

MLR INSTITUTE OF PHARMACY

Approved by AICTE & PCI, New Delhi
Affiliated to JNTU, Hyderabad
Dundigal (V), Gandimaisamma(M)
Medchal Dt, Hyderabad—500043

“The beautiful thing about learning is that no one can take it away from you.”

– B. B. King

Editorial Board

Editor In - Chief:

Dr. K.S. Murali Krishna
M. Pharm, Ph. D

Executive Editor:

Dr. S. Bala Murali Mohan
Pharm. D

Board Members:

Dr. Soumadip Das,
Pharm. D

Dr. C. Suhas Reddy,
Pharm. D

Mr. N. Ramanachary,
M. Pharm, (Ph. D)

Mrs. Sasmitha Samuel
M. Pharm

Student Members:

Md. Waris Ali
S. Sruthi Reddy
V. Pooja
P. Mary Param Jyothi

INSIDE THIS ISSUE:

Health Input 03

PharmaLore 03

PharmaInsight 04

Medicine Watch 04

Student's Corner 05

Student's Achievements 06-07

Faculty Achievements 07

Seminars 08



Sri Marri Laxman Reddy Sri Marri Rajashekar Reddy

Founder & Chairman **Secretary**
MLR Group of Institutions **MLR Group of Institutions**

He has been in the field of education for more than three decades. He is an exemplary personality and extraordinary visionary and a constant inspiration to the younger generation. He is a veteran athlete of international repute. He emphasizes the importance of physical health for academics and overall personality development.

He is a person of great acumen and remarkable abilities. He is a dynamic leader and strives hard to make every dream a reality. He is an initiator, innovator, and executor of novel plans for the progress of the institutions. He is the motivational and driving force of all the activities in the campus.



PRINCIPAL'S DESK

A decade is truly a short span for any organization to measure its progress. However our MLR institute of Pharmacy has made rapid strides on the path of progress to transform into an institute of academic excellence. During this journey, we had many achievements, accomplishments recognitions, appreciations and captured memories of several events. We have made an attempt to record all these impressions in the form of a news letter christened as “*PharmaScout*” with a tag line official e-mag of MLRIP. Besides, the objective of this news letter is to showcase the talents of our students, staff and researchers and also highlighting the professional outlook by contributions from eminent personalities from medical, clinical research, pharma industry, regulating authorities as well as academicians.



Dr. K. S. Murali Krishna
Professor & Principal

GUEST SPACE



Dr. CH. Devika Rani
Director, IMS,
Telangana State

VRK DIET

Nowadays, a new health trend has swept the Telugu speaking states i.e. Telangana and Andhra Pradesh. Gaining immense fan following and popularity is the Veeramachaneni Rama Krishna Diet or VRK Diet.

VRK, an accountant by profession, claims his diet to be curative for Diabetes, Hypertension, Obesity and most of the other conditions. He advocates high fat intake including 60-80 gm of virgin coconut oil, ghee, butter, meat, fish and vegetables. Minimal carbohydrates intake – hence no grains, tubers, root vegetables etc.

Funnily enough, this diet bears an uncanny resemblance to the KETO diet, long popularised in the west. But VRK claims to have never heard of it. The original KETO diet is fat – centric diet where the body is starved of carbohydrates and forced to burn fat for energy. This produces small fuel molecules called “KETONES” used as an alternate energy source.

The medical community are divided on the safety aspects of these diets without proper controlled studies and safety criteria. The so called KETO diet comes with a most of the side effects, like – Keto Flu, elevates cholesterol level, menstrual problems, insomnia, palpitation, electrolyte imbalance, cramps etc. Before extrapolating the diet to the wider population, a broad cohort based scientific study over a prolonged period with informed volunteers is the need of the hour.

About MLRJP

VISION

To be an educational institute of par excellence and produce competent pharmacy professionals to serve the community through research and the ever-increasing needs of Industry.

VISION

1. Imparting quality education and innovative research for various career opportunities.
2. Creating conducive academic environment to produce competent pharmacy professionals.
3. Indoctrination of students adorned with high human values and make them aware of their responsibility as health care professionals.

PROGRAMME EDUCATIONAL OBJECTIVES (PEO's)

PEO 1: To produce graduates with sound theoretical knowledge and technical skills required for their career opportunities in various domains.

PEO 2: To incite the students towards research and to address the challenges with their innovative contributions for the benefit of the mankind.

PEO 3: To instill the essence of professionalism, ethical commitment to become a health care professional with sound integrity and adherence to the core human values in the service of the society.

PROGRAMME OUTCOMES

1. **Pharmacy Knowledge:** Possess knowledge and comprehension of the core and basic knowledge associated with the profession of pharmacy, including biomedical sciences; pharmaceutical sciences; behavioral, social, and administrative pharmacy sciences; and manufacturing practices.
2. **Planning Abilities:** Demonstrate effective planning abilities including time management, resource management, delegation skills and organizational skills. Develop and implement plans and organize work to meet deadlines.
3. **Problem analysis:** Utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice. Find, analyze, evaluate and apply information systematically and shall make defensible decisions.
4. **Modern tool usage:** Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of the limitations.
5. **Leadership skills:** Understand and consider the human reaction to change, motivation issues, leadership and team-building when planning changes required for fulfillment of practice, professional and societal responsibilities. Assume participatory roles as responsible citizens or leadership roles when appropriate to facilitate improvement in health and well-being.
6. **Professional Identity:** Understand, analyze and communicate the value of their professional roles in society (e.g., health care professionals, promoters of health, educators, managers, employers, employees).
7. **Pharmaceutical Ethics:** Honour personal values and apply ethical principles in professional and social contexts. Demonstrate behavior that recognizes cultural and personal variability in values, communication and lifestyles. Use ethical frameworks; apply ethical principles while making decisions and take responsibility for the outcomes associated with the decisions.
8. **Communication:** Communicate effectively with the pharmacy community and with society at large, such as, being able to comprehend and write effective reports, make effective presentations and documentation, and give and receive clear instructions.
9. **The Pharmacist and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety and legal issues and the consequent responsibilities relevant to the professional pharmacy practice.
10. **Environment and sustainability:** Understand the impact of the professional pharmacy solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
11. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Health input

24th March — “WORLD TB DAY”

Tuberculosis (TB) is a bacterial disease, spreads from one person to another through air. It usually affects your lungs, but may also cause illness in other parts of body. It is one of the world’s deadliest diseases, One fourth of the world’s population is infected with TB.

PREVENTIVE MEASURES:

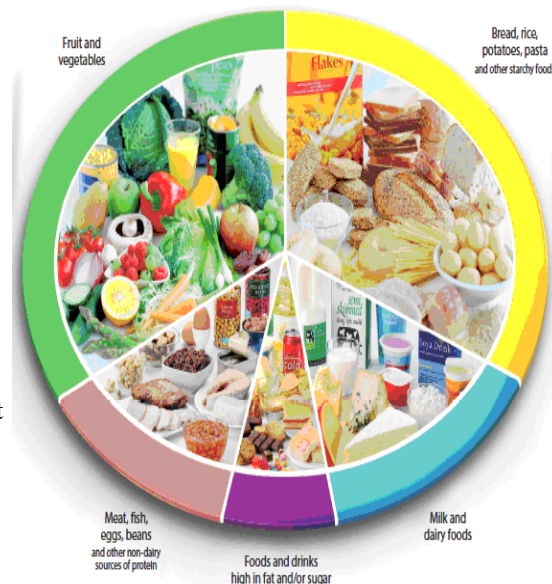
- To cover mouth with a handkerchief or tissue if you cough or sneeze.
- Avoid close contact with young children and other people who may have weak immune systems as they are more vulnerable to illness.
- To spit in a tissue and then throw it away into closed trash can or toilet.
- Houses should be adequately ventilated.
- Patients should spend as much as time as possible outdoors.
- If possible, sleep alone in a separate, copious ventilated room.
- Spend as little time as possible on public transport.

BCG VACCINE is generally used to protect children, rather than to interrupt transmission among adults.

TB cannot be spread by sharing food, eating utensils, or clothes. is not transmitted through physical (e.g., shaking hands) or sexual contact

The eatwell plate

Use the eatwell plate to help you get the balance right. It shows how much of what you eat should come from each food group.



Antigen	Age of 1 st Dose	Doses in primary series	Doses for those who start vaccination late		Booster
			If < or = 12 months of age	If >12 months of age	
BCG	As soon as possible after birth	1 Dose	1 dose	Not recommended	Not recommended (exception for HIV children)

**Salla Shruthi
Dr. Raja Rajeshwari. B.**

Pharmalore

Myth: You can swallow your medication with a sip of any drink

Fact: Remember to always take your medicine with water, not alcohol. Alcohol can interfere with the way your body absorbs medication. Also, a quick sip of water is not a sufficient enough amount to swallow your medication. Swallow enough water to keep the tablets or capsules from dissolving before they reach your stomach or you the run the risk of the medication irritating your throat on the way down. Knowing whether to take your meds on a full versus an empty stomach is also extremely important. Following instructions will ensure that your medicine can do its job.

Myth: If you’re really hurting, you can ignore the label and take more pills.

Fact: When you’re in severe pain, you may look at the dose on the pain reliever label and think, “an extra dose can’t possibly hurt me.” But the truth is, yes, it can. The recommended dose of an over-the-counter (OTC) or prescription drug isn’t just a suggestion — it’s a careful calculation. Pharmaceutical companies work hard to develop the appropriate dose of each and every medicine.

Myth: Once you feel better, you don’t have to keep taking medication.

Fact: If your symptoms are gone but you have a week left on your medication, you may be tempted to stop taking the pesky pills. However, if you stop taking your medication early, it can increase your chance of relapsing into illness.

Myth 4: Antibiotics are always the answer.

Fact: When you or a loved one is sick, you want to get better fast, and you also want the cure to last. Most people assume that antibiotics are the fastest route to recovery. But antibiotics are only helpful in illnesses such as strep throat caused by bacteria. Most illnesses, like colds and sore throats, are caused by viruses that don’t respond at all to antibiotics. Even though you’re feeling miserable, over-the-counter medications will usually relieve your symptoms until the virus is gone. Prescribers try to reserve antibiotics because using them when they are not needed can lead to resistant and harder-to-treat infections.

Mohammed Waris Ali, Dr. S. Bala Murali Mohan.

Lansoprazole a Gastric Acid Suppressant: New Ray of Hope for TB Treatment

Mary Param Jyothi, Ramanachary Namaju

In 2016, 10.4 million people fell ill with tuberculosis and it is in the top ten causes of death globally, killing more people than any other infectious disease. Chemotherapy is the most powerful tool in the fight against tuberculosis and there are many drugs that can curb the growth of this deadly microorganism. However, should be used with utmost care and under stringent conditions. However, many of the existing drugs used to treat TB are losing the glory due to resistance and many drugs used to treat resistant TB have unacceptable side effects. Due to these reasons, Tuberculosis has resurfaced as a "global emergency" in recent years not only in terms of increase in number of cases world-wide but also the emergence of the deadly multidrug-resistant tuberculosis. Better antibiotics capable of killing this deadly multi-drug-resistant *pathogen* are urgently needed. Despite extensive drug discovery efforts, only a few promising candidates are on the horizon and alternative screening protocols are required.

Therefore, it would be a major breakthrough to find a new drug with useful activity against *Mycobacterium tuberculosis* and a favorable side effect profile - particularly a drug like lansoprazole, which is cost-effective. Recent research revealed that, lansoprazole cheap and widely used drug, used to treat conditions such as heartburn, gastritis and ulcers found to work against the bacteria that cause tuberculosis (TB).

The people who used lansoprazole, as opposed to similar drugs omeprazole or pantoprazole, were a third less likely to develop TB.

The research in laboratory animal and epidemiological data is all consistent with lansoprazole acting against the bacteria that cause TB.

Findings of the laboratory studies uncovered that lansoprazole effective at killing *M. tuberculosis*, whilst other drugs in the same class had no effect. *Ex vivo* pharmacokinetics and target identification studies reveal that lansoprazole kills *M. tuberculosis* by targeting its cytochrome *bc*₁ complex through intracellular sulfoxide reduction to lansoprazole sulfide. This novel class of cytochrome *bc*₁ inhibitors is highly active against drug-resistant clinical isolates and spares the human H⁺K⁺-ATPase thus providing excellent opportunities for targeting the major pathogen *M. tuberculosis*. Further, in a population based cohort study with 527,364 new users of lansoprazole and 923,500 new users of omeprazole or pantoprazole, showed that, among people using lansoprazole, there were 10 cases of TB per 100,000 person years compared to 15.3 cases among those using omeprazole or pantoprazole.

It is interesting that medications can have unintended effects; often these are harmful, but occasionally we also find unexpected benefits that may offer new hope for difficult to treat diseases. Tuberculosis is still a major health problem in many parts of the world, and the results of this study raise the possibility that lansoprazole, a well-established treatment for stomach complaints, may also be useful for treating tuberculosis."

References:

Rybniker J, Vocat A, Sala C, Busso P, Pojer F, Benjak A, Cole ST. Lansoprazole is an antituberculous prodrug targeting cytochrome bc1. Nat Commun. 2015 Jul 9;6:7659

Medicine watch

STEGLATRO

Generic Name: ertugliflozin

Dosage Form: Tablets

Date of Approval: December 19, 2017

Company: Merck & Co., Inc.

Used for Treatment of 'Type 2 Diabetes'.

INDICATIONS AND USAGE:

STEGLATRO is a sodium glucose co-transporter 2 (SGLT2) inhibitor indicated as an adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus.

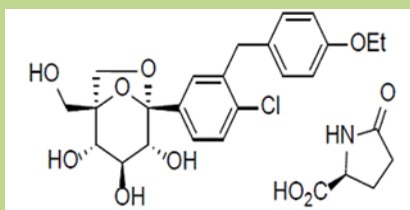
DOSAGE AND ADMINISTRATION

1. Recommended starting dose is 5 mg once daily, taken in the morning, with or without food.
2. Increase dose to 15 mg once daily in those tolerating STEGLATRO and needing additional glycemic control.
3. Assess renal function before initiating STEGLATRO and periodically thereafter:
 - Do not use in patients with an estimated glomerular filtration rate (eGFR) below 30 mL/minute/1.73 m².

- Initiation is not recommended in patients with an eGFR of 30 to less than 60 mL/minute/1.73 m².
- Continued use is not recommended in patients with an eGFR persistently between 30 and less than 60 mL/min/1.73 m².

CONTRAINDICATIONS

Severe renal impairment, end-stage renal disease, or dialysis, History of serious hypersensitivity reaction to STEGLATRO.

**WARNINGS AND PRECAUTIONS**

Hypotension, Ketoacidosis, Acute Kidney Injury and Impairment in Renal Function, Urosepsis and Pyelonephritis, Lower Limb Amputation, Hypoglycemia, Genital Mycotic Infections & Increased LDL-C.

ADVERSE REACTIONS

Female genital mycotic infections.

USE IN SPECIFIC POPULATIONS

- ◆ **Pregnancy:** Advise females of the potential risk to a fetus especially during the second and third trimesters.
- ◆ **Lactation:** Breastfeeding not recommended.
- ◆ **Geriatrics:** Higher incidence of adverse reactions related to reduced intravascular volume.
- ◆ **Renal Impairment:** Higher incidence of adverse reactions related to reduced intravascular volume and renal function.

Student's corner

THE EFFECTS OF ALTERATION IN FOOD PATTERNS LIKE FASTING OR FAST FOOD DIETS

Dontham Sreelu, P. Sneha Malleshwari.

Intermittent fasting is a term used for a planned diet cycle where intake of diet is planned at regular fixed intervals. It generally has a definite fasting period after intake of food. The time period of fasting may vary based on the calories consumed. Most popularly employed plans are Whole day fasting where a 24 hour fasting period is followed by 24 hour non fasting period and Time restricted feeding which involves intake of food at specific time period like a 16 hour fasting period followed by 8 hours non fasting period.

In a country like india where local restaurants and street vendors make moolah by selling a lot of fast food which is a hit among the youth. These fast foods are prepared and served quickly and thus there is a high chance that they are undercooked. Keeping these terms aside it is an evident fact that fast foods are typically less in nutritional value when compared with other foods and dishes. According to NIH, fast foods are quick alternatives to home-cooked meals. They are also high in saturated fat, sugar, salt and calories. A high calorie diet increases the risk towards obesity, several digestive tract cancers and cardiovascular diseases. What if they are also found to decrease ageing..? Based on some preliminary reports doing the rounds on internet a couple of studies have proven that fast food diets decreases ageing. In this communication we focus on discussing the details of these reports and their results.

Decades of research and several studies have shown that sustained and continuous under consumption of calories has significant health benefits and this also delays the onset of age related diseases. There is an underlying mechanism where caloric restriction increases the production of Cellular reactive oxygen species (ROS), which in-turn initiates a protective, adaptive response.

This response appears to be important mechanism behind the beneficial effect of calorie restriction Mitochondria are believed to play an important role in these protective responses, as the primary site of ROS production are mitochon-

dria itself and mitochondrial transcription factors are upregulated with caloric restriction.

While Caloric restriction research has yielded much valuable information, it is still largely unknown whether the positive benefits of CR would exist in the absence of weight-loss in humans. In addition, Caloric restriction appears to be an unsustainable prophylactic measure for most individuals as humans cannot control their taste buds for lifetime. Of the alternative dietary interventions available, intermittent fasting (IF) has emerged as an alternative dietary regimen that may produce effects on specific biological pathways comparable to Caloric Restriction.

In a recent Randomized Double blind crossover trial (NCT02132091) 24 participants were enrolled and allocated to Intermittent fasting (Fasting) or normal caloric intake (Feasting). After 12 weeks of the diet programme some gene expressions like SIRT1, SIRT3, SOD2, TFAM were assessed using Analysis techniques and the total RNA was extracted from the whole blood of these individuals for identifications of these expressions. These specific gene expressions were chosen as they been proved for their role in mediating diet induced benefits on ageing. It was found that each increase in expression following intermittent fasting is qualitatively larger than the post treatment change for intermittent fasting along with antioxidant supplementation. The findings of this study suggest that IF may have some benefits on biological pathways that directly effects metabolism and potentially longevity, even in healthy individuals. So IF can be put forward as a measure to increase longevity and also as an alternative to caloric restriction.

In a study where the NCBI Gene expression Omnibus (GEO) database was explored to have a more better Proof and understanding of the effects of diet patterns on ageing. This study selected the Mouse Brain gene expressions during different times of fasting. Their analysis proved that fasting modulated genes and those regulated during ageing were related. And fasting had the ability to turn on the genes that are normally turned off in ageing and vice-versa.

Coming to fast food diet, Six 8 week old mice fed with diet exclusively of Mcdonalds

fast food were put up for analysis. The data again from the GEO database for Brain transcriptomes was identified. The results proved that the effects were exactly opposite to that which were obtained from Fasting. Cerebral Ageing was noted for up to 30% in almost all of the mice.

In fasting period, the mouse brain responded reducing all processes connected to cell death and lipid biosynthesis and the IF played a neuroprotective function in cerebral ischemia through the inhibition of apoptosis. These can be understood that reduction in lipogenesis is due to energy deficiency. The Important Outcome was for the Fast food Diet, 30% of all transcriptomes showed overlapping. Further these genes are connected to biological processes of immunity, amino acid synthesis and glucose metabolism stating fast food diet can indirectly reduce all the three important functions which would further elevate other complications.

Going through the results of these studies we can conclude that fasting and fast food diet played the opposite role in Ageing. An intermittent fasting could be the strategy to fight against ageing, loss of memory and neuro-inflammation. At the same time, a low fat diet could help the brain to reactivate degenerative processes triggered by ageing. Well if the dots are connected and established it can be a breakthrough and would give a heavy advantage against obesity and dementia.

And analyzing the results of the Fast food fed mice, we can assume that its time to give our taste buds a gap and stay away from fast food and restrict its consumption as the famous quote from Hippocrates "Let food be thy medicine, thy medicine shall be thy food."

References:

1. Castrogiovanni, P., Li Volti, G., Sanfilippo, C. et al. "Fasting and Fast Food Diet Play an Opposite Role in Mice Brain Ageing." *Mol Neurobiol* (2018). <https://doi.org/10.1007/s12035-018-0891-5>.
2. Wegman, Martin P. et al. "Practicality of Intermittent Fasting in Humans and Its Effect on Oxidative Stress and Genes Related to Aging and Metabolism." *Rejuvenation Research* 18.2 (2015): 162-172. <http://doi.org/10.1089/rej.2014.1624>.

Student achievements

KONTU RAJINI Achieved Guinness world record in Taekwondo



Yasaswini Palukuru, Neelima Chandu of Pharm D, under the guidance of **Mrs. Revathi Boyina**, Asst Professor, presented a poster entitled "**KNOWLEDGE OF PATIENTS ON MEDICATION GIVEN TO THEM – AN INDIAN SCENARIO**" in **FIP WORLD CONGRESS 2015**, held in **Düsseldorf, GERMANY**



Students of V Pharm. D attended an International conference on pharmacy practice with the theme "**MULTISPECIALITY PHARMACIST - AN EMERGING CAREER IN HEALTH CARE SYSTEM**" organized by **VIGNAN PHARMACY COLLEGE** in collaboration with the **UNIVERSITY OF FINDLAY COLLEGE OF PHARMACY, Ohio, USA** on 28th n 29th december 2017.

K. Nageshwara Rao, M. Pavani and V. Sai Vaishnavi won **2nd prize in Case Dissection and Analysis**.

Afreen Sultana, Rithwika Nandini Dash, A. Sandhya Rani and K. Shravya won **3rd prize in Patient Counseling Event**.



Student achievements

Our Pharm. D fifth year students V. SAI VAISHNAVI and M. PAVANI's paper entitled "**BENEFICIAL OUTCOMES OF PROTIEN SUPPLEMENTATION IN AUTOIMMUNE DISORDERS**" won 1st prize in the category of e-poster presentation (out of 300 posters from different places of India) in **INDIAN COUNCIL OF MEDICAL RESEARCH (ICMR)** sponsored national workshop on **BIostatistics, EPIDEMIOLOGY & RESEARCH METHODOLOGY** with a theme "**TRANSLATION OF RESEARCH INTO PRACTICE**".

It was organized by **VIGNAN PHARMACY COLLEGE**, vadlamudi, guntur in association with **SRI RAMA CHANDRA MEDICAL COLLEGE & RESEARCH INSTITUTE, (SRMC&RI)**, Chennai.



Winners of Poster and e-Poster Presentation Competition at Prestigious 9th INDIAN PHARMACEUTICAL ASSOCIATION - STUDENTS CONGRESS
Rajahmundry - 2nd & 3rd September 2017



Pooja Vemula
IV B.Pharm
1st prize in Pharmacology



Sneha malleshwari
IV B.Pharm
1st prize in Pharmaceutics



Usha Lalitha
III B.Pharm
1st prize in Bio-technology



V. Sai Vaishnavi
V Pharm. D
1st prize in Pharmacy Practice

Winners of Poster and e-Poster Presentation Competition at Prestigious

EMERGING TRENDS AND INNOVATIONS IN PHARMACEUTICAL SCIENCES - ETIPS (2017)

Two day national conference held in JNTU, Hyderabad on 12th & 13th October 2017



Pooja Vemula
IV B.Pharm
1st prize in Pharmacology



Usha Lalitha
III B.Pharm
1st prize in Bio-technology



S. Sruthi Reddy
VI Pharm. D
2nd prize in Pharmacy Practice

Faculty achievements

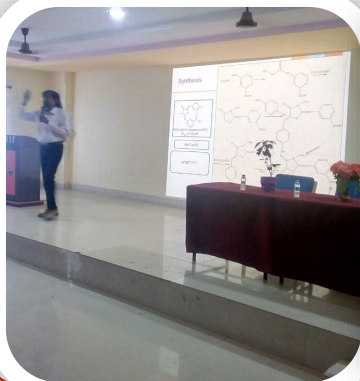


Ramanachary Namoju, Associate Professor won 1st prize in Poster presentation in Pharmacology and Clinical Pharmacy during the 11th Indo - African International Conference held at Malla Reddy College of Pharmacy, Hyderabad on 16th September 2017.

Mrs. Sashmitha Samuel, Associate Professor won 1st prize in Poster presentations in Pharmaceutical Chemistry during the **Emerging Trends and Innovations in Pharmaceutical Sciences - ETIPS (2017)**, a two day national conference held in JNTU, Hyderabad on 12th & 13th October 2017.



Seminars



Prof. D. Sriram, Ph. D
Professor,
DBT Tata Innovation Fellow
[2016-2019]
Department of Pharmacy,
Birla Institute of Technology
& Science-Pilani, Hyderabad
Campus.
He delivered a seminar on
Synthesis of Novel Anti-
Malarials.

Dr. M. Sunitha Reddy

Ph.D, FPGEE, NABP (MEM), RPH, USA,

Assistant Professor

Centre for Pharmaceutical Sciences

JNTUH, delivered seminar on

**“MEDICATION ERRORS – ROLE OF
CLINICAL PHARMACIST IN CASE
STUDIES”**. She shared her experiences while

she was practicing as a pharmacist in USA
and some case studies have been discussed at
the end of the programme and the session was
so interactive and beneficial for the students.

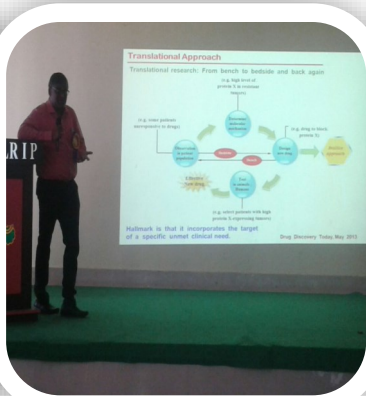


Dr. Akhilesh Kumar

, MBBS, MD, PGPC, PGD,
Assistant Civil Surgeon

ESIC Model Hospital, delivered a seminar
on **“RATIONAL USE OF ANTIBIOTICS”**.

He spoke about the gross misuse of antibiotics
and its grave issues such as development
of antibiotic resistance and emphasized the
rational use and discussed measures for safe
practice of antibiotics and to reduce the anti-
biotic resistance.



Dr. K. Srinivas
Principal Scientist, IICT, Hyderabad.

Dr. Narender Reddy
Scientist, Elan Pharma, Hyderabad.