



PUSHPAGIRI

We care God cures

PHARMA ECHO

**OFFICIAL
PUBLICATION
OF PUSHPAGIRI
COLLEGE OF
PHARMACY**

MEDICITY CAMPUS, PERUMTHURUTHY P.O., TIRUVALLA-689 107. Tel.: 0469-2645450, 2645900. Fax: 0469-2645460

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

Vol. 3 Issue. 1
2015 March

Contents

1. Article by Ms. Dhanya Prabhakar
2. Article by Ms. Ashly Merin James
3. Article by Ms. Jancy Kuruvilla
4. Teacher's Day
5. Pharmacists Day Celebration
6. Honouring of Kerala State Best Pharmacist Awardee
7. Orientation Classes for freshers
8. Article by Ms. Rani Manju
9. Pharma Woche Fisso 2014
10. Article by Ms. Sissy Aloysia
11. Article by Ms. Athulya Raj
12. Publications & Seminars Attended
13. Run KeralaRun 2015

Our Patron

Rev. Dr. Thomas Mar Koorilos
Metropolitan Archbishop of Tiruvalla

Our Vice President

Rev. Dr. Philipose Mar Stephanos
Auxiliary Archbishop of Tiruvalla

Chairman and CE

Rev. Dr. Shaji Vazhayil

Chief Advisor &

Director of Academics & Research

Rev. Dr. Mathew Mazhavancheril

Director, Medicity

Rev. Fr. Mathew Vadakkekutt

Editorial Advisory Board

Rev. Fr. Mathew Vadakkekutt

Director, Medicity

Prof. Dr. Mathew George

Principal

Prof. Dr. Lincy Joseph

HOD. Dept of Pharm. Chemistry

Staff Editor

Ms. Santhi Maria Joseph

Student Editor

Ms. Remi Elza John

Ms. Agnus Elsa Francis

Our Patron



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.

Vice President



Rev. Dr. Philipose Mar Stephanos
(Auxiliary Bishop of Tiruvalla)

FROM THE EDITOR'S DESK

The pharma echo news letter is not like other newsletters, it is an amalgamation of scientific arena, college events and documentation of our students, accomplishments and proud moments in both academics and cultural fields.

This news letter provides the glimpse of vibrant and dynamic life of the Pushpagiri family which aims at the holistic growth of the students and the institution.

Sincere thanks goes out to every one who put the effort and time to ensure that the letter is a success.....



MACROPHAGE ACTIVATION SYNDROME (MAS)

(Ms. Dhanya Prabhakar, M-Pharm, Department of Pharmacy Practice)

Macrophage activation syndrome (MAS) is a potentially fatal systemic disorder that results from uncontrolled activation and proliferation of T cells and excessive activation of the macrophages. It usually results from various adult and childhood systemic inflammatory rheumatic diseases; most commonly systemic onset juvenile idiopathic arthritis. MAS has also been associated with systemic lupus erythematosus, Kawasaki's disease and adult-onset Still's disease.

It is thought to be closely related and pathophysiologically similar to reactive or secondary haemophagocytic lymphohistiocytosis (HLH). HLH is a rare but potentially fatal disease of normal but overactive histiocytes and lymphocytes that commonly appears in infancy, although it has been seen in all age groups. Active haemophagocytosis by normal appearing macrophages is the pathogenic feature of MAS.

Primary HLH which is familial erythrophagocytic lymphohistiocytosis, an inherited form of HLH, is a heterogeneous autosomal recessive disorder. Secondary HLH (acquired haemophagocytic lymphohistiocytosis) occurs after immunological activation, such as that which can occur with systemic infection, immunological deficiency, and underlying malignancy. Both forms are characterised by the overwhelming activation of normal T lymphocytes and macrophages, invariably leading to clinical and haematological alterations and death in the absence of treatment. There is uncontrolled activation and proliferation of macrophages and T lymphocytes with a marked increase in circulating cytokines, such as IFN gamma and GM-CSF.

The diagnostic criteria proposed by the histiocyte society for inclusion in the international registry for haemophagocytic lymphohistiocytosis is as follows:-

1. Fever of 7 or more days with a temperature as high as 38.5 ° F.
2. Splenomegaly.
3. Cytopenia: Counts below the specified range in at least 2 of the following cell lineages:-
 - a. Absolute neutrophil count less than 1,000/ml.
 - b. Platelets less than 100,000/ml.
 - c. Haemoglobin less than 9.0 g/dl.

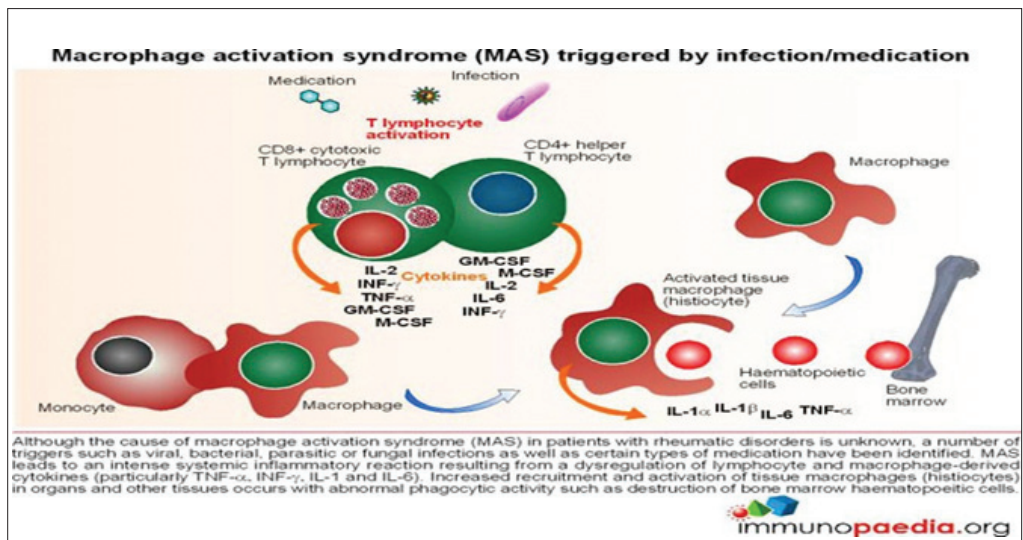
4. Hypofibrinogenaemia or hypertriglyceridaemia.
5. Demonstration of haemophagocytes in the bone marrow, spleen, or lymph nodes.
6. Rash.

At least 5 of the above criteria have to be satisfied to make a definitive diagnosis. For confirmation, tissue diagnosis is required.

Treatment of secondary HLH is mainly supportive. More specifically, the underlying disease has to be treated. Treatment includes appropriate antibiotics, chemotherapeutic agents, corticosteroids, and immunosuppressive agents such as cyclosporine, cyclophosphamide, and IV immunoglobulins.

Two types of agents are used:-

1. To interrupt the function of activated macrophages and histiocytes. These are etoposide, steroids, and high dose IV immunoglobulins.
2. To interrupt the function of activated lymphocytes (T cells). These are steroids, cyclosporine; and antithymocyte globulin.



3. Since TNF-alpha levels are elevated in MAS, anti-TNF alpha agents have been used to achieve quick symptomatic relief.

A more commonly followed protocol consists of corticosteroids and etoposide with or without cyclosporine A. In MAS, corticosteroid treatment (high dose oral prednisolone or methyl prednisolone pulses) is usually effective. Cyclosporines A, as also other therapeutic measures for secondary HLH, have been used. Indications for these would be uncontrolled fever, progressive pancytopenia, and impending organ failure.

First new antibiotic in 30 years discovered in major breakthrough

(Ms. Ashly Merin James , IIIrd Pharm D)

The first new antibiotic to be discovered in nearly 30 years has been hailed as a 'paradigm shift' in the fight against the growing resistance to drugs. A team from Northeastern University in Boston, Massachusetts, have discovered a way of using an electronic chip to grow the microbes in the soil and then isolate their antibiotic chemical compounds. They discovered that one compound, Teixobactin, is highly effective against

common bacterial infections *Clostridium difficile*, *Mycobacterium tuberculosis* and *Staphylococcus aureus*.

The first antibiotic Penicillin, was discovered by Alexander Fleming in 1928 and more than 100 compounds have been found since, but no new class has been found since 1987. The lack of new drugs coupled with over-prescribing has led to bacteria becoming increasingly resistant to modern medicines.

However the new discovery offers hope that many new antibiotics could be found to fight bacterial infections. Crucially, the scientists believe that bacteria will not become resistant to Teixobactin for at least 30 years because of its multiple methods of attack. Testing on mice has already shown that the antibiotic works well at clearing infections, without side-effects. The team is now concentrating on upscaling production so that it could be tested in humans.



COFFEE REDUCE ALZHEIMER'S RISK

(MS. Jancy Kuruvilla , M-Pharm , Department of Pharmacy Practice)

The latest research suggests that compounds called polyphenols and caffeine can also be responsible for this protective effect - and these exact compounds are also found in high quantities in coffee.

The study found that moderate coffee consumption was associated with a lower risk of developing dementia over a four year test period - by up to 20 per cent.



The researchers found caffeine helped prevent the formation of amyloid plaques and neurofibrillary tangles in the brain - two hallmarks of Alzheimer's Disease.

Both caffeine and polyphenols reduced inflammation and decreased the deterioration of brain cells - especially in the hippocampus and cortex, areas of the brain involved in memory, researchers found.

INTERNATIONAL HUMAN RIGHTS DAY 2014



Pushpagiri College of Pharmacy organized International Human Rights Day on January 11, 2014. Honourable Justice Sri J B Koshy inaugurated the function and delivered about the importance of human rights. Prof. Dr. Mathew George, Principal welcomed the gathering. Rev. Fr. Mathew Vadakkekutt, Director felicitated. The students of PCP interacted with justice with various questions.

RUN KERALA RUN 2015



On behalf of National Games, Pushpagiri college of pharmacy hosted 'Run Kerala Run 2015' in association with Malayala Manorama. Sri .Sam Eappen, Perigara Grama panchayat President flagged off the event. Prof. Dr. Mathew George, Principal Pushpagiri College of Pharmacy, Rev. Fr. Mathew Vadakkekutt, Medicity Director, Staff & students actively participated in the event and made it a grand success.

PHARMACIST'S DAY CELEBRATIONS & HONOURING CEREMONY FOR THE KERALA STATE BEST PHARMACIST



Flag off by Mrs. Delsy Sam, Tiruvalla Municipal Chairperson



Receiving Kerala State Pharmacy Council's Best Teacher Pharmacist's Award from Sri . Manjalamkuzhi Ali, Honourable Minister , and Sri. K. Muralidharan, MLA.



Honouring Prof. Dr. Mathew George by Rev. Dr. Mathew Mazhavancheril



Honouring the Chief Guest Sri. K J John , Assistant Drugs Controller



Inauguration Ceremony

The Pharmacist's day celebration and the honouring ceremony for the Kerala State Best Pharmacist 2014 was conducted on September 26th, 2014. The inaugural session commenced with a prayer song. Prof. Dr. Lincy Joseph, HOD, Dept of Pharmaceutical Chemistry welcomed the gathering, followed by the presidential address by Rev. Fr. Mathew Vadakkekutt, Director, Medicity Campus. The chief guest Mr. K.J. John ,Asst. Drug Controller, Kollam, Pathanamthitta & Kottayam district inaugurated the function. Rev. Dr. Mathew Mazhavancheril, Academics and research director,

Pushpagiri group of institutions felicitated. Prof. Dr. Mathew George, Principal, Pushpagiri College of Pharmacy, who won the Kerala state Best Pharmacist award (2014) have been honoured by Academics & Research director in the same event. Also the senior pharmacist of Pushpagiri family, Mr.Ramachandran Kurup was honoured during the function.

The road show and rally was flag off by Mrs. Delsy Sam, Municipal Chairperson, Tiruvalla. The social awareness programme and cultural programmes were organised by the students of second year Pharm D.

REMEDICATION AND COGNITIVE ENHANCERS IN SCHIZOTYPAL PERSONALITY DISORDER.

(Ms.Rani Manju, M-Pharm , Department of Pharmacy Practice)

Individuals with schizotypal personality disorder (SPD) often present with cognitive impairment similar, but of a lesser magnitude to, seen in schizophrenia. Cognitive dysfunction combined with social and perceptual disturbances, which are the hallmarks of this disorder, are directly related to substantially lower functioning. There is no FDA- approved medication for cognitive deficits in SPD; however, potential agents, including alpha 2 a and dopamine agonists, are under investigation. Cognitive remediation therapy (CRT) is a behavioral treatment that has been shown to improve cognitive and psychosocial functioning in individuals with schizophrenia.

Schizotypal personality disorder (SPD) is classified in DSM-5 within the category of Schizophrenia Spectrum and Other Psychotic Disorders, and is characterized by significant social deficits and discomfort, cognitive difficulties and perceptual disturbances, paranoia, and unusual behaviour. Patients typically present to psychiatric treatment with complaints of mood and anxiety symptoms rather than with concerns about cognitive, social and occupational functioning. Individuals with SPD frequently manifest significant impairment in functioning: these persons often realize limited occupational status reduced mental health, and social and emotional difficulties. Cognitive remediation therapy (CRT) combined with social skills training for the cognitive and social deficits in this population is a promising avenue under investigation.

Treatment

Diet and lifestyle

Employ memory aids such as planners, calendars and reminders. Some individuals find that development and maintenance of a structured schedule is helpful in improving cognitive function and managing symptoms. Exercise has



been shown to increase hippocampal volume in individuals with schizophrenia Class II as well as increase brain-derived neurotrophic factor (BDNF), a substance associated with neural plasticity which could facilitate learning and memory. Adequate nutrition is important. Omega-3 dietary supplements may be an additional area for research.

Emerging therapies:

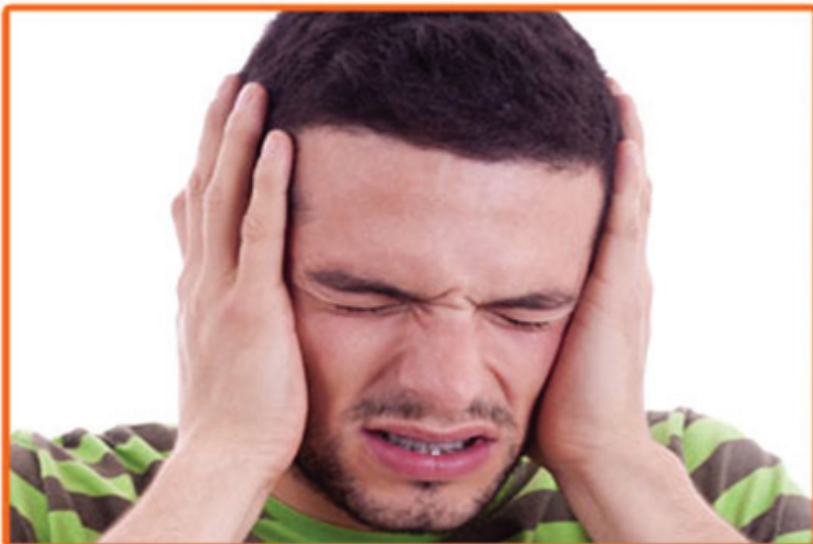
alpha 2 adrenergic agonists eg: guanfacine,

Dopamine agonists eg: pergolide, amphetamine

Cognitive remediation therapy (CRT) is a behavioral intervention designed to improve cognition through repeated stimulation of areas important in cognitive functioning.

Cognitive remediation

This is currently testing a trial of cognitive remediation and social skills training in SPD. The trial is ongoing; however, preliminary results are promising in terms of participant tolerability and response. Participants receive 7.5 weeks of twice weekly computerized, coach-facilitated cognitive remediation treatment, plus concurrent social skills training. Computerized sessions employ Cognitive Enhancement Therapy and participants complete cognitive training exercises in small groups. Administration in small groups encourages additional opportunity for social skills practice, a particularly important exercise for this often socially isolated group of individuals. The addition of social skills training follows from schizophrenia research literature suggesting that transfer of learning is most salient when computer training is paired with a skills group. In these groups, topics relevant to both cognitive difficulties (e.g. ways to enhance memory) and interpersonal issues. Cognitive-remediation therapy is a relatively costly program. Participants attend treatment twice weekly and cognitive remediation coaching and social skills sessions are led by program staff.



PHARMA WOCHES FISSO, 2014

Pushpagiri College of Pharmacy organized PHARMA WOCHES FISSO, the pharmacy week celebrations from 24th November to 28th November 2014. As a part of this event we had also organized blood donation camp; orphanage visit; road shows to invoke the role of a pharmacist in the health care team and an inspire program 'PHARMA INSPIRE' especially for the 11th and 12th standard students who visited our institution.

24th November 2014

Pharmacy week celebration started off by hoisting our college flag by the chairman of Pushpagiri Group of Institutions Rev.Dr.Shaji Mathews Vazhayil and an oath was taken by our college students and staff which was led by Prof. Dr.Lincy Joseph, HOD Dept of Pharmaceutical chemistry followed by the inaugural function. We were extremely honoured to have Shri.M.R.Pradeep, Deputy drugs controller, Kerala, Shri.B.Rajan, President, Kerala State Pharmacy Council, Shri.D.U.Dinesh, Registrar, Kerala State pharmacy council and Shri.Sam Eapen, President, Peringara Grama Panchayat for the inaugural function.

A rally was conducted by our college students which was flagged off by Mr. A.Gopakumar, RDO, Thiruvalla. In the afternoon session we got an opportunity to listen to the enthusiastic words of Rev.Fr.Davis Chiramal, Kidney Federation Of India, who has set an example to the world with his life by donating his own organ.

25th November 2014

As a part of this event we organized a blood donation camp in association with the District Cooperative Hospital, Kottayam and Lions Club International, Thiruvalla. We were greatly privileged to have Mr. Prem Prakash, cine actor cum director from the Malayalam industry who inspired the audience with his words regarding the importance of co-curricular activities in one's life. To inculcate the virtue of charity among the students, the college organized an orphanage visit Shalom Karunya Bhavan, Mallapally.

26th NOVEMBER 2015

PHARMA LUMINENCE

A national seminar was conducted in our college in the esteemed presence of Mr. Dharmajan, Judge, Family Court, Tiruvalla, Dr. Suresh David, Medical Director, Pushpagiri Medical College Hospital; Prof.Dr. M.Surulivel Rajan, and Prof.Dr.Rajesh.V, Dept. Of Pharmacy Practice, Manipal University; Rev.Dr. Mathew Mazhavancheril, Director-Academics and Research, Pushpagiri Group of Institutions; Prof.Dr Mathew George, Principal, Pushpagiri College Of Pharmacy.

SESSIONS OF THE SEMINAR

In the morning, the first session was taken by Dr. Suresh David on the topic 'IMPORTANCE OF CLINICAL PHARMACY AND PHARMACOLOGY' Second session started by 11:30 which was handled by Dr.Surulivel Rajan on 'EVOLUTION OF CLINICAL PHARMACIST-CURRENT DILEMMA AND POSSIBLE FUTURE'.

Afternoon session was taken by Dr.Rajesh.V. on 'RESEARCH AREAS IN PHARMACY PRACTICE AND INFORMATION MANAGEMENT'. A demo was shown by Mr.Amarnath from Micromedex and also on ANIMAL SIMULATOR by Mr.Ram Kumar. A poster arena was arranged by our college where delegates from different colleges participated. The best poster was awarded to Ms. Divya Ramanan, Chemist College of Pharmacy, Ernakulam.

The Valedictory function started at 4pm made special by the presence of Rev.Dr.Vargheese Manakalettu, Major Archbishopal Tribunal President of Malankara Catholic Church and Mr.Jayan Philip, Drug Inspector, Kottayam.

27th November 2014

In order to spread the importance of pharmacy profession in the health care sector, we also organized a programme - 'PHARMA INSPIRE' for the 11th and 12th students. The programme was inaugurated by Mr.S.Hari Kishore, District Collector, Pathanamthitta. The presence of cine artist, Kumari Muktha added more colour to this event. Skits, short films and exhibitions were put up by our students.

28th NOVEMBER 2014

With regard to the World's Diabetes Day, 3rd Year PharmD students organized a talk on 'acupuncture' handled by Dr. Roji T Roy, MBBS, MD followed by the farewell celebrations for the first batch of B-Pharm & M-Pharm students under KUHS.

PUBLICATIONS:

1. **Lincy Joseph**, Mathew George, Surekha SR : Phytochemical Quantification and Amylase Inhibitory activity of Pimenta dioica, Journal of Biological & Scientific Opinion, Vol 3, 231-238 (2014)
2. **Lincy Joseph**, Mathew George, Surekha SR : Synthetic Strategy and therapeutic utility of oxygen and nitrogen containing heterocyclic compounds. National Journal of Pharmaceutical Sciences. Vol 4, 417-431 (2014)
3. **S R Surekha**, Lincy Joseph, Mathew George : Design Synthesis and Screening of Newer 8-hydroxy quinoline derivatives as Novel antitubercular agents. IJASBT. Vol 2(3), 342-358 (Sept 2014)
4. **Lincy Joseph**, Mathew George Estimation of Ascorbic Acid and Amylase & Lipase inhibitory effects in fruit extracts of certain courtyard Plants. American Journal of Phytomedicine and clinical therapeutics, 2014, Vol.2(12), 1397-1403.

SEMINARS:

1. Pharm.D and M.Pharm students attended a seminar on adverse drug reaction monitoring on 22nd December 2014, held at Pushpagiri Medical College Hospital.
2. Principal, Staff, Students of M-Pharm, Pharm D PB & IInd Pharm D students attended an International Seminar on 12th January, 2015 at MG University, RIMS, Puthupally.

24th November 2014



Guests and the official during the flag hoisting ceremony



Oath taking ceremony



Staff and Students during the flag hoisting ceremony



Passing the lighted candle by Rev. Fr. Mathew Vadakkekutt



Flag off by Mr. A. Gopakumar, RDO, Thiruvalla



Receiving the rally at Bishop's House



Inauguration ceremony of National Pharmacy Week Celebration by Sri. B. Rajan, President, Kerala State Pharmacy Council



Inaugural Ceremony of Awareness programme on Organ Donation



Hon'ble guest and dignitaries during the inaugural function



Honouring Rev. Fr. Davis Chiramel, Chairman Kidney Federation of India, by His Grace Rev. Dr. Thomas Mar Koorilos



Benedictory Speech by His Grace Rev. Dr. Thomas Mar Koorilos

25th November 2014



Inauguration of Blood Donation Camp by Cine artist cum director Sri. Prem Prakash

26th November 2014 - Pharma Luminescence



Hon'ble guest and dignitaries



Speaker Dr. Surulivel Rajan, addressing the gathering

27th November 2014



Inauguration of Pharma Inspire - 2014 by Cine artist Kumari Muktha



Sri. Hari Kishore IAS, addressing the gathering



Inauguration of Exhibition Hall by Sri. Hari Kishore, IAS, District Collector, Pathanamthitta



Prof. Dr. Mathew George. Principal explaining the importance of Pharmaceutical sciences.



School Students - during the Pharma Inspire Programme



Students of PCP, Showcasing their talents during Pharma Inspire Programme

28th November 2014 - Farewell Ciao



Farewell Ceremony - First batch of KUHS B.Pharm and M.Pharm Students

GARDASIL 9 APPROVED BY FDA FOR PREVENTION OF CERTAIN CANCERS CAUSED BY FIVE ADDITIONAL TYPES OF HPV

(Ms. Sissy Aloysia, M. Pharm, Department of Pharmacy Practice)

For the prevention of certain diseases caused by nine types of Human Papillomavirus (HPV), the U.S. Food and Drug Administration today approved Gardasil 9 (Human Papillomavirus 9-valent Vaccine, Recombinant). Covering nine HPV types, five more HPV types than Gardasil (previously approved by the FDA), Gardasil 9 has the potential to prevent approximately 90 percent of cervical, vulvar, vaginal and anal cancers.

Gardasil 9 is a vaccine approved for use in females' ages 9 through 26 and males ages 9 through 15. It is approved for the prevention of cervical, vulvar, vaginal and anal cancers caused by HPV types 16, 18, 31, 33, 45, 52 and 58, and for the prevention of genital warts caused by HPV types 6 or 11. Gardasil 9 adds protection against five additional HPV types—31, 33, 45, 52 and 58— which cause approximately 20 percent of cervical cancers and are not covered by previously FDA-approved HPV vaccines.

A randomized, controlled clinical study was conducted in the U.S. and internationally in approximately 14,000 females ages 16 through 26 who tested negative for vaccine HPV types at the start of the study. Study participants received either Gardasil or Gardasil 9. Gardasil 9 was determined to be 97 percent effective in preventing cervical, vulvar and vaginal cancers caused by the five additional HPV types (31, 33, 45, 52, and 58). In addition, Gardasil 9 is as effective as Gardasil for the prevention of diseases caused by the four shared HPV types (6, 11, 16, and 18) based on



similar antibody responses in participants in clinical studies. The effectiveness of Gardasil 9 in females and males ages 9 through 15 was determined in studies that measured antibody responses to the vaccine in approximately 1,200 males and 2,800 females in this age group. Their antibody responses were similar to those in females 16 through 26 years of age. Based on these results, the vaccine is expected to have similar effectiveness when used in this younger age group.

Gardasil 9 is administered as three separate shots, with the initial dose followed by additional shots given two and six months later. For all of the indications for use approved by the FDA, Gardasil 9's full potential for benefit is obtained by those who are vaccinated prior to becoming infected with the HPV strains covered by the vaccine. The safety of Gardasil 9 was evaluated in approximately 13,000 males and females. The most commonly reported adverse reactions were injection site pain, swelling, redness, and headaches. ●

ORIENTATION CLASSES FOR FRESHERS

On 30th October an orientation was organized in our college for the freshers that was for 1st year B.Pharm & Pharm D students. The program was headed by Dr. Girish, (Kairali T V). Orientation was held in two sessions. 1st session was on the topic "how to build a successful person by evaluating their negatives". Second session was an interactive session regarding teenage life.

TEACHERS DAY CELEBRATION

" A GOOD TEACHER CAN INSPIRE HOPE , IGNITE IMAGINATION, AND INSTILL LOVE FOR LEARNING"

As a token of love and gratitude to beloved teachers, Students Pushpagiri College of Pharmacy celebrated the teachers day as a grand function. The celebration was held on 5th September 2014.



PRESCRIBING PATTERN OF INTERNS: TIME FOR NEW INTERVENTIONS

(Ms. Athulya Raj, M.Pharm, Department of Pharmacy Practice)

There are many areas where improvements need to be made to prescribing. For example, the frequency of drug administration was not mentioned in all prescriptions, nor was the intended duration of therapy mentioned in all prescriptions. Leaders in medical education should give particular consideration to interprofessional education in this field whereby medical students, student nurses, and student pharmacists learn together to improve prescribing. Prescribing is ultimately a team based activity and so any attempt to improve it should address the needs of teams, as well as individuals. Collaborative team based activities can improve the quality of prescribing. However, education on its own may not be sufficient to make significant progress. Even the most well educated doctors occasionally make errors it worth thinking of different means of addressing this problem which affects all healthcare systems in the world.

One alternative intervention is to use new technologies to reduce errors. The introduction of electronic prescribing may be one such new innovation. Electronic prescribing could effectively prevent interns from making many of the errors cited. For example, if a drug is prescribed by its brand name, electronic software could detect this and suggest to the prescriber that the generic name is used instead. If a drug is prescribed parenterally and an equally effective oral preparation is available, the software could suggest a change in this regard also. Other problems identified by the study included the failure to record the frequency of drug administration or the duration of therapy. Once again electronic prescribing systems could pick this up immediately, and prevent the prescriber from submitting their prescription until these vital parameters are completed in full. New technologies have transformed practice in many walks of life and indeed within certain specialties in medicine.

List of approved drugs from 01-06-2014 to 31-12-2014 Saxenda (liraglutide [rDNA origin] injection)

Saxenda (liraglutide [rDNA origin] injection) is a glucagon-like peptide-1 (GLP-1) receptor agonist. Saxenda is supplied as a solution for subcutaneous administration. The recommended dose of Saxenda is 3 mg daily. Administer at any time of day, without regard to the timing of meals. Side effects are hypoglycaemia, diarrhea, constipation, vomiting, headache.

Savaysa (edoxaban tablets)

The anti-clotting drug Savaysa (edoxaban tablets) reduce the risk of stroke and dangerous blood clots (systemic embolism) in patients with atrial fibrillation. Savaysa also has been approved to treat deep vein thrombosis (DVT) and pulmonary embolism (PE). The most common side effects

observed in clinical trial participants were bleeding and anemia. In patients with atrial fibrillation, anti-clotting drugs lower the risk of stroke by helping to prevent blood clots from forming in the heart.

Lynparza (olaparib)

A new drug treatment for women with advanced ovarian cancer associated with defective BRCA genes, as detected by an FDA-approved test. Lynparza is a poly ADP-ribose polymerase (PARP) inhibitor that blocks enzymes involved in repairing damaged DNA. Common side effects of Lynparza included nausea, fatigue, vomiting, diarrhea, distorted taste (dysgeusia), indigestion (dyspepsia), headache.

Trulicity (dulaglutide)

Trulicity is a glucagon-like peptide-1 (GLP-1) receptor agonist, a hormone that helps normalize blood sugar levels. The most common side effects observed in patients treated with Trulicity were nausea, diarrhea, vomiting, abdominal pain, and decreased appetite.

Zydelig (idelalisib)

Approved drug for patients with 3 types of blood cancers. Zydelig is being granted traditional approval to treat patients whose chronic lymphocytic leukemia (CLL) has returned (relapsed).

Opdivo (nivolumab)

It is a human monoclonal antibody that blocks the interaction between PD-1 and its ligands, PD-L1 and PD-L2. Binding of the PD-1 ligands, PD-L1 and PD-L2, to the PD-1 receptor found on T cells, inhibits T-cell proliferation and cytokine production. Opdivo is specifically indicated for the treatment of patients with unresectable or metastatic melanoma. Opdivo is supplied as a solution for intravenous administration. The recommended dose of Opdivo is 3 mg/kg administered as an intravenous infusion over 60 minutes every two weeks.

Clinical department activities from Pushpagiri Medical College Hospital June – December 2014

Sl.no	Activities	No.of activities
1.	Drug information	96
2.	Patient counselling	177
3.	Adverse drug reactions	10