Asirvatham Sahaya, Dr. Tauro Savita J., Dr. Bhandari B. Anil., Babu S. Sumi, Shetty R. Rupa., Synthesis and Evaluation of Naproxen Ester Prodrugs, Artide In press., Indian drugs

Paper / Poster Presentations / Conferences /QIPs Attended:

- 1. Dr. Bharat Dhokchawle attended and presented a paper on "Activities beyond Curriculum for improvement of Program Outcome attainment" at 4th World Summit on Accreditation (WOSA 2018), 7th to 9th September 2018, New Delhi.
- 2. Mr. Prashant Chaturvedi attended three days workshop on "ICP-AES, ICP-MS & CHNSO and its applications" at Sophisticated Analytical Instruments Facility, IIT Bombay 3rd to 5th October 2018
- 3. Ms. Nisha Kalayil attended one day IPR Awareness Workshop on "Women in innovation and creativity" at SDNT Women's University, Juhu, Mumbai 9th October 2018
- 4. Mr. Amarjitsing Rajput, attended and presented a paper on "Nose to Brain Targeted Delivery of Donepezil Liposome Based in Situ Gel in Treatment of Alzheimer's Disease " at 70th Indian Pharmaceutical Congress, 21st to 23rd December 2018, Amity University Campus, Delhi-NCR
- 5. Mr. Abhijeet Puri attended and presented a paper on "Isolation and evaluation of banana starch as a disintegrant in dispersible lornoxicam tablet" at International Conference On Herbal Medicines: Research and Commerce Global Perspectives 27th to 29th December 2018, Ahmedabad.
- 6. Mr. Prakash Khandagale attended and presented a paper on "Phytochemical screening and antiasthmatic activity of *Caesalpinia bonducella* [L.] Roxb. Seed " at International Conference On Herbal Medicines: Research and Commerce Global Perspectives 27th to 29th December 2018, Ahmedabad.

FACULTY PROFILE BACHELOR OF PHARMACY



Dr. (Mrs) Savita J. Tauro Principal & Professor



Dr. Govind S. Asane Vice - Principal & Professor



Dr. (Mrs.) Savita R. Kulkarni Adjunct Professor



Dr. (Mrs.) Norma L. Rebello HOD & Asso. Professor



Dr. Bharat V. Dhokchawle HOD & Asso. Professor



Dr. Deepak K. Bharati HOD & Asso. Professor



Mr. Angel P. Godad Asst. Professor



Mr. Prashant K. Chaturvedi Asst. Professor



Mr. Abhijeet V. Puri Asst. Professor



Mr. Avinash B. Barchha Asst. Professor



Mrs. Vrushali N. Gokhale Asst. Professor



Mrs. Deepali M. Nahar Asst. Professor



Mrs. Meeta N. Jain Asst. Professor



Mr. Amol D. Gholap Asst. Professor



Mr. Dnyaneshwar T. Rajgure
Asst. Professor



Mr. Ramesh D. Bhusal Asst. Professor



Mr. Prashant B. Dalvi Asst. Professor



Mrs. Sahaya Asirvatham Asst. Professor



Mr. Jegan Sakthivel Nadar Asst. Professor



Ms. Della Verghese Asst. Professor



Mr. Melroy M. D'sa Asst. Professor



Ms. Nisha V. Kalayil Asst. Professor



Mr. Yunus N. Ansari Asst. Professor



Mr. Girish A. Kashid Asst. Professor



Mr. Atish N. Waghmare Asst. Professor



Mr. Prakash D. Khandagale Asst. Professor



Ms. Macveena M. Machado Asst. Professor



Mrs. Ekta P. Thakor Asst. Professor



Mr. Amarjitsing P. Rajput Asst. Professor

DIPLOMA IN PHARMACY



Mrs. Anuradha A. Choudhari Lecturer



Mr. Ravindra A. Karande Lecturer



Mrs. Sandhya R. Gawai Lecturer



Mrs. Shanvi S. Gawli Lecturer



Mrs. Varsha N. More Lecturer



Mr. Akashdeep R. Udmale Lecturer

ADMINISTRATION



Mr. Shekar D. Poojari Accounts Manager



Mr. Satishkumar P. Tiwari Registrar



Mr. Mohan Poojary Administrator



Ms. Mary J. Patole Sr. Office Executive



Mr. Ramesh R. Thustu
Office Executive



Mrs. Brinal R. Lopes
Office Executive



Mr. Rohan V. Mishra Jr. Office Executive



Mrs. Vibha V. Patil Jr. Office Executive



Mrs. Shubhangi P. Karbat Receptionist



Mr. Abhishek G. Mestry Office Attendant



Mr. Girish K. Dhuri Office Attendant

LIBRARY STAFF



Mr. Prakash S. Kashide Librarian



Mrs. Rosy Ekka Library Attendant

STORES & LABORATORY



Mr. Rais Ahmed M. Ansari Store Keeper



Mr. Javed N. Shaikh Laboratory Assistant



Mrs. Bhakti A. Patil Laboratory Assistant



Mr. Yogesh M. Patil Laboratory Assistant



Mrs. Shalaka S. Chaudhari Laboratory Assistant



Mr. Nitish U. Gharat Laboratory Assistant



Mr. Harshad D. Satpute Laboratory Assistant



Mr. Pankaj R. Churi Laboratory Assistant



Ms. Krunali Y. Patil Laboratory Assistant



Mr. Devji P. Chavan Laboratory Attendant



Mr. Kishore S. Angre Laboratory Attendant



Mr. Sudesh T. Gavankar Laboratory Attendan



Mr. Sunil N. Kom Laboratory Attendant



Mr. Pascol J. D'souza Laboratory Attendant



Mr. Sagar H. Karbat Laboratory Attendant



Mr. Krishna L. Tamore Laboratory Attendant



Mr. Ankit P. Patil Laboratory Attendant



Mr. Rohit B. Panera Laboratory Attendant

ACADEMIC AWARDS

FINAL YEAR B. PHARM

THIRD YEAR B. PHARM

SECOND YEAR B. PHARM



Mr. Ali Imranhusain 8.20 CGPA



Mr. Omkar Sawant 8.04 CGPA



Ms. Choudhary Manju 8.67 CGPA



Ms. Baghel Shivani 8.48 CGPA



Ms. Khandelwal Nilamkumari 9.52 CGPA



Mr. Taites Aaron 9.36 CGPA

FIRST YEAR B. PHARM



Mr. Dhawal Sankhe 9.32 CGPA



Ms. Khushbu Jain 9.32 CGPA

Mr. Jignesh Kumavat 84.9 %



Mr. Sanjay Suthar 79.6 %



Mr. Dilip Choudhary 90.5 %



Mr. Rishabh Rajpurohit 89.4 %

STUDENT COUNCIL

GENERAL SECRETARY

Ms. Sairiya Rodrigues

Final Year B. Pharm.

TECHNICAL SECRETARY

Ms. Simone Mendonca

Third Year B. Pharm.







Ms. Samiksha Singh Third Year B. Pharm.

SPORTS SECRETARY



Mr. Sahil Pathan Third Year B. Pharm.

TREASURER

Ms. Pooja Pandey Third Year B. Pharm.

CLASS REPRESENTATIVES



Ms. Jenifer Fernandes F. Y. M. Pharm (QA)



Ms. Afiya Lulania F. Y. B. Pharm. Div-I



Ms. Ishrat Shaikh F. Y. B. Pharm. Div-II



Mr. Udit Poojary S. Y. B. Pharm. Div-I



Mr. Viraj Jain S. Y. B. Pharm. Div-II



Ms. Nikita Pise T. Y. B. Pharm. Div-



Ms. Samiksha Singh T. Y. B. Pharm. Div-II



Ms. Sanika Phatak Final Y. B. Pharm. Div-I



Ms. Rachana Mestry Final Y. B. Pharm. Div-II



Ms. Pinky Choudhary F. Y. D. Pharm.



Mr. Shanshank Nayak S. Y. D. Pharm.

COALESCE 2019

ALUMNI SPEAK

I started my St. John's College journey by being a very reserved person, I used to be by myself & not talk to others. I was unfamiliar with the world around. Gradually the change in me began when I made friends, started talking to people, faculty, and slowly developed a rapport with all my classmates and faculty. The 4 years was that period of my life where I developed qualities of maturity, gentleness, humor. Whenever I look back to those college days, I remember the annual day dances, the fun, lectures, the bunking, tiffin sharing, late-night wakes which I had at

> my besties house and various other memories. All the love which I received from my colleagues, faculties, lab assistants, made the four years of my stay at SJIPR the ultimate time of my life where I learned what is college life. Life in SJIPR made all of us feel like a family for each other, I will miss all of that

> > Mr. Omkar Sawant

M. Pharm. (Quality Assurance) SVKM's Dr. Bhanuben Nanavati College of Pharmacy, Mumba

Today I'm glad that to have this opportunity to write as an alumni of SJIPR. The period of four years is actually a large time span but it seems to be just like a few months being in SJIPR. This Institute has been just like my second home. Together, along with my classmates, we have achieved all our academic and extracurricular goals. At present, it feels like something is missing in my life, I also miss the times when my friends would snatch my food and eat. I would like to thank all my dassmates, faculties and the non-teaching staff to make the journey of four years so

fruitful. SJIPR provides all the students with a favorable platform to achieve success. The well-equipped and maintained labs, as well as the great infrastructure of SJIPR, is the driving force for the students. SJIPR played the most important role to teach students about the importance of discipline in life. I just wish the institute grows by leaps and bounds.

Mr. Dheeraj Pandey

MS (Pharm) Medicinal Chemistry

National Institute of Pharmaceutical Education & Research (NIPER), Raebard

My journey with SJIPR began in 2014 and to me it will be a continuous one. 4 years have passed in a blink of an eye. Both teaching and non-teaching staff has brought a sea of changes in me on the academic as well as on the personal front. I realized that when I entered the Corporate world. Fortune shined on me, and I got a few shining stars who have lit up my life, surely forever. SJIPR has been a VIVID experience for me and all my batchmates.

And so my dear juniors, make a conscious effort to extract the maximum you can from this wonderful institute. Also, rightfully enjoy at the same time. SJIPR- A sacred experience for rest of my Life.

Proud to be a Johnite.

I am glad to be a part of SJIPR. The four fantastic years gifted me with lot of unforgettable impressions. Those occasional class bunks, canteen gossips, last bench fun, mentoring sessions, practicals with lot of madness, cultural events like traditional day, teachers day, sports day and many countless memories. This institute has given us a tremendous learning experience, the lessons taught by our Proficient

Professors have given us indispensable knowledge and guidance throughout our session. I am grateful to my Teachers for all their efforts to make us a better person & support us throughout our college journey and of course help us score good grades.

> I have seen this institute growing and grooming every single day because of the highly ambitious and committed faculty. It is their courage, hard work and patience which have helped in producing bright students who have done well in their respective careers.

All thanks to our respected Principal and Teachers! Without you it would not have been possible to tread such a great path. Proud to be a St. Johnite

Ms. Jyoti Thakur

M. Pharm. (Quality Assurance) St. John Institute of Pharmacy and Research, Palghai

Mr. Priyank Mishra

Medical Business Associate GlaxoSmithKline (GSK) Pharmaceuticals

SJIPR is much beyond just an "Institution"...It actually denotes a "Culture"... A culture of excellence, empowerment, and enrichment. Achievements-applauds, opportunities-thoughts, this is what I gained from SJIPR. Somedays I won and somedays I learned. I would like to express my heartfelt gratitude to my Principal, Teachers and other members of our Institute. I had many happy moments and some lifelong friendships which will always be cherished. This institute has moulded my personality and darified my vision of the future. And as

> Stephen Hawking said "Look up at the stars and not down at your feet. Try to make sense of what you see, and wonder about what makes the universe exist. Be curious!"

> > Proud to be a St. Johnite Love to all at SJIPR.

Ms. Candice Desouza Pharmacovigilance Tata Consultancy Services, (TCS)

It gives me immense pleasure to be a part of SJIPR where I have spent 4 memorable years. SJIPR has made me more responsible and confident for which I will be forever grateful. This could be possible only because of the faculties who have been so supportive throughout and friends who turned into family. The time spent in dassrooms, laboratory, library, corridors etc, can never be replaced. The extra-curricular activities made sure that everybody got a chance to showcase their talents. My sincere gratitude to all Teaching and Non-

Teaching staff for making the 4 years journey easy for all of us. To all those who have started their journey, it's going to be a rollercoaster ride with mixed feelings and to those who will leave soon, you are going to miss your college life. Trust me!

Best wishes to everyone at SJIPR!

Ms. Neha Eldho Masters in Biotechnology & Bioinformatics, Deakin University, Australia



SJIPR COALESCE 2019

IPA STUDENTS FORUM





Sairiva Rodrigues Editorial Committee



Annmaria Johnson Finance Committee



Aaron Taites Student Exchange Officer



Suzanne Gomes Public Relations Officer



Alisha Dsouza



Christopher Dsouza Pharmacy Education Officer



Victoria Blessing

IPA Students' & Panache Biz - MSB - Students is a forum for pharmacy students under the Indian Pharmaceutical Association. It aims to bring all pharmacy students under one umbrella so that their energies can be synergized to make a difference. This will enable them to become better future pharmacists while abiding with the highest ethical and professional standards. This will catalyze their overall development, honing their academic, leadership and professional skills for their benefit, in turn, the profession and thus health of INDIA. The mission of IPA-MSB-SF is to provide opportunities for students to pursue their personal, professional and academic goals in student-led organizations. To enhance their educational experience, students are encouraged to participate in group activities that allow them to develop personal and professional relationships, learn leadership and organizational skills and serve the community.

Students from SJIPR are in the following committees of IPA-MSB-SF and hold designations as mentioned above: The year started off with a bang, with our first event 'Hepathon' witnessing over 100 participants from SJIPR, followed by a seminar wherein eminent personalities spoke to students about the various facets of Hepatitis, its prevention, and cure. The next social cause we took up was that of blood donation, organized at Lalbaug, where there were numerous volunteers and blood donors as well. Apart from this, there were various health campaigns to spread awareness, blood bank, and hospital visits as well. On the academic and curriculum front, there were numerous Seminars and Orientation lectures encompassing higher education, future prospects, and other topics. All work and no play could have made the year dull, so keeping that in mind we also had many recreational activities. Garba Night during Navratri and the Trek to Irshalgad were standout events. This was followed by events like Aesthetica and Literati having a total of 50 participants from our college. We now look forward towards an amazing participation in Rx which will be held in January 2019. Rx festival is a sport, cultural, technical and talent enhancing program of the Students' Forum, organized every year on a grand scale by the effort and excellent coordination of the students. This enables them to learn the skill in event management & teamwork, thus helping them to acquire the art of working in collaboration with their fellow students. These skills, in turn, will indirectly help the profession of pharmacy in the nation. The Rx Festival is the oldest large-scale annual festival for the pharmacy student community and has increased over the years. The festival is divided into three main categories that are Rx-Sports, Rx-Techfest, and Rx-Cultural event. Every year a new theme is set for Rx and the entire festival revolves around the selected theme. Rx-Cultural event provides a platform for pharmacy students to showcase their hidden talents in the field of dancing, singing, fashion, literary events and many more. It is the most awaited and anticipated festival of the pharmacy community.

So join us and let's make SJIPR standout in Rx this year. Here's to an amazing year!



SJIPR

VISIT OF THE HON. VICE CHANCELLOR, UNIVERSITY OF MUMBAI



It was indeed a cherishing moment for the St. John Institutions on 13th December 2018 when the Hon. Vice Chancellor of Mumbai University, Dr. Suhas Pednekar, visited the Campus along with Dy. Registrar, Dr. Dinesh Kamble and Asst. Registrar, Mrs Sanjana Sawant. The guests were welcomed by the Dy. Campus Director, Dr. Savita Tauro, Principals Dr. G. V. Mulgund and Dr. B. S. Ajitkumar, General Manager, Mr. K. K Shetty and H. R. Manager Mr. Vidyadhar Patil along with HOD's and Senior Administrative Managers of all the Institutes.

Dr. Savita Tauro briefed the Hon. Vice Chancellor and his team about the inception of the Aldel Education Trust, the Board of Trustees and their effort in setting up a Technical and Educational Campus on a Self-Financing basis in the rural and tribal region of Palghar District. She also informed them about the progress made by the academic institutions in the Campus, their Accreditations by NAAC and NBA and especially the ranks achieved by students at the University Examinations.

The Hon. Vice Chancellor was impressed by the infrastructure and the maintenance of the Campus. He appreciated the efforts of the Management in providing a wonderful campus in a remote region like Palghar. He was fascinated with the lush green campus and serenity, and stated that it was a perfect ambience for learning.

The Hon. Vice Chancellor's special message for the faculty members:

"Academicians play a key role in leading young minds in the right direction. Faculty should be alert with the changes taking place in the Fourth Industrial Revolution and the effects of the Digital era wherein traditional jobs of 'Teaching' will no longer continue with the same teaching methods, knowledge and skills. Artificial Intelligence is predicted to take over

traditional teaching and sooner or later a Teacher's role would be obsolete. If teachers continue to deliver content that is already available to learners at their fingertips through digital resources, they would gradually avoid the classroom and rather prefer to upgrade their knowledge through resources outside the classroom. However we teachers can still hold on to our career if we can pass on the specialized skills, with the vision of future, in our respective areas of specializations. Teachers need to reform their teaching techniques and pass on the requisite skills to their learners. We just need to be facilitators, and not make them only exam oriented learners. We need to ignite the inquisitiveness in students and encourage them to ask questions. Quality teaching should be provided every time. This all will definitely help to avoid substituting the Human Teacher with Artificial Intelligence."

The Hon. Vice Chancellor expressed his happiness about many older Institutes affiliated to University of Mumbai applying for Autonomy and encouraged the St. John team to plan for the same in future. His opinion was that Autonomy would provide an opportunity to the Institutes to follow a curriculum as per Industry requirements and improve the employability of their students. He shared his experience of US Universities where Multi-teaching was the new practice, involving not just academicians but also industry experts, teaching a class of students simultaneously. Their aim was to not only keep the students informed about the concepts but also the practical applications.

He congratulated the Aldel Education Trust and the St. John team for their hard work and perseverance in bringing Technical Education to the rural area and encouraged them to work towards the employability of students. He assured them of his support in their endeavors.

ARTIFICIAL INTELLIGENCE IN LIFE SCIENCES

After reading with interest a recent Times article outlining the role that robots are playing in helping transform the healthcare sector, it's clear that the gains could be enormous.

With androids aiding surgeons in operating theatres and artificial intelligence systems scanning x-rays, the bar is being set very high with machines pooling the medical expertise of thousands of specialists.

What are the cutting-edge organisations already doing?

The growing maturity of artificial intelligence technologies, including natural language processing, machine learning and natural language generation is already leading cutting-edge in Life Sciences companies to investigate their possibilities in R&D. We expect to see more proofs of concept and targeted deployments of these technologies across the whole spectrum of R&D functions and processes including market access, clinical trial recruitment, automation of adverse event capture and processing, automation of report writing, translation automation and enhanced Regulatory Intelligence services. Life Sciences should be looking at the opportunity to eliminate unnecessary work, drastically cut cycle times and the possibility of reducing operational costs by 50% or more. At full maturity, these innovations have the potential to completely transform the operations and cost base for both Life Sciences R&D and the growing Service Provider community.

APPLICATIONS: Many industries have been disrupted by the influx of new technologies in the Information Age. Healthcare is no different. Particularly in the case of automation, machine learning, and artificial intelligence (AI), doctors, hospitals, insurance companies, and industries with ties to healthcare have all been impacted — in many cases in more positive, substantial ways than other industries. According to a 2016 report from CB Insights, about 86% of healthcare provider organizations, life science companies, and technology vendors to healthcare are using artificial intelligence technology. By 2020, these organizations will spend an average of \$54 million on artificial intelligence projects. So what solutions are they most commonly implementing? Here are 10 common ways AI is changing healthcare now and will in the future.

- 1. Managing Medical Records and Other Data: Since the first step in health care is compiling and analyzing information (like medical records and other past history), data management is the most widely used application of artificial intelligence and digital automation. Robots collect, store, re-format, and trace data to provide faster, more consistent access.
- 2. Doing Repetitive Jobs: Analyzing tests, X-Rays, CT scans, data entry, and other mundane tasks can all be done faster and more accurately by robots. Cardiology and radiology are two disciplines where the amount of data to analyze can be overwhelming and time consuming. Cardiologists and radiologists in the future should only look at the most complicated cases where human supervision is useful.
- **3. Treatment Design :** Artificial intelligence systems have been created to analyze data notes and reports from a patient's file, external research, and clinical expertise to help select the correct, individually customized treatment path.
- **4. Digital Consultation**: Apps like Babylon in the UK use Al to give medical consultation based on personal medical history and common medical knowledge. Users report their symptoms into the app, which uses speech recognition to compare against a database of illnesses. Babylon then offers a recommended action, taking into account the user's medical history.
- **5. Virtual Nurses**: The startup Sensely has developed Molly, a digital nurse to help people monitor patient's condition and follow up with treatments, between doctor visits. The program uses machine learning to support patients, specializing in chronic illnesses. In 2016, Boston Children's Hospital developed an app for Amazon Alexa that gives basic health information and advice for parents of ill children. The app answers asked questions about medications and whether symptoms require a doctor visit.
- **6. Medication Management**: The National Institutes of Health have created the AiCure app to monitor the use of medication by a patient. A smartphone's webcam is partnered with Al to autonomously

- confirm that patients are taking their prescriptions and helps them manage their condition. Most common users could be people with serious medical conditions, patients who tend to go against doctor advice, and participants in clinical trials.
- **7. Drug Creation**: Developing pharmaceuticals through clinical trials can take more than a decade and cost billions of dollars. Making this process faster and cheaper could change the world. Amidst the recent Ebola virus scare, a program powered by Al was used to scan existing medicines that could be redesigned to fight the disease.

The program found two medications that may reduce Ebola infectivity in one day, when analysis of this type generally takes months or years – a difference that could mean saving thousands of lives.

- **8. Precision Medicine**: Genetics and genomics look for mutations and links to disease from the information in DNA. With the help of Al, body scans can spot cancer and vascular diseases early and predict the health issues people might face based on their genetics.
- **9. Health Monitoring**: Wearable health trackers like those from FitBit, Apple, Garmin and others monitors heart rate and activity levels. They can send alerts to the user to get more exercise and can share this information to doctors (and Al systems) for additional data points on the needs and habits of patients.
- **10. Healthcare System Analysis**: In the Netherlands, 97% of healthcare invoices are digital. A Dutch company uses AI to sift through the data to highlight mistakes in treatments, workflow inefficiencies, and helps area healthcare systems avoid unnecessary patient hospitalizations.

These are just a sample of the solutions AI is offering the healthcare industry. As innovation pushes the capabilities of automation and digital workforces, from providers like Novatio, more solutions to save time, lower costs, and increase

accuracy will be possible.

Ms. Rachana Mestry Final Year B. Pharm.



AMAZING HUMAN BODY FACTS

The human body is an incredibly complex and intricate system and it still baffles researchers regularly despite thousands of years of medical knowledge. As a result, it shouldn't be a surprise that even body parts we deal with everyday have unexpected facts and explanations behind them.

- 1. The brain is more active at night than during the day. Scientists don't know yet why this is so.
- 2. The higher your IQ, the more you dream.
- 3. Humans are the only species that produce emotional tears.
- 4. Your eyes remain the same size after birth but your nose and ears never stop growing.
- 5. All babies are color blind at birth, they see only black and white.
- 6. Babies are always born with blue eyes. The melanin in their eyes needs time to be fully deposited or to be darkened by ultraviolet light to reveal the true eye color.
- 7. The only part of your body that has no blood supply is the cornea
- 8. Everybody has one strong eye and one weak eye.
- Noise causes the pupils of your eyes to dilate. Even very small noises can do this.
- 10. Women blink twice as many times as men do.
- 11. Women are born better smellers than men and remain better smellers over life.
- 12. After eating too much, your hearing is less sharp.
- 13. During your lifetime, you will produce enough saliva to fill two swimming pools.
- 14. If your saliva cannot dissolve or mix with food, you will not be able to taste that food (try tasting something after drying off your tongue)
- 15. By the age of 60, most people will have lost half their taste buds.
- 16. A normal human being can survive 20 days without eating but can survive only 2 days without drinking.
- 17. A woman's heart beats faster than a man's.
- 18. The lifespan of a human hair is 3 to 7 years on an average.
- 19. Facial hair grows faster than any other hair on the body.
- 20. The nail on the middle finger grows faster than the other fingernails.

- 21. Fingernails grow nearly four times faster than toe nails.
- 22. Three hundred million cells die in the human body every minute and every day and an adult produces 300 billion new cells.
- 23. Humans shed and regrow outer skin every 27 days.
- 24. About 32 million bacteria call every inch of your skin home, but they are mostly harmless and some of them are even helpful.
- 25. The acid in your stomach is strong enough to dissolve zinc. It doesn't destroy the stomach because the stomach wall constantly renews itself.
 - 26. Men burn fat faster than women by a rate of about 50 calories a day.
 - 27. Men get hiccups more often than women.
 - 28. A simple, moderately severe sunburn burns the blood vessels extensively.
 - 29. The colder the room you sleep in, the higher the chances are that you would get a nightmare.
 - 30. A man has approximately 6.8 liters of blood in the body while women have approximately 5 liters.
 - 31. The largest cell in the body is the female egg and the smallest is the male sperm.
 - 32. Everyone has a unique body odour, unique finger print and unique tongue print.
 - 33. We are about 1cm taller in the mornings than in the evenings.
 - 34. The strongest muscle in the body is the human tongue.
- 35. The hardest bone in the human body is the femur bone.
- 36. The hands and feet contains almost half of the total bones in the human body.
- 37. The human feet have 500,000 sweat glands and can produce more than a pint of sweat a day.
- 38. It is impossible to kill yourself by choking yourself with your hands.



Compiled By: Mr. Davesh Bhoir Final Year B. Pharm.



AMNION HARVEST

Innovation in health science extends its roots deeper day by day and makes human society healthy and wealthy. Newly manifested organ or tissue donation and transplantation plays a vital role. Donation of human products had started with blood, organs like kidney, heart and liver; then with skin, bone, eyes, sperm, ovum and cord blood and now recently amniotic membrane donation and transplantation has joined the list. Amniotic membrane which protects the developing foetus in the mother's womb is used widely in many human illnesses especially in the field of plastic surgery and ophthalmology.

The role played by amniotic membrane is extensive and very great

Uses of amniotic membrane

- 1. For treatment of burn wounds
- 2. For treatment of diabetic ulcer and pressure ulcer
- 3. For treatment in cosmetic medicine
 - 4. For the treatment of eye (corneal ulcer)
- 5. Preparation of synthetic mesh
- 6. Preparation of eye drops

Burn wound management

- **Dressing for burn wounds:** Burn wound management is a complex phenomenon in which the main aim is to obtain physiological closure of wound in a short time. Failure to do so will result in fluid loss through skinless burn wounds. Amniotic membrane dressing is a widely used modality of care for burn wound management which showed a remarkable improvement in wound healing, controlled infection, decreased mortality rate and overall decrease in hospital stay.
- For skin grafting: Autogenous skin graft remains the primary method of wound closure. As there is paucity of available donor sites the need of amniotic membrane is very essential for skin grafting in case of burn wounds.

Treatment of diabetic ulcer and pressure ulcer: The main complication of diabetic and pressure ulcer is infection and extension of suppurative process and tissue degeneration. Application of amniotic membrane to these helps in recovery of wound and preventing tissue deterioration. It is very effective in promoting epidermal growth factor and tissue regeneration.

Treatment in cosmetic medicine: In dermoabrasion of face and in exposed body parts, application of amniotic membrane dressing showed a remarkable recovery with minor scar look. Amniotic membrane is also used in moisturizing and treating dry sensitive skin.

Treatment of eye (corneal ulcer): Amniotic membrane is used as a graft for healing corneal ulcer, especially ulcer due to infectious and inflammatory process like scleritis, keratitis etc. Hypothesis says that difficulties in treating sclera or corneal ulcers stem from disorganization and inflammation within the cornea that prevents proper epithelial growth and migration. Amniotic membrane patch and graft is an effective solution for the above problem. Surgeons first used preserved human amniotic membrane for graft to promote growth and differentiation of conjunctival epithelial cells and to inhibit scar formation.

But now research has shown that the graft has also antiinflammatory and anti-microbial activity which promotes reepithelisation, stromal melting and prevents perforation of sclera and corneal ulcers.

Preparation of synthetic mesh: Collagen part of amniotic membrane is separated and combined with synthetic bioabsorbable polyglycolic acid mesh in preparing mesh products.

Preparation of eye drops: AM contains an extensive extracellular matrix, including collagen and laminins, cellsignaling proteins (cytokines), and growth factors. It has anti-inflammatory, anti-angiogenic, immunomodulatory, anti-bacterial, angio-modulatory, anti-scarring, and hemocompatibility properties. These extracts are used in preparation of eye drops for management of dry eye syndrome and also in corneal ulcer management.

Advantages of using amniotic membrane:

- It is easy to handle and flexible.
- It offers protection through presence of lysozyme and interleukins
- 3. There is no immune-rejection in both burn wounds and in corneal ulcers
- 4. Exudation of wound also takes place very easily due to its porosity.
- Amniotic membrane is easy to apply without hurting the patient especially in burn wounds
- 6. It is easy to observe the progress of wound, especially in burn wounds, due to its transparency
- Scar formation is very minimal after application of amniotic membrane



Compiled By: Ms. Sanika Pathak Final Year B. Pharm.

DNA VACCINES - A REVOLUTIONARY STEP

The induction of antigen-specific immune responses after in vivo transfection with expression plasmids has triggered a revolution of vaccine research. After a first hype, evoked by the fascinating options of this method, clinical studies did not reach the ambitious aims and a phase of disillusion was introduced. It became obvious that Gene vaccines displayed a weaker immunogenicity in humans than had been observed in the mouse models. Meanwhile, these hurdles have been overcome and gene vaccines underwent a renaissance. It has sowed the seeds of engineered vaccines, namely DNA and RNA vaccines. Its content ranges from general mechanisms, inherent immune-stimulatory properties, and the vast potential to modulate immune responses, to recent successful clinical studies and approved veterinary gene vaccines. DNA vaccines are nowadays being developed against a variety of diseases prevailing today in mankind. The last successful and most widespread gene study was the Human genome project started in 1990 and ended in 2003. It left with us a lot of important information of 20,500 genes which has

We have advanced in the field but there is always more to explore. DNA vaccines have provided till date successful treatments to a lot of incurable diseases. For instance, the utilization of yeast cell to express B antigens was the first and strikingly fruitful recombinant protein vaccine. This vaccine has been highly effective in preventing hepatitis B viral infection and thus became the first vaccine, which has the capability to prevent human cancer, the hepatocellular carcinoma, associated with early-acquired, persistent hepatitis B infection. The successful vaccine gives a fruitful opportunity to use it, not just as a part of the term prophylaxis of infectious diseases, but also to broaden their purposes in controlling existing and persisting infectious diseases. For instance, vaccines are being investigated as an approach to control HIV and other incessant viral infections as well as treatment of cancer and autoimmune ailments.

exponentiated the today's growth of gene therapy and medications.

Carbohydrates are the substantial molecular destination in the evolution of vaccines against cancer, viral and bacterial infections, and many other diseases. However, one of the major immunological problems faced in the development of polysaccharide vaccines was that carbohydrates are usually poorly immunogenic and cannot induce a T cell-dependent immune response that is necessary for protective immunity and therefore, it is less effective especially in children (aged below two years) and infants who represent the main target population of vaccination. To solve this dilemma of poor immunogenicity, the carbohydrate molecules have to be coupled to a carrier protein, to enhance their immunogenicity. By facilitating access to structures of increasing complexity many carbohydrate-protein coupling techniques have been applied to develop several polysaccharide-protein conjugate vaccines, which filled the gap in many areas, especially for children and infant vaccination. The current progress in glycol-chemistry has facilitated the design of adequate and highly sophisticated glycoconjugate vaccines using synthetic saccharide components, which are imitative epitopes that naturally involved such protection. The disadvantage that travels along with these vaccines is the development of cancerous cells because of the insertion of the foreign genome into the host cell or vice versa. Nowhere technology takes us to different areas of exploration on the most complex systems in nature i.e. the human body and great heights in the success of mankind, what we as health professionals share the ultimate aim minimizing the human suffering.

> Compiled By-Mr. Dhawal Shanke S. Y. B. Pharm.





GLOBE AMARANTH A MULTITUDE OF MEDICINES

Besides the beautiful sacred lotus, one of the amazing flowers you see everywhere is the globe amaranth. The bulbs are a beautiful purplish red and they are like no flower you've ever seen. They just don't seem to wilt. The Balinese make garlands out of them and they last for weeks. Its name is an English word for the Greek word "amarantos," which means "unfading." Because of this property, this little plant and its flower symbolize immortality. Once you discover some of the powerful compounds contained within it, you'll understand why the ancient Greeks and Indians picked up on its antiaging benefits. Treatments at health spas often end with a floral bath that includes globe amaranth. These flowers are believed to be a link to the spiritual world. So after a spa treatment that cleanses you of real impurities, the flower bath cleanses your impurities symbolically. Even better, globe amaranth can also help you if you have chronic inflammation. It fights diabetes1 and can even lower your blood pressure. Science is only now slowly beginning to discover the many healing properties of plants that have been part of the oldest healing traditions in the world for centuries. For example, have you ever heard of betacyanins? They are dark red plant pigments with powerful antioxidant health benefits. Globe amaranth has two unique betacyanins, isogomphrenin III and gomphrenin III.

In China, two scientists working with mice discovered that betacyanins have protective effects on the nervous system. These powerful antioxidants may be useful against cancer, too. When doctors in India exposed human leukemia cells to betacyanins, they began eliminating cancer. Globe amaranth is better known in places like Jamaica and the U.S. as bachelor button. It offers powerful medicine against prostate problems. In many countries, they eat the sweet-tasting seeds from the dried flower pouches (the buttons) to aid

prostate health. The unique healing antioxidant that helps in this is called gomphrenoside-1. Bachelor button can help men who have a swollen prostate and have a hard time urinating—even if they've had the problem for years. But it's not only good for prostate health and cancer. Another of globe amaranth's powerful plant compounds is kaempferol. This antioxidant helps boost your skin's natural defenses against the environment because it fights superoxide free radicals, which age you faster. The free radicals damage the fatty layer of the cell, making it more prone to cellular attacks. Kaempferol stops that process. Kaempferol also helps defend your skin against ultraviolet radiation and blocks pain. As I mentioned before, one of the best things about globe amaranth is that it lowers blood pressure. This has been a traditional used for centuries.

A team of Brazilian researchers from the Federal University of Piauí, Brazil, proved that globe amaranth significantly reduces arterial blood pressure without changing the heart rate. This is very important because it means that nothing else in the body changes except blood pressure. Even a very small amount works very well. Amaranth is easy to grow. You'll find these beautiful little purple-bulbed flowers growing in many places in the U.S., especially in Texas and the south. It's commonly used as borders for flower beds, and you can also use it for wedding pocket flowers (thus, the name bachelor button).

It can grow up to two feet tall with a one-foot spread. It blooms in pink, purple and red. The flowers are often dried and sold as decorations. They are known to grow in Hawaii like a weed and they grow easily in South Florida. It likes warm climates and it survives well in hot summer days. The little flower makes a nice food coloring as well. It livens up the look of your cakes, salads, and teas. The globe amaranth flower is considered an anti-aging ingredient because it's so good for the skin. With so many marvelous benefits that make our skin and bodies healthier, kill cancer, reduce inflammation and protect our nerves, it's no wonder this plant is known as the immortal flower.



HOW ONE SCIENTIST AVERTED A NATIONAL HEALTH CRISIS



"Her exceptional judgment ... has prevented a major tragedy." -PRESIDENT JOHN F. KENNEDY."

In the fall of 1960, Frances Oldham Kelsey was one of the Food and Drug Administration's newest recruits. Before the year was out she began a fight that saved thousands of lives, though no one knew it at the time. Although she was new to the FDA, Kelsey was no novice as a scientist.

After graduating from high school at the age of 15, she enrolled at McGill University in Montreal and acquired both undergraduate and master's degrees in pharmacology. From there she applied for researcher's post at the University of Chicago's pharmacology department. Her acceptance letter was addressed to "Mr. Oldham." Kelsey later joked that had her name been

Elizabeth, her career might have ended there. Fortunately, it didn't. She earned her doctorate in pharmacology and accepted Chicago's invitation to stay as faculty, where she undertook pioneering research on drugs and fetal safety. In 1950, she earned an M.D, her fourth and final degree. By the time she joined the FDA, Frances Kelsey was one of the most educated, experienced scientists around. Yet, as the newest member of the team, Kelsey was assigned what everyone thought would be an easy review: an application, Kelsey found its data on thalidomide's absorption and toxicity inadequate. Today, FDA classifies the drug based on their safety for a fetus. But in 1960, many experts believed that the placental barrier shielded a fetus from harm. Kelsey's earlier animal-based research demonstrated the opposite: drugs could pass from mother to fetus through the placenta. Like other drug companies at this time, Merrell had not tested its drugs on pregnant animals. Kelsey later said Merell's evidence for thalidomide's safety seemed "more like testimonials than the result of well- defined studies". Kelsey had rejected Merrell's application and asked them to submit a second baked by better evidence. Her FDA colleagues supported this decision.

Merrell had expected a quick, affirmative reply, so it could launch thalidomide for the holiday season when sedative sales soar. Instead of supplying Kelsey with the data she requested, they first tried to convince her to approve the drug over a series of calls and visits. When these failed to sway her, Merrell's executives complained that stubborn and nit-picking Kelsey was the problem, not thalidomide. The FDA backed Kelsey, forcing Merrell to file applications one after the other. As Kelsey received and rejected each new application, news of thalidomide's adverse side-effects began to surface. Doctors reported cases of nerve damage in early 1961, and by fall, they'd unmasked a more horrible truth. Thalidomide, widely used by pregnant women, caused severe birth defects. Thousands of babies died in utero and tens of thousands more were born with extra appendages, shorter limbs, or no limbs at all. In November 1961, thalidomide was pulled from the German market. Nonetheless, Merell continued trying to get it approved in US for several months before withdrawing their sixth and final application. While Kelsey wasn't the only scientist to identify the risks of thalidomide, she sounded the alarm that kept off the multi-billion dollar American drug market.

As public awareness of the thalidomide tragedy grew, the quiet scientist became a media sensation. Headlines in newspaper and magazines heralded her heroism, while a smiling president John. F. Kennedy presented her an award on the white house lawn. After the thalidomide scare, Congress passed laws that expanded the FDA's authority and toughened requirements for new drug applications. Kelsey was tapped to head the agency's drug investigation branch. Working at the FDA in different capacities into her 90s, Kelsey was able to witness the chances her actions helped inspire her visibility may have dimmed since, but her legacy endures. Prevailing facts over opinions, and patience over shortcuts, she made evidence-based medicine the foundation of reforms that continue to protect people today.

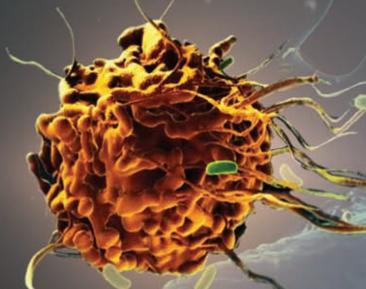
I am inspired by Frances Kelsey's story and I hope you're too. But Dr. Kelsey's life-saving work was overshadowed by the pervasive gender-bias ease of the 1930s. When offered a job at the University of Chicago, she felt pressure to refuse it because according to Dr. Kelsey "when a women took a job in those days, she was made to feel as if she was depriving a man of the ability to support his wife and child". Today, women make up almost 40% of the world's paid workforce but, they're still disproportionately unrepresented in STEM fields. Why?

Compiled By-Ms. Mehavi Raut S. Y. B. Pharm.

MACROPHAGE MIGRATION INHIBITORY FACTOR (MIF)

Macrophage Migration inhibitory factor (MIF) is an important link in UVR (UltraViolet Radiation) induced carcinoma. Exposure to UVR is the most significant reason of skin cancer. Ultra Violet radiations exposure causes damage to skin which is impermeable to reverse the activity. UV radiations trigger a chain of reactions on intracellular level causing release of many cytokines like InterLeukin (IL)-1, IL-6, Tumor Necrosis Factor (TNF-) and Macrophage Migration Inhibitory Factor (MIF) which leads to photoaging , immune suppression and finally carcinogenesis of skin.

The most common target for UV radiation is epidermal cells which receive excess UV radiations. UV radiations consist of three chief rays viz UV-A, UV-B and UV-C out of which UV-A and UV-B are the dangerous radiations which penetrate inside the skin membrane. Keratinocytes are the cells which are responsible for releasing biologically active



cytokines in response to UV exposure. These cytokines directly or indirectly affect various cells like endothelial cells, dermal cell, dermal fibroblast etc. which trigger the release of adhesion molecules including ICAM-1, VCAM-1, E-selection etc. causing sunburn cells. The overall action is manifested in turns of inflammation, redness and itching.

Macrophage migration inhibitory factor:

This is a pleiotropic inflammatory mediator which was primarilay considered as a cytokine responsible for concentrating macrophages at the site of inflammation. They are also called as strcker for micro macrophage activation and are crucially involved in cell mediated immunity. Chemically MIF consists of 114 amino acids and has a tertiary structure. Macrophage inhibitory factors have been considered to play important role in varieties of skin disorders.

Macrophage inhibitory factors participate in the degradation of dermal cell and collagens by stimulating MMP-1 in skin photoaging. Similarly, MIF has also proven its expression in the pathogenesis & progress of non-

melanoma skin cancer (NMSC). On acute exposure of UV-B radiations an increase in MIF occurs which causes cessation of p-53 dependent apoptosis and inducing skin cancer. The accumulation of MIF has also been proved in melanocyte cells when analysed histochemically. In malignant melanoma, an over expression of MIF has been observed.

MIF is also expressed in other skin diseases like: Allergic and Irritant contact dermatitis, Atopic dermatitis, Psoriasis, Vitiligo, Alopecia areata, Lupus erythematous, and Xeroderma Pigmentosum.

Macrophage Inhibitory factor (MIF) does not always acts as a criminal factor but also accelerates wound healing in tissue injury and regulates several phases of inflammation. MIF also acts as a valuable diagnostic test for diagnosis of drug eruptions. MIF has been the subject of intensive recent researches. It has proven to play a critical role for this molecule in innate and adaptive immunity. MIF is expressed by a variety of cells including eosinophils, lymphocytes, macrophages, epithelial cells as well as endothelial cells. This protein shifts macrophages to inflammation loci and also activates lymphocytes, granulocytes and monocytes/macrophages. In the field of dermatology, MIF is believed to be a criminal agent in many diseases but, its contribution to other aspects of skin biology is currently unknown. Considering that MIF has been manifested to be involved in the immune pathogenesis of cutaneous disorders; production of novel generations of the chemical or herbal preparations selective targeting of MIF, anti-MIF antibody and specific chemical MIF inhibitors can be the valuable therapeutic avenues in the future for the treatment of MIF related dermatologic disorders. Moreover, according to the unique association between MIF and glucocorticoids, MIF antagonist agents can also highlight an impressive strategy for steroid-sparing therapies in patients with refractory autoimmune diseases. Utilization of antibody, soluble receptor or small molecule technologies may result in the capacity to test in the clinic the value of MIF in inflammatory diseases.

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Compiled By: Ms. Thakur Jyoti M. Pharm. (QA) SJIPR

SWAMI VIVEKANANDA: REMINDING US OF OUR INNER STRENGTHS AND ABILITIES

Attitude

It is our own mental attitude which makes the world what it is for us. Our thoughts make things beautiful, our thoughts make things ugly. The whole world is in our own minds. Learn to see things in the proper light. We must have friendship for all; we must be merciful towards those that are in misery; when people are happy, we ought to be happy; and to the wicked, we must be indifferent. These attitudes will make the mind peaceful.

Belief in self

Never think there is anything impossible for the soul. It is the greatest heresy to think so. If there is a sin, this is the only sin; to say that you are weak, or others are weak. If faith in ourselves had been more extensively taught and practiced, I am sure a very large portion of the evils and miseries that we have would have vanished.

Concentration & focus

The world is ready to give up its secrets if we only know how to knock, how to give it the necessary blow. The strength and force of the blow comes through concentration. Take up one idea. Make that one idea your life - think of it, then dream of it, live on that idea. Let the brain, muscles, nerves, every part of your body, be full of that idea, and just leave every other idea alone. This is the way to success.

Grumble less, work more

Those who grumble at the little things that have fallen to their lot to do, will grumble at everything. Always grumbling they will lead a miserable life. But those who do their duty putting their shoulder to the wheel will see the light, and higher and higher duties will fall to their share.

Positive thinking

If you think about disaster, you will get it. Brood about death and you hasten your demise. Think positively and masterfully, with confidence and faith, and life becomes more secure, more fraught with action, richer in achievement and experience. Fill the brain with high thoughts, highest ideals, place them day and night before you, and out of that will come great work.

Character

When a man is perfect, he sees perfection in others. When he sees imperfection, it is his own mind projecting itself. Be determined not to curse anything outside, not to lay the blame upon anyone outside, but stand up, lay the blame on yourself. You will find that is always true. Get hold of yourself.

Decisions, Deeds, and Destiny

We reap what we sow, we are the makers of our own fate. The wind is blowing; those vessels whose sails are unfurled catch it and go forward on their way, but those which have their sails furled do not catch the wind. Is that the fault of the wind? We make our own destiny. We are responsible for what we are, and whatever we wish ourselves to be, we have the power to make ourselves. If what we are now has been the result of our own past actions, it certainly follows that whatever we wish to be in the future can be produced by our present actions; so we have to know how to act.



Compiled By-Ms. Apoorva More M. Pharm. (QA)



THE GREAT OLD INDIAN BELIEFS

The Indian culture holds a long history, and no matter what part of the country you stay in, we are all raised with certain superstitions that stay with us for a lifetime. Right from throwing coins into the river, to applying tilak on our foreheads or even sleeping with your head facing the north direction, these beliefs can be found just about anywhere and everywhere. Though we try to believe these are baseless beliefs, somewhere deep inside our hearts, we are stuck to our roots and still believe in some of these superstitions, if not all of them. Let's try to find logic behind them.

- Throwing coins in the river: The general reasoning given for this act is that it brings Good Luck. However scientifically speaking, in the ancient times, most of the currency used was made up of copper unlike the stainless steel coins of today. The intake of water with copper is very good for health and body i.e., the reason behind why we use copper vessels in houses. Throwing coins the river was one way our forefathers ensured we intake sufficient copper as part of the water as rivers were the only source of drinking water. Making it a custom ensured that all of us follow the practice.
- Eat curd and sugar before heading out: It has always been told to us since childhood by our grandparents to have curd and sugar before going out for some important work as it brings you good luck. But what science says Is that curd is a coolant, it keeps the person calm whereas sugar is basically glucose it provide us with instant energy. Both the things help in maintaining one's efficiency during the exam and giving the optimum performance.
- Swallow Tulsi leaves never chew: It is widely believed that the tulsi plant is goddess Lakshmi's avatar and hence one should not chew the leaves but directly swallow them. However science behind it is that Tulsi leaves contain maximum quantity of mercury and iron which are released on chewing them. Although the Tulsi leaves do not show such immediate effect but it surely damages the teeth as chewing it directly causes the teeth to become yellow or results in degradation of enamel.
- Ringing the bell in the temple before entering: The temple bells are made specifically of five metals (copper, silver, gold, brass and Iron). This represents 'Panch Mahabhoota: earth, air, sky, water and fire. They are created to have specific long strained sound waves of "OM". It helps evil spirits to get away from inside and around your surroundings. The real science in making of these bells is that they are made in such a way that when they produce a sound it creates a unity in the Left and Right parts of our brain. The moment we ring the bell, it produces a sharp and lasting sound which lasts for minimum of 7 seconds in echo mode that touches seven healing centres or chakras of our body. This results in emptying our brain from all our thoughts and helps us in entering a very sharp state where we can have good level of concentration.

- Plastering floor with the cow dung is auspicious: Cow dung plaster is considered auspicious just like any other product of a cow. Hence, mostly all rituals dictate the usage of cow dung to plaster the floor. Our ancestors probably started this practice to guard us against insects and reptiles which are repelled by the pungent smell of cow dung; as they did not have the luxury of buying commercial disinfectants. Also the floor coated with cow dung remains warm in winters and cold in summers. Cow dung acts as a natural mosquito repellent too.
- Applying tilak kumkum on the forehead: Tilak is applied on exactly the same place where the Anjna Chakra lies which is the bundle of all the nerve joint in the system. It battles anxiety and stress by keeping the mind calm and pure. Especially kumkum has detoxified mercury in it which when pressed in the forehead acts as acupressure to the nerve joint in that area and cools the entire nervous system. Medically the joint also has a nerve (trigerminal) that when pressed clears sinuses by increasing the blood pressure to the nose.
- Bathe after attending a Funeral ceremony: Our ancestors did not have vaccination against hepatitis, smallpox and others deadly and contagious diseases. Hence they came up with a set of rituals to be followed after the funeral rites are performed so as to prevent infection from the dead body. Slowly stories about the deported souls got linked to this practice.
- Don't sleep facing north: A common myth is that sleeping with our head facing the north invites ghosts or death, but science have more logical explanation for this. Scientist have found that the human body has an electromagnetic field (Biomagnetism). As we are all aware, our planet has a magnetic pole that stretches from the north (positive pole) to the south (negative pole). Our human bodies have the similar field, so when we sleep facing head towards the north, free iron from the whole body starts migrating to the brain. It is believed that this increased iron activity on the brain can cause headache, Alzheimer's cognitive decline, Parkinson disease, and brain degeneration also.



Compiled By: Ms. Urmila Solanki S. Y. B. Pharm.



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HOW TO OVERCOME EXAM FEAR

STEP1: Develop good study habits. Proper study habits and preparation are the keys to cutting out exam fear, according to Kids Health. Avoid last-minute "cramming" for exams and actively listen while in class. Know when the tests are coming up and prepare in advance; do not study all night or otherwise procrastinate.

STEP 2: Keep your mind and body healthy by getting enough sleep, eating well and exercising. Healthier people who are well-rested often do better in exams and sacrificing the basics even in the short term can have negative

STEP 3: Meet with your instructor to aid in focusing your study sessions. Knowing what the test will cover helps you zone in on the important material. Ask if a practice test is available so that you have an idea of

STEP 4: Focus on the positives to help calm your test anxiety. Practice positive self-talk as you prepare for the test as, "I just need to do my best," or "I will be prepared for this test." Push back negative thoughts that creep into your mind. If you tell yourself you're going to fail, remind yourself that you have participated actively in what to expect. class, studied and so by God's grace, you won't fail. Often, people who suffer from exam anxiety cannot shut out negative thoughts or emotions about the test, and this can contribute to feeling more anxiety than is normal.

STEP 5: Relax the night before your test. A last-minute review can help you remember facts, but fretting over last-minute studying is likely to cause you more anxiety. If you prepared thoroughly, relax by

STEP 6: Beat the morning rush by waking up early. Give yourself time to eat a nutritious breakfast that won't distracting yourself with a television show or a good book. weigh you down or feel greasy in your stomach. Check your bag to ensure you have everything you need for the

test. Get to the room early so that you can take your seat and organize yourself. STEP 7: Manage your anxiety with relaxation exercises as you wait for the test to start. Breathe

STEP 8: Scan the test to find questions that are easy. Answer those test questions first to give yourself a deeply, close your eyes and imagine yourself calmly taking the test. confidence boost. You can see progress and find that you do know the information. If you get stuck on a multiple choice question, cross off answers you know aren't correct. Compare the remaining answers to find the best fit.

STEP 9: Understand that you are not alone and ask for help as necessary. Exam fear is normal. When that anxiety severely interferes with your ability to take the test, however, outside help might be needed. Ask your teachers and family for support and help. Special accommodations may be available that can reduce the stress.

STEP 10: Reward yourself after the test is over. The reward gives you the break you deserve after all of your studying. Treating yourself also helps you stop thinking about the test and analyzing every little mistake you may have made.

Step 11: Trust God to help you with the results!!



Ms. Katyayini Upadhyay Compiled By: T. Y. B. Pharm.

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22 TECHNOMANIA

Trust yourself; you know more than you think you do". - Benjamin Spock

HUNTING THE 'DARK PHOTON

The Universe, as we know it, includes about a tenth of the total stuff that's out there. The rest? Missing, Invisible, Undetectable, except through the effects of its gravity on the fraction of stuff that we can see. Researchers call that missing stuff the dark sector — the class of energetic and massive particles that seemingly must exist out there somewhere but that don't interact with luminous matter (the stuff we're made of, along with everything we can see) in any way we can detect.

There's a new project at the National Institute for Nuclear Physics in Italy that's going to try to unlock all that dark stuff using the theoretical dark photon (the dark-sector version of regular light-carrying photons) as the key. And if they actually find the dark photon, it will provide evidence for the universe's fifth force — which would be huge news in physics.

According to a report, Italian researchers plan to bombard a diamond wafer with a beam of antimatter particles called positrons, which are the antimatter versions of electrons. Under normal circumstances, positrons and electrons that smash into each other annihilate each other, producing a pair of regular photons. But if dark photons really exist, then every once in a while, a positron-electron annihilation should produce one. Instead of the interaction spitting out two regular photons, a dark photon and a regular photon would emerge side by side. The researchers told Physics World that they hope that the beam of positrons in their experiment, which they call Padme, will crash into enough electrons in the diamond to produce a dark photon. Padme won't be able to detect that dark photon directly; instead, a missing photon will serve as evidence. A positron-electron annihilation that produces a dark photon will look to Padme like some of its energy just disappeared, because it will have entered the dark sector. If that happens, the researchers expect to be able to confirm the existence of the dark photon, and measure its mass. (Unlike regular photons, dark photons have mass, according to The Guardian.) That would be evidence of not just a new particle but also an entirely new force. In the luminous universe, there are four forces. Electromagnetism carries light energy and binds atoms to other atoms. (As The Guardian noted, it's the reason you don't fall through your chair.) The strong force holds the particles inside atoms together. The weak force causes atoms to fall apart and decay. And gravity, the fourth force we can detect, pins you to the Earth and governs the movements of the cosmos. If dark photons exist, then they would be the manifestation of a fifth force entirely — one not present in our prevailing model of the universe: dark electromagnetism. If one turns up in Padme then it will really be time to rewrite the physics textbooks.

Reference: - www.livescience.com/63493-dark-photon-fifth-force.html



Compiled By: Mr. Jonathan Alexander F. Y. B. Pharm.

LEARN SOMETHING NEW EVERYDAY

Most of us have one or two areas of knowledge that we strive to know very well - things that are related to our jobs, of course, and may be a hobby or two. But while it's important to develop a deep understanding of the things that matter most to us, it is just as important to develop a broad understanding of the world in general.

There are a lot of good, practical reasons to make learning something new a part of your daily routine. But the best reason has nothing to do with the practicality - we are learning creatures, and the lifelong practice of learning is what makes us humans and our lives worthwhile. Here are some benefits of lifelong learning:

- Learning across a wide range of subjects gives us a range of perspectives to call on in our own narrow day to day areas of specialization.
- Learning helps us to adapt to new situations more easily and readily.
- A broad knowledge of unfamiliar situations feeds innovation by inspiring us to think creatively and providing examples to follow.
- Learning deepens our character and inspires us and those around us.
- · Learning makes us more confident.
- Learning instills an understanding of the historical, social and natural processes that impact and limit our lives.
- And, there's the whole "making life worth living" thing.

"Life will only change when you become more committed to your dreams than you are to your comfort zone".

Ms. Samrin Suleman F. Y. B. Pharm.

IMPERFECTIONS

I have many, even you have one, some accept it and show, some think that it is nothing but flaws.

No that isn't your fault, it's just the melanin because you carry extra sun under your skin and bones.

The Maggie on your head, those are just your strands,

No matter what way they are,

Wavy, straight or curls,

Those are just your strands, don't think about it too much girl. You are skinny or you are fat, the society is still a brat, they will surely judge your figure, as if they own that.

Boy, Your smile is the cutest,

Yes, I Know, the slight gap in your teeth,

I know that you feel uncomfortable about it,

But I would still repeat,

Your smile is a peace indeed.

So dear, be comfortable in your skin, because only you can choose, who you want to mould, mould yourself in.

By: Katyayini Upadhyay

T. Y. B. Pharm.

This is your life do what you love, and do it often.

If you don't like something, change it.

If you don't like your job, quit it.

If you don't have enough time, stop watching TV.

If you are looking for the love of your life, stop.

They will be waiting for you, when you start doing things you love.

Stop over analyzing, life is simple.

All emotions are beautiful,

When you eat, Appreciate every last bite.

Open your mind, arms and heart to new things. And people, we are united in our differences.

Ask the next person you see, what their passion is, and share your inspiring dream with them.

Life is about the people you meet and the things you create with them so go out and start doing.

Life is too short. Live your dream, and wear your passion.

By:- Dhiraj Yadav S. Y. D. Pharm.

INNER SOUL

Running in a race, Faking a smile on my face,

Things are in such a mess, No one can even guess.

Trying to give my best, In all the upcoming tests,

Holding so much in my mind, A will, a way, I need to find,

There is no one beside, So all I want is to hide,

Waiting for things to go right, Waiting for me to win my own fight.

Want to prove them wrong, Who said I'm not strong?

Want to feel happy for a while, This time with a genuine smile.

By: Ankita Gupta S. Y. B. Pharm.

STRUGGLE

Am I really working for my passion? Or just dreaming of a big mansion?

Does the dream really scare me? Or is it just the fear in me?

Narrowed path obstacles in my way; Do I then flow like a river come what may?

When I fall, do I learn from my failures? Or just blame n curse like the presumptuous liars?

Am I growing through this? Or just letting it go the way it is? Uncertainty, do I think of a future twitter padded? Or like an optimist I wouldn't call it fated!

An ever growing rush, there's hope in my vein, Thou shall see me struggle through the pain,

With blurry vision of a clear intention, with dedication and furnished interpretation,

Thou shall see me my reach my goal, the only thing that will satisfy my soul!

> **By:-Simone Mendonca** T. Y. B. Pharm.

THE BEST IN YOU...

To be so strong that nothing can disturb your peace of mind.

To talk health, happiness, and prosperity to every person you meet.

To make all your friends feel that there is something in them

To look at the sunny side of everything and make your optimism come true.

To think to work and to expect only the best.

To be just as enthusiastic about the success of others as you are about your own.

To forget the mistakes of the past and press on to the greater achievements of the future.

To wear a cheerful countenance at all times and give every living creature you meet, a smile.

To give so much time to the improvement of yourself that you have no time to criticize others.

To be too large for worry, too noble for anger, too strong for fear, and too happy to permit the presence of trouble.

To think well of yourself and to proclaim this fact to the world, not in loud words but great deeds.

To live in faith that the whole world is on your side so long as you are true to the best that is in you.

> **By:- Apoorva More** M. Pharm. (QA)

अक्षरधारा

माणसातला देव...

देव देव्हाऱ्यात नाही, देव देव्हाऱ्यात नाही देव चोरून नेईल अशी कोणाची पुण्याई...

देव देव्हाऱ्यात नाही, देव मूर्तीत नाही तर 'देव' माणसात आहे. संत समाजाचा इतका मोठा पगडा आपल्या समाजावर आहे. असे हे संत देखील आपला देव मूर्तीत किंवा मंदिरात शोधत नाही तर ते आपला देव माणसात शोधतात अशा या माणसातल्या देवाची प्रचिती 'बाबा आमटें ना' व त्याच्या कार्याला पाहून मिळते.

'मुर्लीधर देविदास आमटे' अर्थात बाबा आमटे ज्यांच्या नावातच केवळ देवाच्या दिव्यत्वाची प्रचिती येते. लक्ष्मी देवीचा वरदहस्त असताना देखील तो मार्ग सोडून त्यांनी दिनदुबळया कुष्ठरोग्यांचे जीवन फुलवण्याचा मार्ग स्वीकारला आणि बनले सगळयांचे 'बाबा'.

जेथे समाजाने नाकारले, बहिष्कृत केले असे हे कृष्ठरोगी अश्या लोकाच्या जीवनात बाबानी 'आनंदवनाच्या' नावाने उमेदीची नवीन आशा आणली हा प्रकल्प लोकबिरादरी प्रकल्पाच्या अध्यक्षतेखाली चालतो आनंदवनाच्या या कामात बाबा आमटेना मोलाचे सहकार्य मिळाले ते त्याच्या पत्नीचे आणि कुंटुबीयांचे साधना आमटे या आपला घरसंसार चालवत आनंदवनातील लोकांची काळजी घेत आईप्रमाणे सुशुषाकरत वेळप्रसंगी संसारासाठी राखलेले चार पैसे देखील कुष्ठरोगाच्या सेवेस खर्च करत.

<mark>बाबांच्या या कार्यांची धुरा आता त्याच्या पुढची पिढी म्हणजेच डॉ. प्रकाश आमटे, डॉ. विकास आमटे सांभाळत आहेत. चांगले शिक्षण घेऊन</mark> स्वतःचा उदरनिर्वाह करण्याचे सोडून डॉ. प्रकाश आमटे व डॉ. मंदािकनी आमटे (पत्नी) यांनी बाबांचे कार्य पुढे चालू ठेवले व त्यांनी 'हेमलकसा' नावाने कुष्ठरोग्यासाठी नवीन प्रकल्प उभारला.

<mark>हे दोन्ही प्रकल्प नागपूरमधील 'गडिचरोली' जिल्हयातील, 'गडिचरोली' जिल्हा हा नक्षलवादी व आदिवासी लोक या दोन गोष्टींनी</mark> <mark>ओळखला जातो. जेथे लोकाना शिक्षण तर सोडा अन्न, वस्त्र, निवारा यासारख्या गोष्टीदेखील उपलब्ध नाही. अशा लोकाना समाजात</mark> <mark>मानाचे स्थान निर्माण करण्यासा</mark>ठी डॉ. प्रकाश आमटे व डॉ. मदाकिनी आमटे यानी अहोरात्र मेहनत घेतली दीनदुबळयाची सेवा, आदिवासी लोकांचे राहणीमान ते त्यांचे जीवन बदलण्याचे काम त्यांनी केले.

जंगल हे आपल्याला निसर्गाने दिलेले वरदान असून आपण त्यांचे हे ऋण नेहमीच फेडले पाहिजे असे सांगत त्यांनी निसर्गातल्या सर्व प्राणिमात्रांशी मैत्री केली. मुके असले तरी भावभावना असणारे हे प्राणी त्याच्या जगण्याचाच एक भाग बनले हे कळलेच नाही.

आदिवासी मुलांना जीवनावश्यक शिक्षण देणे असो किंवा गावात लोकपयोगी कामे करणे असा सगळयातच डॉ. प्रकाश आमटे व डॉ. मंदािकनी आमटे यांचा खारीचा वाटा राहिला.

<mark>शेवटी अशा या कार्याचा वटवृक्ष करण्यात संपूर्ण आमटे कुटुबीयाचे श्रेय राहिले आहे. म्हणूनच 'पद्मश्री' पुरस्कार मिळवणारे पिता—पुत्र</mark> म्हणून बाबा आमटे व डॉ. प्रकाश आमटे यांचे नाव ओळखले जाते. श्वेता सुभाष सावंत

<mark>आजच्या या जगात अशा माणसातल्या देवा</mark>ची अनुभूती घडणे म्हणजेच नवल...

T. Y. B. PHARM

आयूष्य

आयुष्यभर सोबत असून, जवळ कधी बसत नाही एकाच घरात राहुन आम्ही, एकमेकास दिसत नाही. हरवला तो आपसातला, जिव्हाळयाचा संवाद एकमेकास दोष देवून, नित्य चाले वादविवाद धाव धाव धावतो आहे, दिशा मात्र कळत नाही हृदयाचे पाऊल कधी हृदयाकडे वळत नाही इतक जगून झाल पण, जगायला वेळ नाही. जगतोआहोत कशासाठी, काहीच कसला मेळ नाही. क्षण एक येईल असा, घेवून जाईल हा श्वास, अर्ध्यावरच थांबलेला. असेल जीवन प्रवास. अजुनही वेळ आहे, थोड तरी जाणून घ्या. सुंदर अशा जगण्याला, Pooja Gupta डोळे भरून बघून घ्या. Final Year B. Pharm.

आई साठी काय लिहू, आई साठी कसे लिहू, आई साठी पुरतील एवढे शब्द नाहीत कोठे आई वरती लिहिण्याइतपत नाही माझे व्यक्तिमत्व मोठे जीवन हे शेत तर आई म्हणजे विहिर जीवन हि नौका तर आई म्हणजे तीर, जीवन हि शाळा तर आई म्हणजे पाटी, जीवन हे कामच काम तर आई म्हणजे सूट्टी. आई तू उन्हामधली सावली आई तू पावसातली छत्री आई माझी पहिली सखी आई माझी पहिली गुरू. आई म्हणजे मदिराचा उच कळस आई म्हणजे अगणातील उच पवित्र तुळस आई म्हणजे आरतीत वाजवावी अशी लयबध्द टाळी आई म्हणजे वेदनेनंतरची सर्वात पहिली आरोळी.

> **Bhavina Shekhar Kubal** S. Y. D. Pharm.

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कोकिळेच्या मध्र स्रात वसत ऋत्ची होते स्रवात साद ऐकुनी मोर पिसारा फुलवितो या आनंदात थुईथुई नाचतो पावसाची सर हळ्वार येते अलगद मनाला वेड लावते थेंबाथेंबाने जण् रेशीमधारा पडते नागमोडी वळणे घेत वाहत जाते सगळीकडे आनदी आनद पसरतो प्रत्येकाच्या मनाला न्हावून नेतो तेव्हा जणु वाटते स्वच्छंद बागडावे शितल स्पर्शाला जाणून घ्यावे गारांच्या वर्षावात जणु हिमवृष्टी होते थडगार पावसाने अग चिबचिब होते कोकिळेचे गाणे इंद्रधन्ची साथ गाण्यासंगे सप्तरंगांची होते बरसात

> Varsha N. More Lecturer D. Pharm.

PHOTOTHEQUE

F. Y. M. Pharm. Quality Assurance (QA)





FINAL YEAR B. PHARM.
DIVISION — I

FINAL YEAR B. PHARM.
DIVISION — II







THIRD YEAR B. PHARM.
DIVISION — I

THIRD YEAR B. PHARM.
DIVISION — II





SECOND YEAR B. PHARM.
DIVISION – I

SECOND YEAR B. PHARM.
DIVISION – II







FIRST YEAR B. PHARM.
DIVISION – I

FIRST YEAR B. PHARM.
DIVISION — II





FIRST YEAR D. PHARM.

SECOND YEAR D. PHARM.



APBISE Dele



Trisha Shetty S. Y. D. Pharm.



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Himani Vanmalit F. Y. B. Pharm.



Samriddhi Kadam Final Y. B. Pharm.

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SPORTS MEET



SCIENCE FEST



ANNUAL DAY

SJIPR



FAREWELL



CULTURAL EVENTS





PHARMACISTS DAY

SJIPR COALESCE 2019



TECHNICAL EVENTS



ISTE STTP 2018



CONFERENCE



INDUCTION & ORIENTATION PROGRAMME

SJIPR



SAVE GIRL CHILD

RANGOLI & NAIL ART







TEACHERS DAY

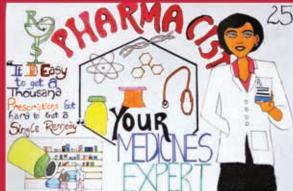
Poster Making Competition





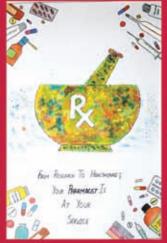








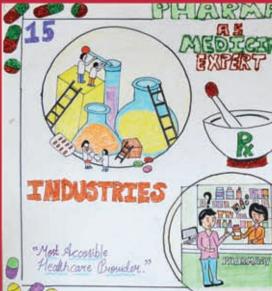














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