pharmahorizon

A panorama in the world of health sciences

NEWSLETTER FROM DEPARTMENT OF PHARMACY, SUMANDEEP VIDYAPEETH | SEP-DEC 2015 I Vol I Issue 5

ASSOCIATE EDITOR'S VIEW

New Year Greetings!!!

It's a great privilege to be associate editor of Pharmahorizon. Initially conceived as a bimonthly newsletter, from this issue onwards Pharmahorizon will be released quarterly.

In the current issue, we talk about recent developments and other information in the medical and pharmaceutical field. In breakthrough discoveries, we have incorporated winners of Nobel Prize for discovering a novel therapy against roundworm infection and discovery of Artemisinin. Asenapine, a drug of choice for Bipolar disorder and Schizophrenia is Molecule of the Millennium.

We also discuss strong WHO recommendation on micronutrients like Vitamin A, Zinc and Iron for infant and children of 6-59 months of age to reduce child morbidity and mortality. Furthermore two new drugs, Cangrelor and Selexipag for reducing periprocedural thrombotic events and pulmonary arterial hypertension respectively have been discussed.

Various college activities like Pharmacy week, Balmela and HPTLC demonstration are highlighted and we are also pleased to announce that Dept. of Pharmacy is organizing 2nd National Seminar & Workshop "Pharmarendezvous" in the month of March.

Pharmahorizon will continue to serve the pharmacy profession and to highlight the achievements and milestones of Dept. of Pharmacy, Sumandeep Vidyapeeth University. But our efforts would be incomplete without your support. So we welcome your contributions and comments to Pharmahorizon.

Happy Reading.

Dr. Dhanya B Sen, M.Pharm, PhD

Asst. Prof. , DoP, SV

A TRIUMPH OF TRIO

W C Campbell

Satoshi Õmura

Tu Youyou

IVERMECTIN

William Cecil Campbell & Satoshi Õmura both were jointly awarded the 2015 Nobel Prize in Physiology or Medicine for discovering a novel therapy against infections caused by roundworms. They helped to discover a class of drugs called avermectins, whose derivatives have been shown to have "extraordinary efficacy" in treating River blindness and Lymphatic filariasis, among other parasitic diseases affecting animals and humans.

A blockbuster animal health anthelmintic and antiparasitic drug, with global annual sales in excess of $1 billion since the mid-1980s, Ivermectin has been donated free of charge since 1987 by its manufacturers, Merck & Co., Inc., to combat River Blindness (and recently Elephantiasis) in people throughout the tropics.

Discovery of Artemisinin - A gift from Traditional Chinese Medicine to the World

Tu Youyou is a Chinese pharmaceutical chemist and educator. She is best known for discovering artemisinin (also known as qinghaosu) and dihydroartemisinin, used to treat malaria, which saved millions of lives. Her discovery of artemisinin and its treatment of malaria is regarded as a significant breakthrough of tropical medicine in the 20th century and health improvement for people of tropical developing countries in South Asia, Africa, and South America. Tu is the first Chinese Nobel laureate in physiology or medicine and the first citizen of the People's Republic of China to receive the Nobel Prize in natural sciences, as well as the first Chinese person to receive the Lasker Award.

Source:http://www.nobelprize.org/nobel_prizes/medicine/laureates/2015/

CARTON

Schizophrenia group therapy.

MOLECULE OF THE MILLENNIUM ASENAPINE : It is an antagonist at various dopaminergic (D2, D3 and D4), serotonergic ($5HT_{2A}$, $5HT_{2B}$, $5HT_{2C}$, $5HT_6$ and $5HT_7$) and alpha adrenergic receptors (α_{1A} and α_2). It has an appreciably high affinity for $5HT_{2A}$ receptors than D2 receptors. Antagonism of α_2 adrenoceptors is said to improve the negative symptoms and cognitive function in schizophrenia. As asenapine blocks α_2 receptors, it has the potential to offer these benefits. The antagonistic activity at α_1 adrenoceptor accounts for the orthostatic hypotension caused by the drug.

Bipolar I disorder, Acute mixed or manic episodes, monotherapy or adjunct treatment with lithium or valproate

a) Monotherapy : Usual dose: 10 mg sublingually twice daily. May decrease to 5 mg twice daily for adverse events. The safety of doses greater than 10 mg twice daily is not established. Periodically reevaluate efficacy of long-term use.

b) Adjunct Therapy : 1) Initial dose: 5 mg sublingually twice daily with either lithium or valproate. 2) Titration and maintenance dose: May increase to 10 mg twice daily based on clinical response. The safety of doses greater than 10 mg twice daily is not established. Periodically reevaluate efficacy of long-term use.

Schizophrenia :

Usual dose : 5 mg sublingually twice daily. After 1 week may increase to 10 mg twice daily. In clinical trials there was no added benefit with higher doses, and there was an increase in adverse reactions. The safety of doses above 10 mg twice daily is not established.

Asenapine is not indicated for the treatment of dementia-related psychosis

It has a favourable weight gain profile and less propensity to cause metabolic disturbance. The most common adverse effect associated with asenapine is somnolence. The other common adverse effect is orthostatic hypotension. Asenapine has a mild effect on QTC prolongation which is comparable with quetiapine. Oral hypoesthesia is a peculiar adverse effect of asenapine.

Source: *www.micromedex.com*

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WHO recommendations on micronutrients for infant and children

Neonatal vitamin A supplementation

- At the present time, neonatal vitamin A supplementation (that is, supplementation within the first 28 days after birth) is not recommended as a public health intervention to reduce infant morbidity and mortality

Vitamin A supplementation in infants 1–5 months of age

- Vitamin A supplementation in infants 1–5 months of age is not recommended as a public health intervention for the reduction of infant morbidity and mortality

Vitamin A supplementation in infants and children 6-59 months of age

- In settings where vitamin A deficiency is a public health problem, vitamin A supplementation is recommended in infants and children 6–59 months of age as a public health intervention to reduce child morbidity and mortality

Intermittent iron supplementation in preschool or school-age children

- In settings where the prevalence of anaemia in preschool or school-age children is 20% or higher, intermittent use of iron supplements is recommended as a public health intervention to improve iron status and reduce the risk of anaemia among children

Micronutrient powders for home fortification of foods consumed by infants and children 6–23 months of age

- Home fortification of foods with micronutrient powders containing at least iron, vitamin A and zinc is recommended to improve iron status and reduce anaemia among infants and children 6–23 months of age.
- Strong recommendation, high quality evidence for iron efficiency, moderate quality evidence for anaemia, haemoglobin concentration, iron status and growth.

Source: http://www.who.int/maternal_child_adolescent/documents/guidelines-recommendations-child-health.pdf

NEW DRUG APPROVAL

Cangrelor (Approved June 2015) (For reducing periprocedural thrombotic events)

Kengreal (cangrelor) is a direct P2Y12 platelet receptor inhibitor that blocks ADP-induced platelet activation and aggregation. Cangrelor binds selectively and reversibly to the P2Y12 receptor to prevent further signaling and platelet activation.

Kengreal is specifically indicated as an adjunct to percutaneous coronary intervention for reducing the risk of periprocedural myocardial infarction, repeat coronary revascularization, and stent thrombosis in patients who have not been treated with a P2Y12 platelet inhibitor and are not being given a glycoprotein IIb/IIIa inhibitor.

Kengreal is supplied as a sterile white to off-white lyophilized powder for reconstitution into an IV infusion. The recommended dosage is a 30 mcg/kg IV bolus followed immediately by a 4 mcg/kg/min IV infusion. Initiate the bolus infusion prior to PCI. The maintenance infusion should ordinarily be continued for at least 2 hours or for the duration of PCI, whichever is longer.

Selexipag (Approved December 2015) (pulmonary arterial hypertension)

Uptravi (selexipag) is a prostacyclin receptor agonist, which exerts vasodilating effects.

Uptravi is specifically indicated for the treatment of pulmonary arterial hypertension (PAH, WHO Group I) to delay disease progression and reduce the risk of hospitalization for PAH.

Uptravi is supplied as tablets for oral administration. The recommended starting dose of Uptravi is 200 micrograms (mcg) given twice daily. Tolerability may be improved when taken with food. The dose should be increased in increments of 200 mcg twice daily, usually at weekly intervals, to the highest tolerated dose up to 1600 mcg twice daily. If a patient reaches a dose that cannot be tolerated, the dose should be reduced to the previous tolerated dose. Do not split, crush, or chew tablets.

Source: http://www.centerwatch.com/drug-information/fda-approved-drugs/drug/100126

Drug Safety Communication

FDA revises labels of SGLT2 inhibitors for diabetes to include warnings about too much acid in the blood and serious urinary tract infections

Patients should stop taking their SGLT2 inhibitor and seek medical attention immediately if they have any symptoms of ketoacidosis, a serious condition in which the body produces high levels of blood acids called ketones. Symptoms of ketoacidosis include nausea, vomiting, abdominal pain, tiredness, and trouble breathing. Patients should also be alert for signs and symptoms of a urinary tract infection, such as a feeling of burning when urinating or the need to urinate often or right away; pain in the lower part of the stomach area or pelvis; fever; or blood in the urine. Contact a health care professional if you experience any of these symptoms.

Health care professionals should assess for ketoacidosis and urinary tract infections in patients taking SGLT2 inhibitors who present with suggestive symptoms. Ketoacidosis associated with the use of SGLT2 inhibitors can occur even if the blood sugar level is not very high. If ketoacidosis is suspected, the SGLT2 inhibitor should be discontinued and treatment instituted promptly.

SGLT2 inhibitors are a class of prescription medicines that are FDA-approved for use with diet and exercise to lower blood sugar in adults with type 2 diabetes. When untreated, type 2 diabetes can lead to serious problems, including blindness, nerve and kidney damage, and heart disease. Medicines in the SGLT2 inhibitor class include canagliflozin, dapagliflozin, and empagliflozin (see section on List of FDA-approved SGLT2 Inhibitors for Type 2 Diabetes). SGLT2 inhibitors are not FDA-approved for use in patients with type 1 diabetes.

FDA Drug Safety Communication: FDA warns of serious liver injury risk with hepatitis C treatments with ombitasvir, paritaprevir and ritonavir

The U.S. Food and Drug Administration (FDA) is warning that hepatitis C treatment Viekira Pak and Technivie **(ombitasvir, paritaprevir and ritonavir)** can cause serious liver injury mostly in patients with underlying advanced liver disease. As a result, FDA is advised manufacturers to add new information about this safety risk to the drug labels.

Patients taking these medicines should contact their health care professional immediately if they develop fatigue, weakness, loss of appetite, nausea and vomiting, yellow eyes or skin, or light-colored stools, as these may be signs of liver injury. Patients should not stop taking these medicines without first talking to their health care professionals. Stopping treatment early could result in drug resistance to other hepatitis C medicines. Health care professionals should closely monitor for signs and symptoms of worsening liver disease, such as ascites, hepatic encephalopathy, variceal hemorrhage, and/or increases in direct bilirubin in the blood.

They are used to treat chronic hepatitis C, a viral infection that can last a lifetime and lead to serious liver and other health problems, including cirrhosis, liver cancer, and death. These medicines reduce the amount of hepatitis C virus in the body by preventing it from multiplying and may slow down the disease.

Source: http://www.fda.gov/Drugs/DrugSafety/ucm468634.htm

Highlights of Events - Department of Pharmacy

Demonstration on Camag HPTLC System: A Demonstration on Camag HPTLC System was organized by Dept. of Pharmacy on 6th October 2015. The speaker for this event was Mr. Prashant Hande, Application Specialist, Anchrom enterprise Ltd., Mumbai. The objective of this program was to make the faculty members and students aware about the recent advancements in HPTLC and its applications in stability indicating studies as well as in identification of herbal products.

Industrial visit – Relax Biotech Pvt. Ltd.: Final Year B.Pharm students of Department of Pharmacy Visited "Relax Biotech Pvt. Ltd., Vadodara" on 4th December, 2015. Total 16 students accompanied by 2 faculty members visited the Pharmaceutical manufacturing unit. Relax Biotech has WHO GMP approved non-sterile pharmaceutical formulations manufacturing facilities. Students visited different industrial departments such as, raw material stores, tablet manufacturing unit, liquid manufacturing unit, microbiology and sophisticated instrument lab etc.

Pharmacy Week Celebrations: Department of Pharmacy, SV celebrated Pharmacy week on 14th, 15th and 16th December, 2015 as a part of 54th National Pharmacy Week celebrations. The theme selected for this year was "Responsible Use of Antibiotics Saves Lives". The main objective of Pharmacy week celebrations was to create awareness among the healthcare professionals and community regarding appropriate use of antibiotics and role of pharmacist in general. Various events such as, quiz competition, elocution competition, Pharma marketing, Pharma Rangoli as well as Health camp were organized.

Resource person and the faculty for IPSCON – 2015: Conference of Indian Pharmacological society was held from 17th to 19th Dec 2015 at Saurashtra University, Rajkot. This conference was preceded by a workshop on Pharmacovigilance. Dr. R. Balaraman, Prof. of Pharmacology, Department of Pharmacy, Sumandeep Vidyapeeth was deputed by National Academy of Medical Sciences, New Delhi as an observer to this workshop. Dr. R. Balaraman also chaired one of the sessions in conference. Furthermore, Dr. Rajesh Maheshwari and Mr. Ghanshyam Parmar attended the workshop and conference.

Participation in Balmela: Department of Pharmacy, SV participated in 44th Balmela sponsored by Vadodara Municipal Corporation on 26th and 27th of December 2015. The aim of this festival (BAL MELA) is to create awareness among the society regarding the use of first aid, harmful effects of plastics, advantages of yoga, abuse of antibiotics etc. Students of Dept. of Pharmacy exhibited several posters on the topic "Responsible Use of Antibiotics: Save Lives".

Faculties of DoP, SV awarded PhD degrees

Dr. Girish U Sailor, Associate Professor, has been awarded the degree of Doctor of Philosophy (Ph.D) in Pharmaceutical Sciences by Sumandeep Vidyapeeth in October 2015 for the study entitled "Development and evaluation of novel drug delivery systems containing active herbal constituent". He has conducted his research work under the guidance of Dr. Avinash K Seth, HOD/Director, Department of Pharmacy, Sumandeep Vidyapeeth.

Dr. Sachin P. Chauhan, Associate Professor has been awarded degree of Doctor of Philosophy (Ph.D) in Pharmaceutical Sciences by Sumandeep Vidyapeeth in October 2015. His dissertation topic was "Design, development, characterization and optimization of magnetically targeted nanoparticulate drug delivery system for treatment of breast cancer". He has conducted his Ph.D research work under the guidance of Dr. Avinash K. Seth, HOD/Director, Department of Pharmacy, Sumandeep Vidyapeeth.

Dr. Nirmal Shah, Associate Professor has been awarded degree of Doctor of Philosophy (Ph.D) in Pharmaceutical Sciences by Sumandeep Vidyapeeth in October 2015. His Ph.D research topic was "Techniques to improve bioavailability of selective estrogen receptor modulator (SERM) for the treatment of osteoporosis". He has conducted his Ph.D research work under the guidance of Dr. Avinash K. Seth, HOD/Director, Department of Pharmacy, Sumandeep Vidyapeeth.

Dr. Ashim Kumar Sen, Associate Professor has been awarded degree of Doctor of Philosophy (Ph.D) in Pharmaceutical Sciences by Sumandeep Vidyapeeth in October 2015. His Ph.D research topic was "Development and validation of newer analytical methods for some group of pharmaceuticals from it's bulk and pharmaceutical dosage form". He has conducted his Ph.D research work under the guidance of Dr. R. Balaraman, Ph.D, FAMS, Head of Department of Pharmacology, Department of Pharmacy, Sumandeep Vidyapeeth.

Dr. Dhanya B Sen, Assistant Professor has been awarded degree of Doctor of Philosophy (Ph.D) in Pharmaceutical Sciences by Sumandeep Vidyapeeth in November 2015. Her Ph.D research topic was "Development and validation of newer analytical methods for some antidiabetic group of drugs from it's bulk and pharmaceutical dosage form". She has conducted her Ph.D research work under the guidance of Dr. R. Balaraman, Ph.D, FAMS, Head of Department of Pharmacology, Department of Pharmacy, Sumandeep Vidyapeeth.

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Announcement: Pharmarendezvous – 2016

Department of Pharmacy, Sumandeep Vidyapeeth will be organizing the 2nd National Seminar and Workshop – Pharmarendezvous 2016 on 21st and 22nd March, 2016. The primary focus of Pharmarendezvous 2016 will be on "Cancer Treatment – A Global Challenge" and "Role of Clinicians and Pharmacists in implementing Pharmacovigilance to overcome Adverse Drug Reaction". The program schedule covers plenary lectures and poster/oral presentation sessions.

For more details on sub themes for presentation, author guidelines and model abstract, please visit: **www.pharmarendezvous2016.com**

Deadlines:

Submission of Abstract	:	06th March 2016
Notification of Acceptance of Abstract	:	08th March 2016
Registration	:	10th March 2016

Registration details for Pharmarendezvous 2016 is as follows:

Category	Up to 10th March, 2016		
	Seminar	Workshop	Both
Student/ Research Scholar	500/-	800/-	1000/-
Delegates from Industry/ Academia	700/-	1000/-	1500/-

Category	11th March onwards and Spot Registration		
	Seminar	Workshop	Both
Student/ Research Scholar	700/-	1000/-	1500/-
Delegates from Industry/ Academia	1000/-	1300/-	2000/-

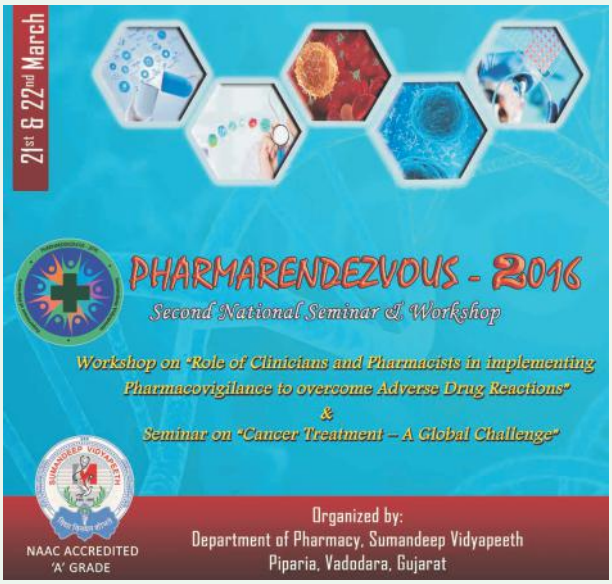
The invited speakers for Pharmarendezvous 2016

Day 1 : Workshop on "Role of Clinicians and Pharmacist in implementing Pharmacovigilance to overcome Adverse Drug Reactions"

- **Dr. Bikash Medhi,** Professor, Department of Pharmacology and Coordinator, Pharmacovigilance Centre, PGIMER, Chandigarh
- **Dr. Ajay Prakash,** Assistant Professor, Department of Pharmacology, PGIMER, Chandigarh
- **Dr. B.M. Sattigeri,** Professor& Head, Department of Pharmacology, SBKS Medical Institute and Research Centre, Sumandeep Vidyapeeth, Vadodara
- **Dr. Chetna Desai,** Professor and Head, Department of Pharmacology, B J Medical College, Ahmedabad
- **Dr. V. Kalaiselvan,** Principal Scientific Officer, Indian Pharmacopoeia Commission, Ministry of Health & Family Welfare, Govt. of India, Ghaziabad

Day 2 : Seminar on "Cancer Treatment – A Global Challenge"

- **Dr. Chirag Shah,** Director, Department of Cancer, Blood disease and Stem Cell Transplant, Apollo Hospital, Ahmedabad
- **Dr. Rishit Zalawadia,** Manager – Discovery Biology (Pharmacology), Sun Pharma Advanced Research Company Limited, Vadodara
- **Dr. Abhijit Chaterjee,** Deputy General Manager/ Group Leader, Zydus Research Centre, Ahmedabad
- **Dr. Chandramani More,** Professor & Head, Department of Oral Medicine and Maxillofacial Radiology, KM Shah Dental college & Hospital, Sumandeep Vidyapeeth, Vadodara
- **Dr. Velumurgan,** Senior Scientist, Century Pharmaceuticals Ltd., Vadodara



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Department of Pharmacy
Sumandeep Vidyapeeth, Piparia, Vadodara (Gujarat)

Please email your suggestions, comments and contribution for next issue to editorpharmahorizon@gmail.com
Note: If you have any query regarding medication and disease please write us at: svdruginfo@gmail.com