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## A Pharmacy Practice Newsletter

Volume 2 Issue 2

May - Aug 2017



Dear readers,

*Alone we can do so little;  
TOGETHER we can do so much.*

--- Helen Keller

World Alliance for Breastfeeding  
Action, WABA has announced the World

Breastfeeding Week from 1-7th August, 2017. It is to promote, protect and support breastfeeding among the public and make it a global campaign in association with the sustainable development goals (SDG). It is high time that we Indians also become a part of this awareness movement. The issue features significant facts about breast-feeding apart from the facts about therapeutic drug monitoring with the other essential pharma news, if the newsletter is able to kindle interest in you, then we at the editorial board will have been successful.



1-7  
August  
2017

Breast feeding and the use of human milk helps reductions in health risks for infants and children, mothers, families and society that are attributable to breastfeeding and the use of human milk for feeding. These benefits include developmental, economic, health, nutritional, immunological, psychological, social and environmental benefits.

The only source of nutrition a healthy infant requires is breast milk for about first 6 months of life. It is tailored to specific nutritional needs of infants, contains immunological agents like secretory immunoglobulin IgA and IgG and has anti-inflammatory properties that offer protection to the potentially immature immune systems of both term as well as preterm infants. Breast milk consists of bioactive components that are resistant to digestive processes and that enhance the infant's immune system, thereby contributing to short- and long-term health protection.

**Reduced health risks for breastfed children:**

**Protection against short-term infections:**

- ❖ Acute Otitis Media (AOM)
- ❖ Gastroenteritis and diarrhea
- ❖ Respiratory Tract Infections (RTIs) such as pneumonia, increase the risk of developing childhood asthma.
- ❖ Necrotizing enterocolitis
- ❖ Sudden infant death syndrome
- ❖ Chronic diseases: Asthma & Obesity

**Reduced health risks for mothers who Breastfeed:**

Mothers who breastfeed typically are at a lower risk of developing certain diseases. Breastfeeding reduces post-partum bleeding and hemorrhage risk, that help mothers to recover from childbirth. Breastfeeding is associated with longer birth intervals resulting from lactational amenorrhea, or suppression of ovulation, giving mothers' bodies more time to recover fully from pregnancy and childbirth. Breastfeeding also reduces the chance of occurrence of breast cancer and ovarian cancer.



## VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN

### THERAPEUTIC DRUG MONITORING (TDM)

Therapeutic drug monitoring (TDM) is the clinical laboratory measurement of a chemical parameter which, with appropriate medical interpretation, may have direct influence upon the drug prescribing procedures. In case of TDM, the drug dose is individualized for optimal patient benefit by maintaining blood or plasma drug concentrations within a specified therapeutic range. The assessment of efficacy and safety of specific medication can be carried out in various clinical settings, with the knowledge of pharmaceutics, pharmacokinetics and pharmacodynamics together.

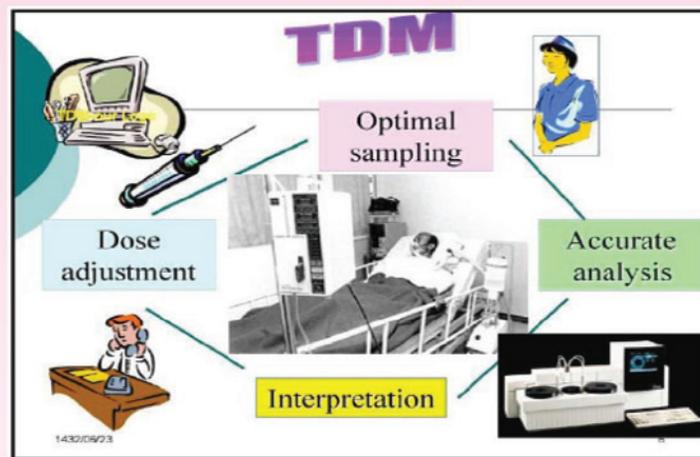
#### TDM will be useful if the following criteria are met:

- ❖ The drug in consideration has a narrow therapeutic window
- ❖ A direct relationship exists between the drug or drug metabolite levels in plasma and the pharmacological or toxic effects
- ❖ Therapeutic effect may not be readily assessed by the clinical observation
- ❖ Large individual variability in plasma steady state concentration exists at any given dose and Availability of appropriate analytical techniques to determine the drug and metabolite levels.



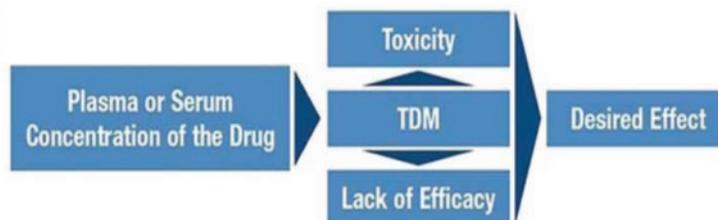
*"Your greatest contribution to the kingdom of God may not be something you do, but someone you raise."*

– Andy Stanley



#### TDM is unnecessary when

- ❖ Clinical outcome is unrelated either to dose or to plasma concentration
- ❖ Dosage need not be individualized
- ❖ The pharmacological effects can be clinically quantified
- ❖ When concentration effect relationship remains un-established,
- ❖ Drugs with wide therapeutic range such as beta blockers and calcium channel blockers.



### COMMON DRUG CHARACTERISTICS FOR TDM

Drug with an established relationship between its serum drug concentration (SDC), therapeutic response and toxicity.

Drug with a narrow therapeutic index. Ex: Lithium, phenytoin and digoxin.

Drug with large individual variability at steady state SDC in any given dose.

Drug with poor relationship between its SDC and dosage.

Drug with poor defined end point or difficult to clinically predict the response. Ex: Immunosuppressant drugs.

Drug whose toxicity is difficult to distinguish from a patient's underlying disease. Ex: Theophylline in patients with Chronic Obstructive Pulmonary Disease (COPD).

Drug whose efficacy is difficult to establish clinically. Ex: Phenytoin.

# VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN



## NEW DRUG MAY TREAT AND LIMIT PROGRESSION OF PARKINSON'S DISEASE

A research team including Binghamton University psychology professor Chris Bishop and former graduate student David Lindenbach recently employed a preclinical model of Parkinson's disease to compare the effects of the dopamine agonist ropinirole to their new drug, known as D-512.

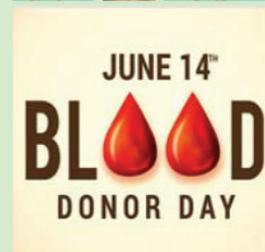
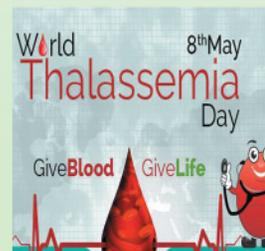
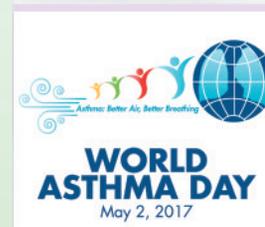
Results demonstrated that D-512 was more efficacious than ropinirole in treating the symptoms of Parkinson's disease while also prolonging the time window in which the animals showed benefits. These findings followed on the heels of prior work by this collaborative group which demonstrated that D-512 may also protect against the progression of Parkinson's disease. Researchers also noted that D-512 may have fewer side effects than current medications. The researchers are currently at a pre-clinical phase (Source: [www.worldpharmanews.com](http://www.worldpharmanews.com)).

## GREEN TEA INGREDIENT MAY AMELIORATE MEMORY IMPAIRMENT, BRAIN INSULIN RESISTANCE AND OBESITY

A study published online in The FASEB Journal, involving mice, suggests that EGCG (epigallocatechin-3-gallate), the most abundant catechin and biologically active component in green tea, could alleviate high-fat and high-fructose (HFFD)-induced insulin resistance and cognitive impairment. Previous research pointed to the potential of EGCG to treat a variety of human diseases, yet until now, EGCG's impact on insulin resistance and cognitive deficits triggered in the brain by a Western diet remained unclear (Source: [www.worldpharmanews.com](http://www.worldpharmanews.com)).

## NOVEL DRUG APPROVALS FOR 2017

Drug Name	Active Ingredient	Approval date	FDA approved use on approval date
Imfinzi	Durvalumab	5/1/2017	Treatment of locally advanced or metastatic urothelial carcinoma
Radicava	Edaravone	5/5/2017	Treatment of amyotrophic lateral sclerosis
Kevzara	Sarilumab	5/22/2017	To treat adult rheumatoid arthritis
Baxdela	Delafloxacin	6/19/2017	To treat acute bacterial skin infections
Bevyxxa	Betrixaban	6/23/2017	Prophylaxis of venous thromboembolism
Tremfya	Guselkumab	7/13/2017	For the treatment of plaque psoriasis
Nerlynx	Neratinib maleate	7/17/2017	To reduce risk of breast cancer returning
Vosevi	Sofosbuvir, Velpatasvir & Voxilaprevir	7/18/2017	To treat chronic hepatitis C virus
Idhifa	Enasidenib	8/1/2017	To treat relapsed or refractory acute myeloid leukemia



*"You only live once,  
but if you  
DO IT RIGHT,  
once is enough"*

– Mae West



# VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN



## Campus News

- ❖ PMBJK - Janaushadhi Medical store was opened on 23<sup>rd</sup> July, 2017 in the campus of VIPW. This is the first of its kind opened by Pharmacy Institution in the state of A.P. as per the instructions of Central Government and PCI.
- ❖ A mega Health Camp also was organized on this auspicious occasion which was lead by Dr. Kola Vijaya Sekhar with his eminent team of doctors. Around 800 patients were benefited with this camp and medicines were distributed for free of cost.
- ❖ Dr. Vallabhaneni Vamsi Mohan, MLA, Gannavaram constituency, Dr. C. L. Venkat Rao, Executive Vice Chairman, Swatch Andhra Mission, A.P., Dr. Paruchuri Rambabu, Asst. Director, Drug Control Administration, Krishna District and Dr. K. S. Karuna Murthy, Dr. NTRUHS NSS Prog. Co-ordinator have graced the occasion.
- ❖ Dr. K. S. Karuna Murthy, Dr. NTRUHS NSS Prog. Co-ordinator conducted an awareness programme on Breast Feeding as a part of World Breast Feeding Week - 2017 celebrations on 5<sup>th</sup> August, 2017.
- ❖ Students of 2<sup>nd</sup> & 3<sup>rd</sup> Pharm. D actively participated in Pharmoria 2017, held on 11<sup>th</sup>-13<sup>th</sup> August, 2017 by Tychee Innovations, Vijayawada. Students of VIPW gave oral presentations, attended the panel discussions and focused to the job prospects for Pharm. D students in Government sectors and in private organizations.

To,

*We are pleased to receive your feedback and suggestions :*

The Editorial Board,

A Pharmacy Practice News Letter,

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