



AMRITA
VISHWA VIDYAPEETHAM
UNIVERSITY
Established u/s - 3 of the UGC Act 1956

AMRITA SCHOOL OF PHARMACY

PHARMA COGNIZANCE

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Mission

To provide value based education and mould the character of the younger generation through the synthesis of science and spirituality so that their earnest endeavor to achieve progress and prosperity in life is matched with an ardent desire to extend selfless service to the society, one complementing the other.

Vision

To be a centre of excellence ensuring high quality education with an international focus to students from all sections of society. The school of Pharmacy strives not only to provide quality education in pharmaceutical sciences but also to establish itself in research and serves as an ideal platform for the overall development of highly competent pharmacy professionals.

Principal's message

It is my pleasure to forward the 1st issue of our Quarterly newsletter. I am sure that all of you are busy with the academic year at its peak but still request you to spare few minutes to have a glance of the Pharmacognizance. We too are busy with classes, exams, projects, postings and so on. Achievement of a 8th rank in the national level in NIRF ranking 2016 has really boosted up our spirits and we realize the great deal of responsibility and commitment that we owe to this profession and in moulding the professionals. As our Chancellor AMMA says a "true master is an endless loving alchemist who transforms students into pure



gold" ! We under her noble guidance, strive to bring the best out of each kid at Amrita School of Pharmacy!

Amma speaks.....



"In today's world, people experience two types of poverty: the poverty caused by lack of food, clothing and shelter, and the poverty caused by lack of love and compassion. Of these two, the second type needs to be considered first because if we have love and compassion in our hearts, then we will whole heartedly serve those who suffer from lack of food, clothing and shelter"

Indian pharmaceutical products exports : The evolution story..

India is among the top six global pharmaceutical producers in the world. Approximately 70 per cent of the patients in developing countries receive Indian medicines through NGOs like The Clinton Foundation, Bill & Melinda Gates Foundation, Doctors Without Borders, the UNCTAD etc.

Presently there are 10,500 manufacturing units and over 3,000 pharma companies in India. India ranks amongst the top global generic formulation exporters in volume terms. India's exports of pharma and drugs stood at US\$ 16.8 bn. The country's pharmaceutical industry account for about 1.4 per cent of the global pharmaceutical industry in value terms and 10 per cent in volume terms.

According to IBEF, the domestic Indian pharmaceutical industry is estimated to be \$ 26 billion in 2014 growing at nearly 20 percent and is expected to reach nearly \$ 50 billion in 2020. It is evident that a lot of internal factors are responsible for the growing Indian pharmaceutical industry. There are more than 200 companies which are manufacturing medicines for the largest population in the world which adds to the prevailing competition on the domestic front.

PGDE- Indian pharma generic drug exports; GPM- Global Pharma Market; GGM- Global Generic Market

Global Data	2012-13	2016-17	% Growth
GPM (in \$ bn)	962	1200	24.7%
GGM (in \$ bn)	274	432	57.7%
GGM (in \$ bn)	28.5%	36%	
Export Data in India	2012-13	2014-15	% Growth
IPGDE (in \$ bn)	15	25	66.7%

Indian pharmaceutical industry's exports comprise mainly of generic drugs and accounted for nearly \$ 15 billion in the FY 20 12-2013 as per data available from a strategy paper from the Commerce Ministry of India. According to a report by the ministry, Indian pharmaceutical exports were expected to achieve a target of \$ 25 billion set for 2014-15. The generic drug market is expected to grow at nearly at 60 percent by the year 2016-2017 and contribute nearly 36 percent of the total market in the year 2016-2017.



Vellaian Karupiah
Dr. Reddy's Limited

The percentage contribution of the generic pharmaceutical market to the world is expected to increase from 28.5 percent in 2012-2013 to 36 percent in 2016-2017. Indian pharmaceutical export medicines contribute to nearly 5 percent of the total world's consumption of generic drug medicines in the current scenario. The year on year growth has taken a promising growth since 2008 with an incremental increase in the range of \$ 1-1.5 billion each year. The US is the largest consumer of Indian phar-

maceutical exported medicines followed by the UK. Many of the top 50 domestic Indian pharmaceutical companies contribute to this growth both in value and volume. The growth rates of the Indian formulation exports for FY 2010-2011 over the FY 2009-2010 has been nearly 30 percent. The formulation growth rate has managed to sustain this growth rate in the FY 2011-2012 to 27 percent over the FY 2010-2011. The growth rate of Indian pharmaceutical formulations has been nearly 20 percent in the FY 2012-2013.

Opportunities

- Admissions for PhD Programs in Pharmacology, Medicinal Chemistry and Pharmacuetics in The University of Houston Graduate School **USA**. The application for studies beginning in Fall 2017 OPENS on August 1, 2016, and CLOSES at 5:00 p.m. January 20, 2017. For more details., <http://www.uh.edu/graduate-school/prospective-students/how-to-apply/>
- Indo-US Science and Technology Forum Khorana Program for Scholars Awards, 2017. More details., <http://scholarship-positions.com/indo-us-science-technology-forum-khorana-scholars-program-research/2016/09/03/>
- Fully-Funded Commonwealth Scholarships (Masters & PhD) in UK for Developing Countries 2017. More details: <http://www.afterschoolafrica.com/203/commonwealth-scholarship-for/>

Pharma News

- Sandoz introduced a biosimilar for etanercept called Erelzi (TNF blocker) was recently approved by FDA, used for the treatment of RA, juvenile arthritis, psoriatic arthritis etc
- The U.S. Marshals Service seized more than 100 cases of products labeled as containing kratom (tree like plant used for pain relief). The seized products were marketed under the brand name Kratom Therapy which cost approximately \$150,000.
- The U.S. Food and Drug Administration approved safety labeling changes for fluoroquinolones, to enhance warnings about their association with potentially permanent side effects and to limit their use in patients with less serious bacterial infections.
- FDA cleared for marketing the Xpert Carba-R Assay, an infection control aid that test patient specimens to detect specific genetic markers associated with bacteria resistant to Carbapenem antibiotics.
- The U.S. Food and Drug Administration approved the first generic version of Tamiflu (Oseltamivir phosphate), used for the treatment of flu in patients 2 weeks of age and older

Holistic Medicine —Vishnukrantha



Evolvulus alsinoides L. (Convolvulaceae) is commonly found in India, Africa, and Philippines. In Ayurvedic literature *Evolvulus alsinoides* is known as Vishnukrantha, which has been used 'Buddhivardhaka' (Memory enhancer) action and is

categorized in the 'Samjnasthapana dravyas'. The decoction of whole herb is used medicinally for the treatment of fever, nervous debility and loss of memory. Unani medicine believes that this plant has the power to strengthen the brain and memory. In folk medicine it is used as a febrifuge. The leaves are made in to cigarettes and smoked in chronic bronchitis and asthma, leaf juice is used for conjunctivitis, increase brain power, given in bowel complaints, promotes consumption and useful in internal hemorrhages. Its flowers are good for uterus. It is one of the plants in Dasapushpam, the ten sacred flowers of Kerala.

Science and Spirituality

Luciano Bernardi et al hypothesised that the rhythm of both yoga and rosary prayer (practiced in Europe) can synchronise and reinforce cardiovascular and respiratory central rhythms. Twenty three healthy adults had participated in this study. All the subjects in this study were asked to repeat the mantra or rosary prayer with an alive resonant voice for several times.

The result of this study showed that both prayer and mantra synchronized car-

diovascular rhythms which influenced cardiovascular control mechanisms. Also the chanting induced a fixed respiratory rate at a predetermined frequency. The optimum benefit was reflected when the mantra was recited six times a minute.

The similarity of the output of the two geographically and culturally distant practices indicates that it is not an accidental coincidence

In conclusion, prayer and yoga can improve

the body, mind and bring positive changes in health. This research may form a bridge between science and spirituality.



Ref: Bernardi Luciano, Sleight Peter, Bandinelli Gabriele, Cencetti Simone, Fattorini Lamberto, Johanna WdowczykSzulc, Lagi Alfonso. Effect of rosary prayer and yoga mantras on autonomic cardiovascular rhythms: comparative study. *BMJ*. 323 (22-29) : 1446-1449.(Impact factor: 19.96)



You know who??

Tu Youyou is a Chinese pharmaceutical chemist and educator. She was the first Chinese Nobel laureate in physiology or medicine in 2015 for discovering artemisinin and dihydroartemisinin, used to treat malaria, which saved millions of lives.

Events @ ASP

Inaugural ceremony

The inauguration of new batches of B.Pharm, M.Pharm, Pharm.D and Pharm.D (PB) was held on 10th August 2016. The chief guest was Dr.Thangarajan Subburaj, former Vice President, Micro labs Ltd.



Convocation

Graduate Students of B.Pharm, M.Pharm, Pharm.D & Pharm.D (PB) Batches have graduated in the 13th Convocation of University held at Ettimadai on 21st August 2016.



Hepatitis day

July 28th 2016, was observed as world hepatitis day. A quiz competition was conducted by the Dept. of Pharmacy Practice and was followed by an awareness talk on Hepatitis.

Ganapathy Homam

Seeking a positive vibration through out the upcoming Malayalam New year a Ganapathy Homam was performed at the college premises on 16th August 2016.



Onam - Celebration "Avani 2016"

Onam was celebrated as Avani 2016 on 6th September 2016. The onam message by Principal Dr. Sabitha M was thought provoking. The Pookalams, cultural events and the splendid Onasadhya added colour to the event.



Ramayana Quiz

A Ramayana month celebration was conducted in all its full spirit on 16th August 2016. The program included a Ramayana Quiz and Ramayana Recitation by few faculty and students.

Independence Day Quiz

As a part of Independence day celebration a quiz was conducted on 16th August 2016 which had questions from history and freedom struggle of India.

Amritam Gamaya

The first outgoing batch of Doctor of Pharmacy students were given a grand farewell on 15th August 2016. The veteran personalities present were Sri. E P. Jayarajan, Minister for Sports and Industries for Kerala, Sampoojya Swami Poornamritanandapuri, General secretary Mata Amritanandamayi Math, Dr. T. Ramasamy Former Secretary Govt. of India and Dr. Sibin Abraham Kurian, Clinical Scientific Director at Novartis Pharmaceuticals Pvt. Ltd, Hyderabad.



Amritamela 2016

A friendly farewell cricket match was conducted between the outgoing Pegasus batch and the juniors Phoenix on 20th August 2016.



Yoga day

The international yoga day was observed on 21st June 2016. An essay competition and a yoga competition were conducted in connection to this and yoga session was also conducted for all the students and faculty.



Invited lectures

"Industrial opportunities for Pharm.D" by Dr. Sibin Abraham Kurian, Clinical Scientific Director at Novartis Pharmaceuticals Pvt. Ltd, Hyderabad on 13th August 2016.



"A gateway to Australian dreams" by Mr. Girish Madhavan, Member of Pharmaceutical Society, Melbourne, Australia on 21st September, 2016.



"Challenges in Child Leukemia" by Dr. Nazeer Malayakkal, Asst. Professor, King Khalid University, Ministry of Education, Kingdom of Saudi Arabia on 16th August 2016.



Presentations

Dr. Sabitha M delivered a talk as invited speaker on Evaluation of Nutritional & Medicinal properties of Neera and Neera Products at the First International Conference on Nutraceuticals and Chronic Diseases (INCD 2016), jointly organized by Society for Translational Cancer Research and Indian Institute of Technology Guwahati in Cochin, Kerala from 9th -11th September 2016.

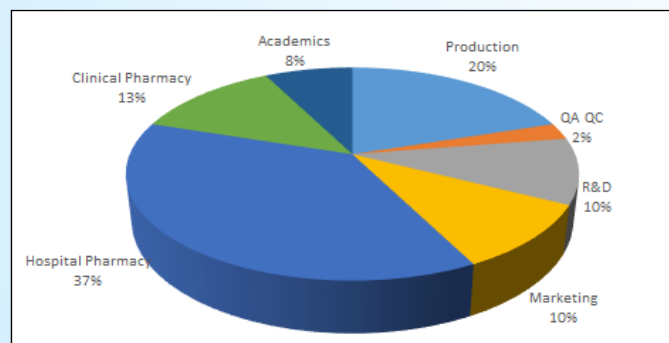
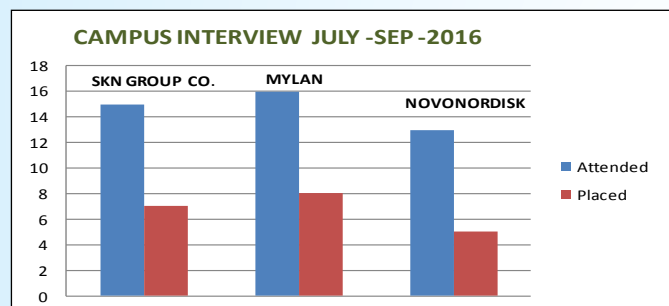
Dr. Kaladhar K participated in the author's panel discussion of "TIFAC Vision 2035 on materials" at Kolkata, at CGCRI on 28th July 2016. Dr. Kaladhar of Amrita School of Pharmacy along with Dr. Chandra Prakash Sharma of SCTIMST has developed the roadmap for biomaterials in TIFAC Vision 2035 document for materials.

Funded Projects

Dr. Sabitha M got a project entitled "Brain targeting of an Antiepileptic drug via intranasal nano structured lipid carriers sanctioned by DST-Nanomission.



Campus Interview & Placements



Publications

1. Jinu Joy, Anooja Thampi, Gireesh Kumar, Sreekishnan T P, Ajith V. A case report on Enteric fever induced hypophosphatemia. Asian Journal of Pharmaceutical and Clinical Research. 2016; 9(4): 1-2.
2. Divya Gopinath, Rajitha Panonummel, Swati Gupta, Jayakumar R, Sabitha M. Acetretin and Aloe-emodin loaded Chitin Nanogel for the treatment of Psoriasis. European Journal of Pharmaceutics and Biopharmaceutics. 2016 ; 107: 97-109. (Impact factor : 4.24).
3. Surya Krishnan, Vrinda Nampoothiri, Kavya Vinod, Neeraja Vijayan, Priya Vijayakumar, Meenu Vijayan. Study on clinical Pharmacists initiated interventions in Geriatric Population. Research Journal of Pharmaceutical, biological and Chemical Sciences. 2016; 7(4): 2952-2960.
4. Sathianarayanan, Asha Jose, Ranganathan Balasubramanian, Diana Thomas, Ashitha Balakrishnan, Rajasekaran Aiyalu. Alcoholic Extract of Wrightia tinctoria leaves and Isolates there of afford DNA Protection in Post Irradiated Sprague Dawley Rats. Journal of Young Pharmacists. 2016; 8(4): 398-405.

If undelivered please return to:

Amrita School of Pharmacy,
Amrita Vishwa Vidyapeetham University
AIMS Health Science Campus, AIMS Ponekkara P. O.,
Kochi - 682 041 Kerala, India
+91 (484) 285 7900/03/04 , +91 (484) 280 2020 (Fax)
pharmaprincipal@aims.amrita.edu,
pharmacycollege@aims.amrita.edu
Website: <https://www.amrita.edu/school/pharmacy>

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