



# PUSHPAGIRI

*We care God cures*

## PHARMA ECHO

OFFICIAL  
PUBLICATION  
OF PUSHPAGIRI  
COLLEGE OF  
PHARMACY

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Affiliated to KUHS, Thrissur and approved by AICTE and PCI, New Delhi.

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H.G. Rev. Dr. Thomas Mar Koorilos  
Metropolitan Archbishop of Tiruvalla  
Catholic Archdiocese of Tiruvalla

### Vision :

"We care..... God cures....."

### Mission :

To work towards a knowledge society with a life in abundance, through science and technology, improving health care of our immediate community, state, country and the world at large.



Rev. Dr. Shaji Mathews Vazhayil  
CEO, Pushpagiri Group of Institutions

## From the Editor's Desk...

### Greetings to all in the new academic year!!!

It is a great honor to showcase this Pharma Echo in light of glorious NAAC "A" accreditation to Pushpagiri College of Pharmacy. As we all know, a newsletter reflects the mirror image of the performance of the college. Many constructive efforts have been taken to improve our university results, placements for students and achieved to a great extent. It is a milestone of Pushpagiri College of Pharmacy, that this year the college has been accredited with NAAC "A" grade in the first attempt. The one and only one college in Kerala to hold this golden quill . With the famous quote "Action speaks louder and clearer than words", once more hearty welcome to all PCPIans to new academic year...

## NAAC "A" Grade For Pushpagiri College of Pharmacy

### Our Patron

**Rev. Dr. Thomas Mar Koorilos**

Metropolitan Archbishop of Tiruvalla

Chairman and CE

**Rev. Dr. Shaji Mathews Vazhayil**

Chief Advisor &

Director of Academics & Research

**Rev. Dr. Mathew Mazhavancheril**

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**Rev. Fr. Mathew Vadakkekuttu**

Director, Medicity

**Prof. Dr. Mathew George**

Principal

**Prof. Dr. Lincy Joseph**

HOD. Dept of Pharm. Chemistry

Staff Editor



NAAC Peer Team Exit Meeting...

**Prof. Dr. Lincy Joseph, NAAC Coordinator**

The first NAAC inspection at Pushpagiri College of Pharmacy was held during June 20<sup>th</sup>-22<sup>nd</sup>, 2016. The results of the inspection was declared as "A" grade on July 11<sup>th</sup>, 2016. Pushpagiri College of Pharmacy renowned a position in the state of Kerala with high grade in the first cycle of NAAC inspection. The NAAC team appreciated the management, Principal, faculties and students for the achievements in the past three years. On behalf of this royal victory Principal congratulated all the NAAC team members and faculties. The team spirit of all the PCPIans under the guidance of Principal Prof. Dr. Mathew George have made golden crown to Pushpagiri College of Pharmacy.



Celebrating the Happiness of NAAC Achievement at PCP premises with the PCP management team...

## APPRECIATION FOR NAAC "A" GRADE ACCREDITATION FOR PUSHPAGIRI COLLEGE OF PHARMACY

### **Rev. Dr. Shaji Mathews Vazhayil** CEO, Pushpagiri Group of Institutions

The spark of this enhancement has been taken by our committed management, Principal, dedicated teaching faculty & supporting bodies to meet the present challenges of higher education. The best thing about our institution is discipline.. We believe in all round development of our students. We focus on developing full potential of the students, while academic excellence is our priority. We also give a lot of importance to extra-curricular activities. Our faculty is really dedicated and when students pass out from our college they are completely transformed individuals.



Innovation, excellence and quality are the driving forces of the campus and this has translated the vision of the institution into reality over a period of time. Today campus vibrates with not only curricular activities but also with myriad activities like International and National Conferences, Workshops, Student competition, Cultural activities, etc.

The college lays great stress on personalized attention to prepare the students for world class professional avenues. The placement cell of the college is playing a vital role to call reputed companies to offer jobs to the students.

I congratulate the staff and students for their incomparable NAAC "A" grade accreditation.

### **Rev. Dr. Mathew Mazhavancheril** Academic and Research Director Pushpagiri Group of Institutions

On behalf of Pushpagiri Medical Society, I would like to extend my congratulations to Pushpagiri College of Pharmacy, on this glorious victory. Pushpagiri College of Pharmacy has assisted the students in the "journey of life time". It has been a delight to observe the growth and evolution of the Institute since its inception. Over these years I have been heartened by the vitality and energy of the college, the high quality of faculty and students and the commitment to explore the diverse and complex of academic and non-academic arenas. May you move forward from innovative achievement to yet more innovative achievement!



### **Rev. Fr. Mathew Vadakkekuttu** Director, Medicity Campus

#### **CONGRATULATIONS!!**

The NAAC team was appreciative of the fact that in spite of the multiple campuses, multiple schools, multiple disciplines, we are a very cohesive, vibrant, dedicated and well managed unit. Pushpagiri Pharmacy College always showcases its vibrant, dynamic mode in all time. All the best for all efforts taken by the Pharmacy College family....



## Report On One Day National Seminar ONCOWANE -2016

Ms. Bincy K Chacko, Department of Pharmaceutics



Inauguration of One day National Seminar Oncowane-2016

National seminar-"Oncowane" 2016 was held at Pushpagiri College of Pharmacy on 23<sup>rd</sup> Feb. 2016. The meet was inaugurated and led by renowned oncologist, Dr. V P Ganghadharan, Lakeshore Hospital, Ernakulam. The function was presided by Rev. Dr. Shaji Mathews Vazhayil, CEO, Pushpagiri Group of Institutions and the chief guest of the function was Dr. A Nalinakshan, Pro-Vice chancellor, KUHS, Thrissur. During the function, Dr. Jacob V V, scientist, SERB, New Delhi, Mr. Pradeep, Deputy Drug Controller, Govt. of Kerala, Sri. Jayakumar K, DYSP, Tiruvalla were honoured. The scientific sessions were commenced on the topic "Awareness on Cancer" by Dr. V P Ganghadharan,

Senior Oncologist, Lakeshore Hospital. Dr. Krishnan Nampoothiri, Director Nagarjuna Herbal Industry, Dr. Achuthan C Raghavamenon, Amala Cancer Research gave an informative talk on the risk factors and signs and symptoms of various types of cancer. Medicity director Rev. Fr. Mathew Vadakkekuttu, Pushpagiri heart institute director Rev. Fr. Joseph Valampampil, Principal, Prof. Dr. Mathew George spoke at the occasion. The sessions were informative. Students and faculty from various pharmacy colleges in Kerala attended the seminar. During the inaugural function fourth volume of Pharma Echo unveiled.



Unveiling of Pharma Echo by Dr. V. P. Ganghadharan, Senior Oncologist

## Indian Congress Of Pharmacy Practice 2<sup>nd</sup> Convention Of IACP- 2016

Dr. K. Sujith, Department of Pharmacology



Honouring our Principal by PCI President & IACP President during 2<sup>nd</sup> Convention of IACP at Le- Meridian, Coimbatore...

The students and staff of Pushpagiri College of Pharmacy participated in Indian Congress of Pharmacy Practice 2<sup>nd</sup> Convention of IACP- 2016 held at Le- Meridian, Coimbatore on 2<sup>nd</sup> & 3<sup>rd</sup> April

2016. The function was presided over by the eminent personalities like the President of Pharmacy Council of India and representatives of the governing council from different foreign countries like USA, UK & Australia. During the event, Prof. Dr. Mathew George, Principal, Pushpagiri College of Pharmacy was honored by Dr. B. Suresh, President, Pharmacy Council of India and Prof. A. Chinnaswamy, President Indian Association of Pharmacy Colleges.

The speakers from India and Foreign countries gave different informative sessions highlighting the importance of Pharm.D profession. The conference was a highly informative for all the students and faculties who attended.

## Placement Drive By Glaxo Smithkline (GSK) Pharmaceuticals

Ms. Jyothi Lakshmi V Nair, Department of Pharmaceutics

A PLACEMENT DRIVE was organized by Pushpagiri College of Pharmacy on 4<sup>th</sup> July 2016 at Mar Theophilos Annexe Auditorium by the multinational company GLAXOSMITHKLINE PHARMACEUTICALS PVT LTD. Mr. Siva Subramaniam, Mr. Saravana Kumar and Mr. Sreenivasa Reddy (GSK Delegates) were the guests of the function. Prof. Dr. Mathew George, Principal, Pushpagiri College of Pharmacy chaired the function. The function began by 9.30 AM with the prayer song by college choir and welcome address by Prof. Dr. Mathew George. The inaugural address was given by guests and they were honoured with a memento as a token of love. An interactive session with the GSK delegates was open for the students of Pushpagiri College of Pharmacy. The welcoming function ended with the vote of thanks by one of our student delegate Mr. Umesh Kumar. It gives us immeasurable pleasure to report that around 117 students had actively participated in the interview.



GSK delegates during the placement drive @ PCP...

Many of the PCPIans have selected by GSK Pvt. Ltd. As a part of selection process the students had to go through three different rounds of interview prior to reaching the final stage. The abilities of the students were well attested by the excellent placements by the recruiting companies.

## Inauguration Of 13<sup>th</sup> B Pharm Batch & 5<sup>th</sup> Pharm D Batch

Ms. Jeenu Joseph (Department of Pharmacognosy) &  
Ms. Deepthi Mathew (Department of Pharmaceutics)

The inauguration of 13<sup>th</sup> B Pharm batch and 5<sup>th</sup> Pharm D batch was held on 20<sup>th</sup> July, 2016 at Mar Theophillos auditorium. Principal, Prof. Dr. Mathew George welcomed gatherings. Rev. Dr. Mathew Mazhavancheril, Director- Academic & Research presided over the event. Shri. B. Rajan, President-State Pharmacy Council, Thiruvananthapuram,

inaugurated the event. Dr. N. Udappa, Research Director- Manipal University was the chief guest. The unveiling of the academic calendar for the year 2016-17 was done. Rev. Fr. Mathew Vadekkekuttu, Director-Medicity campus felicitated during the event. An interactive session with Shri. B Rajan and Dr. N. Udappa were arranged for the students and faculties.



Inauguration of new B Pharm and PharmD batches...



Unveiling of Academic calendar 2016-17...



Interactive Sessions with Dr. N.Udappa and Shri. Rajan...

## Seminar on R T I Act EARFUL BUZZ - 2016

Ms. Anju V, Department of Pharmaceutical Chemistry



Inauguration Ceremony of Earful Buzz by Shri. Sibi Mathews, IPS

The seminar on Right to Information Act "Earful Buzz -2016" was held at Pushpagiri College of Pharmacy on 15<sup>th</sup> April 2016. The seminar was inaugurated by Dr. Sibi Mathew I P S, Chief Information Commissioner of Kerala. Rev. Fr Mathew Vadakkekuttu, Director Pushpagiri Medicity Campus presided the

event. Prof Dr. Mathew George, Principal, Pushpagiri College of Pharmacy welcomed the gathering. Students interacted with Dr. Sibi Mathew I P S, on relevant topics. The seminar was informative for the students and staff.

## APTI Golden Jubilee Convention – Kerala Regional Meeting At PCP

Ms. Mincy Mathew, Department of Pharmaceutical Chemistry

The APTI golden jubilee convention, Kerala region meeting was held at Pushpagiri College of Pharmacy, on 20<sup>th</sup> July, 2016. The APTICON-2016 convenor Dr. N. Uduppa, met all the faculties from Kerala region. The discussion were made on upcoming golden jubilee conference.



APTI members from different colleges with Dr. N. Uduppa, APTICON-2016 Convenor...

## Best Academic Pharmacist Award - 2016



Prof. Dr. Lincy Joseph, HOD and PG In-Charge of Pushpagiri College of Pharmacy has received "Best Academic Pharmacist" award of 2016 from Kerala State Pharmacy Council from Shri. E. Chandrasekharan, Honourable Minister for Revenue and Housing, Govt. of Kerala in the presence of Honourable Vice Chancellor Dr. M K C Nair, Kerala University of Health sciences, Thrissur.

In the path of teaching pharmaceutical sciences,

she has crossed quinquennial years. She is having teaching experience in international Universities and presented scientific papers nationally and internationally. Currently she is carrying out granted research funded project which has been funded by Govt. of India, New Delhi. She has already published more than 150 research articles in well reputed indexed journals and guided many Ph.Ds and postgraduates.

## Students Exchange Programme

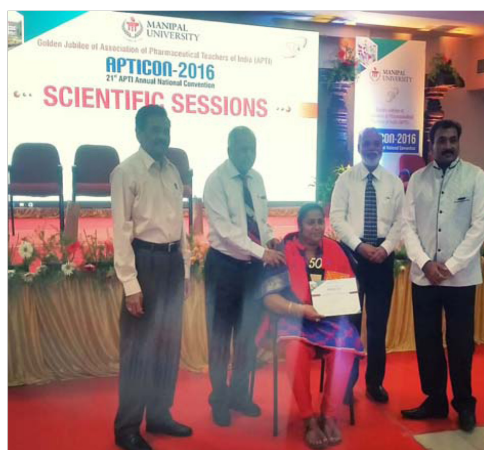
Pushpagiri College of Pharmacy with Manipal University  
Dr. Tom P Thomas, Department of Pharmacy Practice



The Pharm D training program was held at Manipal college of Pharmaceutical Sciences from 17th October to 19th October 2016. All 3rd year Pharm D students of Pushpagiri College of Pharmacy attended the 3 day training program. Ms. Santhi Maria, Dr. Tom P Thomas & Ms. Kavitha A K have accompanied the students throughout the training programme. The program was organized under the guidance of Dr. Girish Thunga P, Associate professor, MCOPS, Manipal.

In the training programme, they have visited Kasturba Medical College Hospital which is one of the famous superspeciality hospitals in India. Dr. Girish Thunga gave a brief idea about various activities performed by Pharm D students' in Patient counselling Centre, Drug information Centre and the wards present in the hospital. Finally they have visited 'The Ecron Acunova', a unit in KMCH where active clinical trials were conducted. In addition; they have attended various classes led by eminent and experienced faculties of MCOPS, Manipal.

## Honouring The Professors by APTI at Manipal University



Prof. Dr. Mathew George, Principal and Prof. Dr. Lincy Joseph, HOD & PG In charge of Pushpagiri College of pharmacy were honored as "Eminent Teachers" for their valuable contribution to the profession of Pharmacy in the 21st Annual National Convention of APTI- APTICON 2016 at Manipal University, Manipal on 14th-16th October 2016.

## Professors At Athens, Europe

Our Professors, Prof. Dr. Mathew George, Principal & Prof. Dr. Lincy Joseph attended three day International workshop cum conference at Athens. Prof. Dr. Lincy Joseph presented a paper during the conference. Prof. Dr. Mathew George & Prof. Dr. Lincy

Joseph chaired various sessions during the event. Both of them have contributed innovative ideas in the field of research and interacted with well known Professors from different continents.





## Report On Cancer Awareness Programme By Pharmacy Practice Department

Ms. Rani Manju, Department of Pharmacy Parctice

On behalf of World Cancer Day, Cancer Awareness Programme by Department of Pharmacy Practice was organised on 4<sup>th</sup> February 2016. The event was inaugurated by Smt. Annapoorna Devi (District Panchayat President, Pathanamthitta Dist.). Rev. Fr. Mathew Vadakkekuttu (Director, Medicity) and Prof. Dr. Mathew George, Principal of Pharmacy College

addressed the gathering during the event. This was followed by a Programme at Thiruvalla railway station delivering awareness to cancer, organized by Pushpagiri College of Pharmacy, led by PharmD and PG students for Two days. The programme at railway station was inaugurated by Shri. Sam Eappen, (Block Panchayat President, Peringara).



Inauguration ceremony of Awareness Programme at PCP campus & Railway Station on World Cancer Day



Activities of PCPIans at Railway Station during the awareness programme

## Nature Club

Ms. Leena P N, Department of Pharmacognosy

Nature Club of Pushpagiri College of Pharmacy hosted the organic vegetable farming, harvesting and auction at Pushpagiri College of Pharmacy on 20<sup>th</sup> April 2016. The event was inaugurated by Ms. Mini George, Branch Manager South Indian Bank,

Perumthuruthy. Prof Dr. Mathew George led the event. The faculties, students of Pushpagiri College of Pharmacy participated in the event with great enthusiasm.



Harvesting ceremony of organic farming at Pushpagiri College of Pharmacy...

## Report On Orientation Programme For Exam Preparations

A One day orientation programme for the students of Pushpagiri was conducted on 6<sup>th</sup> May at Mar Theophilos Annexe auditorium by Rev. Dr. Maria Das, OIC. The programme mainly emphasis the

students, to approach the forthcoming university examinations. All the students, faculties participated in the event.

## National Science Day & World Health Day Celebration - 2016

On behalf of National Science Day, Pushpagiri College of Pharmacy celebrated National Science Day on 29<sup>th</sup> February, 2016 at Mar Theophilos Annexe Auditorium. The third year Pharm D students hosted the

event. Rev. Mathew Vadakkekuttu, Director- Medicity Campus, Prof. Dr. Mathew George, Principal, faculties and students attended the event.



Events during National Science Day-2016

On 7<sup>th</sup> April, 2016 the World health day celebrations held and lead by fourth year Pharm D students at Mar Theophilos Annexe Auditorium. The session focused on the overall health development of public, proper diet, etc. Various programmes like

powerpoint presentation, quiz were conducted during this event. Rev. Fr. Varghese Manalel, Spritual Director Medicity, appraised the students for their stunning performances.



Events during World Health Day Celebration at Pushpagiri College of Pharmacy

## DASVIDANIYA 2016

The farewell programme for the 3<sup>rd</sup> batch of KUHS B.Pharm was organized on 29<sup>th</sup> July 2016, at Mar Theophilos Annexe Auditorium. Ms. Amalu Elizabeth of 4<sup>th</sup> year B.Pharm welcomed the gathering. Prof. Dr. Mathew George, Principal, Pushpagiri college of pharmacy, Rev. Fr. Mathew Vadakkekuttu, Medicity Director and Rev. Fr. Varghese Manalel, Spiritual Director took part in the event. Rev. Fr. Mathew Vadakkekuttu, delivered the director's message. It was followed by 'candle lighting ceremony'. The principal lit the candle- symbolizing 'the light of knowledge'- and passed

on that light to the faculty and then to the outgoing students forming a circle of light. The newly elected college chairperson, for the academic year 2016-2017, Ms. Naina Betsy Alan, received the college flag from the former chairperson. Mr. Georgin Georson, of 5<sup>th</sup> year Pharm.D, felicitated during the event.

The outgoing students were presented with mementos as a token of appreciation. Various cultural events and games were organized by the students of Pushpagiri College of pharmacy. The programme came to an end with the vote of thanks by Ms. Sneha Ann of 4<sup>th</sup> year B.Pharm.



The outgoing batch students with Principal & Medicity Director during the farewell programme....

## TOUR PROGRAMMES



Staff & PG tour – ISRO, Legislative Assembly



2<sup>nd</sup> B-Pharm industrial visit to Micro Labs, Bengaluru

## A Review On The Medicinal Properties Of Gracia Mangostana (Linn)

Ms. Prabha Mathews, Department of Pharmaceutical Chemistry

### INTRODUCTION

*Garcinia mangostana* Linn. (GML) colloquially known simply as mangosteen belongs to the family of Guttiferae and is named “the queen of fruits”. It is a tropical evergreen tree believed to have originated in the Sunda Islands and the Moluccas of Indonesia. It is cultivated in the tropical rainforest of some Southeast Asian nations like Indonesia, Malaysia, Sri Lanka, Philippines, and Thailand. Various parts of the plant have a history of use as traditional medicine, mostly in Southeast Asia. Centuries of Mangosteen use has helped Southeast Asians to maintain or regain their health and cure their diseases. Traditional Asian healers use the fruit to stop infection, treat inflammation, and increase one’s energy, among others. Products derived from *Garcinia mangostana* Linn are now distributed increasingly all over the world. This has given rise to a concomitant increase in research on the phytochemical constituents and biological activity of the species.

Those who have taken the time to do their own research on the validity of each health benefit of Mangosteen will find that there is real and solid science behind the “Queen of Fruits”, so-called because of Queen Victoria’s reported preference for this exotic fruit centuries ago. Modern scientists and a growing number of health practitioners now agree on the medical benefits of Mangosteen. They have found that the fruit is helpful in preventing and possibly even curing a wide range of diseases such as diabetes, heart disease, Alzheimer’s disease, cancer and other chronic diseases.



### Mangosteen in diabetes treatment

According to the study conducted by Muhammed Taher<sup>1</sup> et al, ethanolic extract of GML significantly reduced the blood glucose level in normoglycemic rats and streptozotocin (STZ) – induced diabetic rats when compared against normal control group or diabetic control group respectively. GML significantly reduced the levels of biochemical parameters like triglycerides, total cholesterol, LDL, VLDL, SGPT, SGOT, urea, creatinine and increased the level of certain other parameters like HDL, total protein etc.

### Mangosteen in cancer therapy

A Japanese study published in July 2009<sup>2</sup> found GML to have possible cancer preventing properties. The mouse study evaluated the use of GML in mammary tumors and found that the mangosteen component increased cell death and displayed other benefits which suggested it could be useful as chemoprotective agent in breast cancer.

### Mangosteen in heart diseases

In the most recent study published in nutritional journal<sup>3</sup>, researchers conducted a randomized, double blind, placebo-controlled trial in which some people were given one half liter of mangosteen juice daily while others received placebo. Those who consumed the mangosteen juice showed significant reduction in C-reactive protein levels. C-reactive protein is a factor used to predict cardiovascular disease and a precursor of metabolic syndrome.



### Xanthenes in Mangosteen

This wide range of activities is due to the presence of more than 40 biologically-active, natural chemical compounds called Xanthenes. While all these Xanthenes have similar molecular structures, each one has its own unique chemical composition that permits it to perform a specific function. Alpha-mangostin, for example, is a very potent antioxidant. Gamma-mangostin is a powerful anti-inflammatory. Garcinone E is a strong anti-tumor agent.

These and the other Xanthenes found in the Mangosteen provide a virtual medicine chest of natural healing compounds that address a wide variety of health issues.

The pericarp of GML is a source of xanthenes and other bioactive substances. Crenulated xanthenes isolated from GML have been extensively studied; some members of these compounds possess antioxidant, antitumoral, antiallergic, anti-inflammatory, antibacterial, antifungal and antiviral properties. Xanthenes have been isolated from pericarp, whole fruit, heartwood, and leaves. The

most studied xanthenes are  $\alpha$ -,  $\beta$ -, and  $\gamma$ -mangostins, garcinone E, 8-deoxygartanin, and gartanin. Xanthenes are also powerful immune system boosters.

Xanthenes occupy a special place in the Mangosteen's arsenal of healing compounds. They have been shown to have more potent antioxidant activity than vitamin E, one of nature's most powerful known antioxidants.

A laboratory test known as ORAC (Oxygen Radical Absorbance Capacity), for example, showed that an ounce of Mangosteen juice provides 20 to 30 times more capacity to absorb free radicals than an ounce of most other fruits and vegetables.

### Mangosteen's Other active Constituents

Mangosteen also contain other potent natural compounds like catechins, polysaccharides, quinones, stilbenes and polyphenols. Catechins were discovered to be five times more potent as antioxidants than vitamin C. Polysaccharides are highly potent anti-cancer and anti-bacterial plant compounds. They help to block a mutated cell's ability to stick to healthy cells to help stop the spread of cancer, and are specially effective against intracellular bacteria. Quinones are known for their anti-bacterial properties and also are strong oxidants. Stilbenes in plants defend these plants against fungi. Interestingly, stilbenes also maintain their anti-fungal properties even when ingested. They also acts as strong antioxidants. Polyphenols were found to be far more potent as antioxidants than vitamin E, considered one of the most powerful known antioxidants.

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