

VEPA 2017
2018
THE VIJAYA PHARMACY



CHAMPIONS BOOK OF WORLD RECORD HOLDER

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN
ENIKEPADU, VIJAYAWADA, A.P.

Pharmacist's Oath

I Swear by the code of Ethics of Pharmacy Council of India in relation to the community and shall acts as an integral part of health care team.

I shall uphold the laws and standards governing my profession.

I shall strive to perfect and enlarge my knowledge to contribute to the advancement of pharmacy and public health.

I shall follow the system, which I consider best for pharmaceutical care and counselling of patients.

I shall endeavour to discover and manufacture drugs of quality to alleviate sufferings of humanity.

I shall hold in confidence the knowledge gained about the patients in connection with my professional practice and never divulge unless compelled to do so by the law.

I shall associate with organizations having their objectives for betterment of the profession of Pharmacy and make contribution to carry out the work of those organizations.

While I continue to keep this Oath unviolated, may it be granted to me to enjoy life and the practice of pharmacy respected by all, at all times!

Should I trespass and violate this oath, may the reverse be my lot!



A Great Visionary...

“ Siddhirbhavati Karmaja Success is Born of Action ”

Sri Boyapati Srinivasa Appa Rao is an eminent industrialist with expertise in the field of education. As mechanical engineer, he started various industrial units for manufacturing cement machinery, agricultural implements, special casting and electrical distribution transformers. He is the initiator to come up with the first vegetable cold storage of its kind in Andhra Pradesh. He served as the President of A. P. Small Scale Industries Association. He rendered his services as member of Central Small Scale Industries Advisory Board and State Small Scale Industries Advisory Board.



*Sri Boyapati S. Appa Rao
Founder Chairman*

He is instrumental in establishing Siddhartha Academy of General & Technical Education by being one its founders, and promoted various educational institutions to rise to excellence. He is actively associated with the Private Engineering Colleges' Association from its inception in 1980, which addresses the various problems faced by the private managements and served the association as President for six years.

As one of the pioneering educationists of the city, Sri B.S. Appa Rao laid the foundation for **S.R.K. Group of Institutions** aiming to develop them as model institutions for enhancing the quality of education and research. The Research and Development wing inculcates scientific outlook, humanism, the spirit of equity and reform among the student community. His objective is to produce world class Engineers, Pharmacists and Business Managers endowed with human values to serve the society. He aims at promoting women empowerment through **Vijaya Group of Institutions** established exclusively for women, making young women participatory in societal transformation.

He acts as a guiding force behind the enviable success of S.R.K. Foundation. The Foundation's ascent to prominence in such a short span can be attributed to his strong will power, caliber, conviction, and dynamic leadership, in pursuing his objective to bridge the gap between industry and educational institutions.

His achievements and experiences speak more than words. He believes in the philosophy of education that envisages a complete man, in harmony with tradition and technology. He is endowed with an indomitable spirit to perceive a better world by realizing his vision.



A Tribute to

“Yatra Naryastu Poojyante, Ramante Tatra Devatha”

Smt. Boyapati Vijaya Lakshmi, a **Woman of Excellence** with a blend of social service and philanthropy is a blessing in disguise to **Vijaya Group of Institutions for Women** established under the umbrella of S.R.K. Foundation. It is aptly said that behind every successful man there is a woman and it has been the proven success of Sri Boyapati S. Appa Rao.

Smt. Boyapati Vijaya Lakshmi’s goodness lies in identifying the need of the hour to donate her property for the noble cause of women education. Her benevolence lies behind the flourishing institutions. A highly qualified woman of kindness and perseverance, she has always been there in promoting the welfare programmes taken up by Vijaya Group of Institutions.

A poised woman of balanced will and empathy, she has cherished a desire to serve the poor and needy of the society. Therefore, her social milieu in combination with her service oriented nature has enabled her to participate and conduct various social service initiatives. She has extended her helping hand to the idea of Sri Boyapati S. Appa Rao, and today the seed is witnessed as a growing tree with all its branches blooming, spreading the essence of women education. She is the pillar for the success of Vijaya Group of Institutions.

An embodiment of Indian family traditions and values, she has been an inspiration for thousands of young women Engineers, Pharmacists and Business Managers and is associated with Sri Boyapati S. Appa Rao to strengthen the institutions.



*Smt. Boyapati Vijaya Lakshmi
Member, SRK Foundation*



Chairman's Message.....

I was always conscientious to respond to the needs of the society in the best way I could and felt that the most suitable way to accomplish this responsibility can happen only by fostering education. This vision of mine culminated in the establishment of SRK Foundation in 2007. I also believed that education of women is especially effective and it acts as a magic multiplier in the advancement of a society. Hence, to empower the young women, Vijaya Group of Institutions came into being in 2008. Vijaya Institute of Pharmaceutical Sciences for Women established in 2009 is committed to transform young women pharmacists into committed individuals to be able to have a positive impact on the future of the society.

Henceforth, it is indeed happy to note that Vijaya Institute of Pharmaceutical Sciences for Women is devoted to enhance the multifarious skills of its students and is continuously on the striking chord of success. I congratulate the team at Vijaya Institute of Pharmaceutical Sciences for Women for winning the Indian Star Best Emerging Pharmacy College Award by SMF, the Outstanding Local Branch Award from Indian Pharmaceutical Association for the year 2016 - 17 and the Award of Appreciation by Indian Pharmacological Society for organizing ERIPSCON 2017. Dr. K. Padmalatha, Principal of this institute deserves special appreciation as the institution is listed one among **The 10 Best Women's Education and Empowerment Institutes in India 2018 by The Knowledge Review**, a global education magazine. The institution's efforts in ensuring that the students are imparted with cognitive and creative abilities, inclusive of humanism, nationalism, secularism and scientific temper are highly commendable. I congratulate the magazine committee of **VEPA 2018 – The Vijaya Pharmacy**, for bringing out yet another attractive issue of the wide-ranging display of the talents of the students and staff.

My best wishes to Principal, staff and students!!!



(B.S. APPARAO)
Chairman



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Prof. V.S.S. Kumar
Ph.D. (IIT-D), Post-Doc.,(USA)
Vice-Chancellor



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA
KAKINADA - 533 003. Andhra Pradesh (India)

Phone : +91 9849037843
Fax : +91-884-2300800
E-mail : vsskumar1958@hotmail.com

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Message.....

I am glad to congratulate Vijaya Institute of Pharmaceutical Sciences for Women on yet another issue of their magazine **VEPA 2018** – The Vijaya Pharmacy. A college magazine is a forum of events, memories, innovation, research and creativity. I am sure that the articles would be educational and explorative. On this occasion, I convey my good wishes to the management, Principal, magazine committee, staff and students.

Knowledge makes an individual incredibly powerful by influencing one to develop new insights. India needs accomplished youth with a winning spirit and zeal to transform their dreams into realities. So, work on, go beyond your homes and colleges, go that extra mile and empower yourselves.

May good luck be with you in all your endeavors!

Regards


(Prof. V.S.S. Kumar)

B. Lakshmikantham, I.A.S.,
Collector & District Magistrate,
Krishna District.



Office: Collectorate, Machilipatnam-521002,
Cell : 8332074999,
Tele: +91 8672 252862, Fax: +91 8672 252882
Residence: # 20/510, Chilakalapudi Post-521002,
Teletax: +91 8672 252000, 252222
Camp Office: # 29-16/15, Beside PWD Ground,
Labbipet, Vijayawada-520010,
Teletax: +91 866 2478090, 248155,
Email: lakshmikanthamas@gmail.com,
collector_krsn@ap.gov.in,
Website: krishna.ap.nic.in



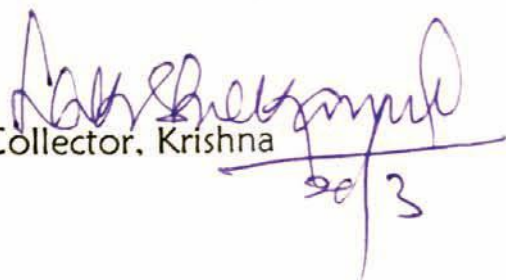
Message.....

My greetings to the management, Principal, staff and students!

Dear students, take the responsibility to be the masters of your careers and have a conviction to reach your goal, by taking an edge over your peers and competitors. There is great demand for the uniquely skilled industrial pharmacists and Pharma D professionals to give their services in the thriving pharmaceutical industries and other organizations. The service oriented professional courses involve a moral responsibility too. So, to fulfil your responsibilities towards the society, combine opportunities with capacity building. **VEPA 2018** – The Vijaya Pharmacy may help bring out the exclusive talents of the students to enable them to perform and transform.

All the best for a bright future!

Yours faithfully


Collector, Krishna

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THE INDIAN PHARMACEUTICAL ASSOCIATION (EDUCATION DIVISION)

Office at : S.B.D.College of Pharmacy, I Cross,
Hanumanthanagar, BANGALORE - 19.
e-mail : tvnarayana2000@yahoo.com

Message.....

**Education must be life building, man-making, character making
assimilation of ideas. — Swami Vivekananda**

My good wishes to the management, Principal, staff and students for winning the **Outstanding Local Branch Award** from IPA for the year 2016-17. A continuous effort in academic, scientific and creative ventures will make the success graph of an institution progress and the students there receive the maximum benefits of education in its true sense. A college magazine also is one such platform to explore the all-round abilities of the students. The research articles of the staff and students and other informative writings published in **VEPA 2018** – The Vijaya Pharmacy may equip the readers with new knowledge and thinking.

My best wishes for your further achievements!



(Dr. T. V. Narayana)
Vice-President – IPA
and
Chairman, IPA-Education Division

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DEVINENI UMAMAHESWARA RAO
Minister for Water Resources



Room No.212, 1st Floor,
Building No.4,
Interim Government Complex,
Amaravati-522 237.
Off. +91863-2444683, 2444742
Camp. Off. +91-866-2428811
e-mail: icadpeshi@gmail.com



Message.....

I am very happy to note that the Vijaya Institute of Pharmaceutical Sciences for Women is bringing out a Annual Magazine **VEPA 2018** with innovative articles of relevance and creativity.

I am sure that the students, guided by their faculty will move on their paths with motivation and persistence.

I congratulate the management, Principal and staff for encouraging the students by making them to participate in community service.

With warm regards...



(Devineni UmaMaheswara Rao)

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Dr. KOLA VIJAYA SEKHAR M.S., M.Ch., (OPh.) (USA IM) B.L., Ph.D., Ph.D.,

M.B., B.S., B.A.M.S., F.C.C.P., F.A.I.M.S., F.A.G.E., F.C.G.P., D.Ac., M.A.M.S., MICARTC.,
N.D., D.H.M., I.C.S.E.P., M.I.P.H.A., C.Diab., M.Drc., C.N.N., M.Th.,

PHYSICIAN - SURGEON - EYE SPECIALIST - GENERAL CONSULTANT

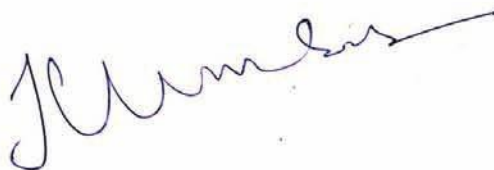
PROFESSOR - GUNTUR MEDICAL COLLEGE, GUNTUR
CIVIL SURGEON - GOVERNMENT GENERAL HOSPITAL, GUNTUR

Message.....

I congratulate **VEPA 2018** – The Vijaya Pharmacy a great success! Hope the articles will be insightful and enhance the awareness on recent trends in health care and pharmaceutical industry. It would also help them to hone their literary and writing skills.

Education endowed with human values and compassion is fulfilling and it is the prime responsibility of the institution to train them in the fashion. The various initiatives to transform the young women Pharmacists and Pharm D professionals into leaders of excellence undoubtedly place the institution on the cutting edge. So, I urge the students to find ways to encourage themselves, to work in teams and to improve their abilities.

Have a bright future ahead!



(Dr. Kola Vijaya Sekhar)

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Dr. Vallabhaneni Vamsi, M.V.Sc.,

M.L.A.,
Gannavaram Constituency,
Krishna District,
Andhra Pradesh.



Office Address : D.No. 5-1,
Main Road, Opp. Govt. Hospital,
GANNAVARAM - 521 101.
Ph. : 08676-253666
Fax : 08676-253599
Cell : 9491122644
e-mail : mlagvrm@gmail.com



Message.....

I find the women of Vijaya Institute of Pharmaceutical Sciences for Women enthusiastic to make their careers in the field of Pharmacy. NSS youth activities of the institution provide them with a social out-reach and build in them a social awareness, social service and social activism. In my opinion, a college magazine is similar to an honest biography, a more open straight talk and places the achievements of students on record. VEPA is a potential documentation of enthusiasm, imagination and perseverance. The magazine is a galore of the multifarious talents of the young women Pharma professionals. As today's world is greatly identity driven, I strongly believe that Vijaya Institute of Pharmaceutical Sciences for Women will make its mark as the best women's organization in and around Amaravathi.

Best wishes!!!



(Dr. Vallabhaneni Vamsi)

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Principal's Message.

All the power is within you. --- Swami Vivekananda



With happiness and pride in my heart, I pen down these few words for our annual college magazine, **VEPA 2018** – The Vijaya Pharmacy. SRK Foundation cherishes the motto of empowering young women through education. *Vijaya Institute of Pharmaceutical Sciences for Women* keeps up this motto by transforming its young women into potential change agents of the society. Empowerment does not mean mere acquisition of knowledge, but it involves character building and enhancing the employability skills. I am sure that the young women coming out of the institution year by year truly reflect a unique culture, *Vijaya culture*, which lays a strong foundation to move ahead and achieve the objectives of education, for a glorious India.

The encouragement of the management, initiatives of the college administration, committed members of faculty and non-teaching members, the active participation of students together have made up the institution to be in the chosen list announced by the international education magazine *Knowledge Review* as one of **the 10 Best Women's Education and Empowerment Institutes in India 2018**. The Outstanding Local Branch Award given by IPA, the **Pride India Star Puraskar- Indian Star Best Emerging College for Women** given by Score More Foundation, a famous non-charitable organization of A.P., the award of appreciation given by IPS to me as Organizing Secretary for ERIPSCON 2017 all speak up for the success story of the institution.

I would like to take this opportunity to express my views on the burning topic of the hour, the employment issue of Pharm D students. They are equally skilled and on par with MBBS students, barring surgery and diagnosis. More than 230 colleges in India hold the six year Pharm D programme and 70% of them are in South Indian states, with 59 in A.P. Small initiatives from the government like introducing accreditation system for community and hospital pharmacies can make the professionals find a place for themselves in the society after their education.

The passed out 9000 students may be allowed to find employment as clinical pharmacists and also at Primary Health Centres. Students must make themselves responsible to come out of their comfort zones and concentrate on understanding the higher purpose of their education. Enhancing their knowledge potential and focusing on research aspects will certainly solve the problem. Statistical records prove that about 85% of WHO Member States have less than one pharmaceutical personnel per 1000 people which clearly indicate the need of Pharmacy professionals all over.

So, dear students, force yourself to gain knowledge and become uniquely skilled that would force people to accept you. Grab the opportunities to develop yourself. Unemployment is an artificial creation, be a job creator and **you** can surely make things happen.

Therefore, stretch your arms up and high and reach for that brass ring!



(Dr. K. Padmalatha)



Secretary's Message...

Pharmacists play a vital role in the building of a nation by coming up with new inventions using the best practices of pharmacy to make the society secure, comfortable and disease free. Today, nations which are ahead in pharmacy and engineering domains are prosperous and providing better lives to their citizens. It is high time that young pharmacists from India must concentrate on research and innovation to contribute to the growth rate of the country.

Vijaya Institute of Pharmaceutical Sciences for Women provides quality education to enable the young women to transform themselves into potential leaders by choosing a varied number of careers. The vision and mission of the institute are in tune with the contemporary times associated with the principles of transparency, responsibility and accessibility which make our place ahead of our competitors.

My greetings to the Editorial Board of **VEPA 2018** – *The Vijaya Pharmacy* for making it appear the best in all its facets.

Good Luck!!!


(B.S. Sri Krishna)
Secretary

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Editor Speaks...



I am indeed happy to greet the readers of VEPA 2018 – The Vijaya Pharmacy. I find it an opportunity to share the success secrets of the institution. The prime principle of our annual magazine is to enlighten, entertain and encourage the readers. The issue features thought stimulating articles with a commitment to retain diversity of readership, their interests and opinions. I appreciate the authors, students and staff who have contributed articles which highlight their scientific, research, literary and artistic acumen. The magazine also showcases the educational, cultural and sports activities of the institution. Subsequently, the achievements and awards speak about small leaps made by the institution consistently over time, leading to all round excellence.

VEPA 2018 – The Vijaya Pharmacy would be investing in knowledge which pays the best interest.

I thank my dedicated editorial team for making the magazine reflect the values and quality of the institution and also Girish Media personnel who have given it an impressive appearance.



About the College...

Vijaya Institute of Pharmaceutical Sciences for Women is established in the year 2009 under the umbrella of S.R.K. Foundation by Sri. Boyapati Srinivasa Appa Rao, a renowned educationalist and industrialist with more than four decades of rich experience in promoting and administering professional colleges. The institution is committed to provide quality education and empower women in the field of pharmacy to cater to the needs of the society in health care sector and also to uplift their socio-economic status through quality education.

The institution is permitted by Govt. of Andhra Pradesh, AICTE – New Delhi, approved by Pharmacy Council of India-New Delhi, affiliated to JNTUK, Kakinada and is certified by ISO 9001 – 2015.

The institution offers courses in B. Pharmacy (100 Seats), M. Pharmacy in Pharmacology (15 Seats), Pharmaceutics (15 Seats), Ph. Analysis & Quality Assurance (15 Seats), Pharm D (30 Seats) and Pharm D Post Baccalaureate, (10 Seats).

The institution has a MoU with Government General Hospital, Vijayawada which is a 1000 bedded teaching hospital with more than ten departments for imparting clinical training for Pharm D and Pharm D Post Baccalaureate Courses.

The institution received Pride India Star Puraskar, as *Indian Star Best Emerging College of Pharmacy for Women 2017* by Score More Foundation, a charitable, non-profitable organization of Vijayawada.

The institution is identified as one of **The 10 Best Women's Education and Empowerment Institutes in India 2018** by **The Knowledge Review** magazine, a sister concern affiliated to Insights Success Media Tech LLC, USA.

The institution received the *Outstanding Local Branch Award for the year 2017* from The Indian Pharmaceutical Association.

On the occasion of International Women's Day Celebrations, on 5th March, 2018, two thousand two hundred and seventy seven (2277) women students pursuing pharmacy, engineering and management courses from SRK Foundation made a place in the *Champions Book of World Record* by forming the biggest *Woman Gender Symbol* within 2 minutes.

The quality policy of the institution makes it responsible for the personal and professional growth of the staff and students.

Vision: To become a Recognized Leader of Pharmacy Education in the State through Excellence

Mission: To serve the State, Nation & World by producing outstanding Pharmacists

VEPA - THE VILLAGE PHARMACY

Neem is a precious gift from the Mother Earth. Our ancestors worshipped the Neem tree as they believed that it not only protects the health against diseases but also drives away the evil eye. Today, Indians consider it as the most versatile for its multitude of medicinal and other uses.

The Indian poets called Neem as Sarva Roga Nivarini, and the rural Indians call it as '**The Village Pharmacy**'. Neem foundation states that Neem is "tailor-made for combating the serious problems confronting mankind today". The medicinal benefits of Neem are spoken about in the Vedas; the world's oldest scriptures. It has provided a wide range of valuable remedies for more than 5,000 years, equally supporting the health of humans and livestock on the planet.

The majestic, deciduous evergreen Neem, the native of Indian subcontinent, is one of the world's most effective and widely used herbs. It is easy to grow Neem in a wide range of temperatures and conditions and the tree can live for 150 to 200 years. The knowledge about its uses and benefits has spread all over the world from India.

Neem is one of the main ingredients in every blood purification formula used in Ayurveda and it appears in most diabetic formulae as well. It is also used to cure arthritis, rheumatism, in the elimination of external and internal parasites, including malaria and various kinds of viral fevers and infections. It is an insect repellent and is reported to have exhibited the ability to control at least 125 species of pest insects.

One of the most famous uses of Neem is to prevent tooth decay and gum disease. Neem twigs have been in use for thousands of years by millions of people in India as 'chewing sticks' to cleanse their teeth and gums to maintain oral hygiene.

Mahatma Gandhi encouraged scientific investigation of Neem tree to revitalize Indian traditions, which eventually paved a way for in depth research on Neem. Acharya Narula, a research professor in the Department of Biology at The University of North Carolina, who embarked on an extensive research on Neem felt that it stands true to its Sanskrit name Arishta which means "**reliever of sickness**", hence rightly called as '**The Village Pharmacy**'.

VEPA - THE VIJAYA PHARMACY

“**The Vijaya Pharmacy**” is a precious gift for the young women of India. The empowerment of women speaks of humanism and those luminaries who are empowered succeed in satisfying human needs and human interests. It is this ideology that sparked ‘The Vijaya Pharmacy’ on a marathon march of scientific progress to serve humanity.

Vijaya Institute of Pharmaceutical Sciences for Women was started in the year 2009 to mould the graduates of pharmacy, to meet the ever-increasing need in the pharma industry and health sector.

“**Education**, together with reproductive health, is one of the most important means of empowering women with the knowledge, skills and self-confidence necessary to participate fully in the development process”.

Pharma professionals endowed with patience, tolerance, ambience and dedication are of great need to public health and industry in the present scenario. Our institution plays a key role in producing the individuals who make up to be a part of competent health care workforce.

Accomplished pharmacists of VIPW provide quality health care as they wish to build a positive ambience with the society, and they believe that compassion can be a powerful catalyst for healing. Our institute contributes for the significant growth of health care industry by sharing its resources with those in need.

Most change begins small but, multiple small acts of positive effort can influence a transformative change in creating the benchmarks along the journey to measure success and progress.

VIPW’s pharmacists would surely extend the horizons and scope of pharmacy practice which include more traditional roles and modern services related to health care. It is sure that they are endowed with the philosophy of joyous service for the greater good of humanity.

‘The Vijaya Pharmacy’ willfully stands as an example to the ultimate pearl of wisdom said by Albert Einstein,” A man’s ethical behavior should be based effectually on sympathy, education, and social ties and needs; no religious basis is necessary”.

Institute Achievements



Glance at World Record




 When Performance Records

CHAMPIONS Book of WORLD RECORDS

Certificate

Largest Women Gender Symbol Formation

<i>Name of the Record Holder</i>	Vijaya Institute of Pharmaceutical Sciences for Women
<i>Year of Establishment</i>	Aug 12th, 2009
<i>Place of Location</i>	Vijayawada, Andhra Pradesh, India
<i>Area of Expertise</i>	Group Attempt
<i>Details of Record</i>	Largest Women Gender Symbol Formation on the eve of International Women's Day
<i>Nature of Record</i>	Record

Your outstanding work speaks volumes of your amazing aptitudes.
 Your commendable record is being placed in our book of records.





Dr. Parashakti Ram, Purigatani
 Registrar of Records
 Champions Book Of World Records

*This Certificate must not be reproduced with out the permission of Champions Book of World Records.



Momentous Moments





ACADEMIC EXCELLENCE

(B. PHARMACY 2013 - 2017 BATCH)

GPAT RANKERS

2017- 2018



Ms. M. Padmavathi
First



Ms. N. Santhoshi
First



Ms. K. Sindhu
Second



Ms. J. Bindu Madhuri
Rank-2340



Ms. D. Dharani Srividya
Rank-2084

CLASS TOPPERS



B. YAMINI
I B.Pharm FIRST in Class



M. BHAVYA
II B.Pharm FIRST in Class



V. ANUSHA
III B.Pharm FIRST in Class



K. SINDHU
IV B.Pharm FIRST in Class



M.V. P. LAKSHMI BHAVYA
I B.Pharm SECOND in Class



K. MOUNIKA
III B.Pharm SECOND in Class



D. LAKSHMI
III B.Pharm SECOND in Class



M. N. V. PADMAVATHI
IV B.Pharm SECOND in Class

B. PHARM



M. TEJASRI
Dept. of Pharmacology



P. TEJASWINI
Dept. of Ph. Anal. & QA



Md. MEHERUNNISA
Dept. of Pharmaceutics



B.C.D. TEJASWI
Dept. of Pharmaceutics



K. MOUNIKA
Dept. of Ph. Anal. & QA

M. PHARM



TAHERA MUBEEN
I PHARM D FIRST IN Class



K. BABITHA
I PHARM D SECOND IN Class



K. HEMA
II PHARM D FIRST IN Class



SK. TANISHA
II PHARM D SECOND IN Class

PHARM. D

ORGANIZING COMMITTEE



Sri B. S. Appa Rao
Chairman



Prof. Dr. K. Padmalatha
Principal



Sri B. S. Sri Krishna
Secretary



Mr. S. Venkateswara Rao
Assoc. Professor, Academic In-charge



Mr. A. Jayarami Reddy
Assoc. Professor, Campus Discipline In-charge



Mr. D. Srinu Naik
Asst. Professor, External Duties In-charge



Mrs. R. Padmaja
CA, Accounts In-charge

TEACHING STAFF



Dr. K. Padmalatha
Principal & Prof., Dept. of Pharmacology

DEPARTMENT OF PHARMACOLOGY



Mr. A. Jaya Rami Reddy
M. Pharm., (Ph. D)



Mrs. D. Santhi Krupa
M. Pharm



Mrs. P. Pradeepa
M. Pharm



Mrs. V. Greeshma
M. Pharm



Ms. Mobeen Shaik
M. Pharm



Ms. Eswari Pasam
M. Pharm., (Ph. D)

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M. Pharm., (Ph. D)



Ms. M. Tejaswi
M. Pharm



Mr. N. Vijay Kumar
M. Pharm



Ms. Sk. Fathima
M. Pharm



Mrs. E. Jajili
M. Pharm



Ms. D. Prasanna
M. Pharm

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Dr. B. Ramu
M. Pharm., Ph. D



Mr. S. Venkateswara Rao
M. Pharm., (Ph. D)



Mrs. Arifa Begum
M. Pharm., (Ph. D)



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M. Pharm



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M. Pharm



Mrs. B. Hemalatha
M. Pharm



Mrs. A. V. S. Hima Bindu
M. Pharm



Mrs. P. M. M. N. Lakshmi Varma
M. Pharm



Mrs. G. Priyanka
M. Pharm



Mrs. Meharunnisa
M. Pharm

DEPARTMENT OF PHAMACEUTICAL ANALYSIS



Dr. M. Narendra
M. Pharm., Ph. D.,



Mrs. S. Archana
M. Pharm



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M. Pharm



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M. Pharm



Mrs. J. Ramya
M. Pharm



Ms. Ch. Anupama Swathi
M. Pharm



Ms. Sk. Shameena
M. Pharm



Ms. M. Anitha
M. Pharm

DEPARTMENT OF PHARMACOGNOSY AND BIOTECHNOLOGY



Dr. S. Sundar
B. Pharm., M. Tech., Ph. D



Mrs. M. Vani
M. Pharm., (Ph. D)



Mrs. A. V. Yagna Priya
M. Pharm



Ms. B. Swathi
M. Pharm

DEPARTMENT OF PHARMACY PRACTICE

DEPARTMENT OF S & H



Dr. A. Chandhra Sekar
BHMC, PGDHM, M.Sc. (App. Psy)



Dr. Dinesh Kumar Meena
Pharm. D (PB)



Mrs. K. R. Rajeswari
M. Pharm



Dr. N. Prathiba
Pharm. D



Mr. V. Srinivas
M. B. A, M. Sc., (Stat.),
M. Phil., (Ph. D)



Mrs. V. V. Vandana Devi
M.A., (Ph. D)



Mr. Y. Naveen
M. Pharm.,



Dr. M. Tabitha Sharon
Pharm. D

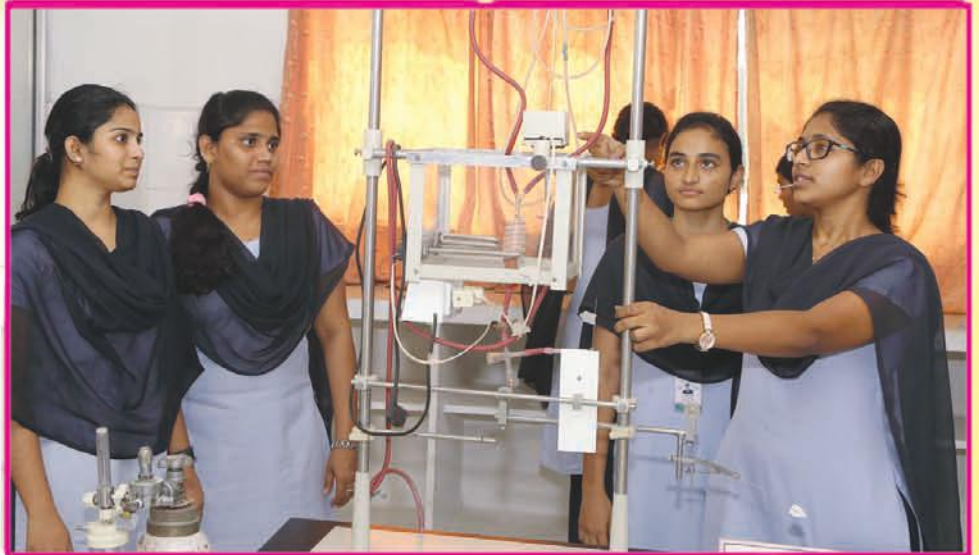


Dr. B. Pragna Malavika
Pharm. D



Mrs. P. Durga
M. Tech.,

GLANCE AT RESEARCH FACILITIES



GLANCE AT RESEARCH FACILITIES

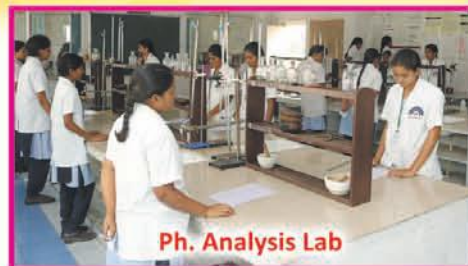
GLANCE AT LAB FACILITIES



Dispensing Lab



Pharmaceutical Technology Lab



Ph. Analysis Lab



Pharma Chemistry Lab



Ph. Microbiology Lab



Pharmacognosy Lab



Pharmacology Lab



Computer Lab



Medicinal Garden



Library



Museum



Stores



Human Anatomy & Physiology Lab



Dosage Forms



Med. Bio Chemistry Lab

GLANCE AT LAB FACILITIES



4th B. Pharmacy [2014 - 2018]



3rd B. Pharmacy - A Section [2015 - 2019]



3rd B. Pharmacy - B Section [2015 - 2019]



2nd B. Pharmacy - A Section [2016 - 2020]



2nd B. Pharmacy - B Section [2016 - 2020]



1st B. Pharmacy - A Section [2017 - 2021]



1st B. Pharmacy - B Section [2017 - 2021]



3rd Pharm D [2015 - 2021]



2nd Pharm D [2016 - 2022]



1st Pharm D [2017 - 2023]



1st M. Pharm [2017 - 2023]

2nd M. Pharm [2016 - 2018]

Pharma Analysis



Pharmacology



Pharmaceutics





Non Teaching Staff

Fire Safety



GLANCE AT ERIPSCON-2017



GLANCE AT ERIPSCON-2017

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN



GLANCE AT ERIPSCON-2017



GLANCE AT ERIPSCON-2017

GLANCE AT JAN AUSHADHI





jan aushadhi
Quality Medicines At Affordable Prices for All

Inauguration of
JAN AUSHADHI GENERIC DRUG STORE

by
Dr. Kamineni Srinivas
Hon. Health Minister of A.P.
&
Dr. Vallabhaneni Vamsi Mohan
Hon. MLA, Gannavaram

on
23, July-2017,
at
09:00 A.M.

**VIJAYA INSTITUTE OF PHARMACEUTICAL
SCIENCES FOR WOMEN**
Enikepadu, Vijayawada



GLANCE AT JAN AUSHADHI

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN

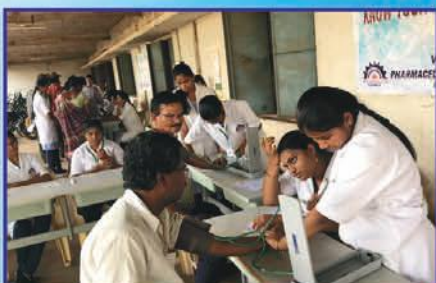


GLANCE AT MEGA HEALTH CAMP



GLANCE AT MEGA HEALTH CAMP

HEALTH CAMP AT INDUSTRIES



HEALTH CAMP AT INDUSTRIES

HEALTH CAMP AT ANDHRA LOYOLA ENG. COLLEGE

HEALTH CAMP AT ANDHRA LOYOLA ENG. COLLEGE



HEALTH SURVEY AT GOLLAPUDI



HEALTH SURVEY AT GOLLAPUDI

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN



MEGA HEALTH CAMP AT GOLLAPUDI



MEGA HEALTH CAMP AT GOLLAPUDI

GLANCE AT AWARENESS PROGRAMMES



GLANCE AT AWARENESS PROGRAMMES

INTERNATIONAL YOGA DAY CELEBRATIONS



INTERNATIONAL YOGA DAY CELEBRATIONS

GLANCE AT NSS ACTIVITIES



GLANCE AT NSS ACTIVITIES

PHARMACIST DAY & PHARMACY WEEK CELEBRATIONS

PHARMACIST DAY & PHARMACY WEEK CELEBRATIONS



Skill Development Programme Offered at **VIPW**



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Future Wise is one of A.P's leading educational training houses. We have tied -up with **VIPW** to train the B.Pharm & Pharm-D students to transform them with skill development at global standards. Till date, together we have successfully trained & placed in reputed pharma companies over 6 out going batches.

L.V.Gangadhara Rao
Corporate Trainer

How
the **students**?
are made job ready



Training modules are designed as per industry needs and standards for their career readiness.

Programme of Instruction includes mandatory soft skill development courses for their corporate readiness.

Practical sessions designed per industry standards for their operational readiness.

Mock interviews with video mirroring are conducted for their interview readiness.

Training is audio/ video supported with interactive sessions.



CERTIFICATE COURSES



CERTIFICATE COURSES

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN



GLANCE AT IPC-2017



GLANCE AT IPC-2017

GLANCE AT PLACEMENTS



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Lila Nutraceuticals (R.A)



Ms. K. DEEPTHI
Hitech Pharmaceuticals (Q.A)



Ms. B. NAGINI
Nifty Labs Pvt. Ltd (Q.A)



Ms. D. SOWMYA
Hetero Labs Pvt. Ltd (Q.C)



Ms. A. SWATHI
Lila Nutraceuticals (R.A)



Ms. K. SWATHI
Hetero Labs Pvt. Ltd (Q.C)



Ms. K. SINDHU
Vimta Labs Pvt. Ltd (Q.C)



Ms. O. ANUSHA
Pellet Formulations (R&D)



Ms. R. JYOTHI
Optimus Pharma (Q.C)



Ms. K. PARIMALA
Micro Labs (Q.C)



Ms. B. MADHAVI
Zenotec Laboratory (Q.C)



Ms. K. MOUNIKA
Micro Labs (Q.C)



Ms. B. C. DURGA TEJASWI
Optimum Coading Services



Ms. M. TEJA SRI
Lila Nutraceuticals (R.A)



Ms. V. SINDHURA
Lila Nutraceuticals (R.A)





‘VIJRUMBHANA’

Vijaya Institute of Pharmaceutical Sciences for Women gives perfect opportunity for all students to participate in the competitions and showcase their creative talent through ‘VIJRUMBHANA’. Programmes are organized to encourage creative pursuits and nature talents. There is a competition and a spirit of camaraderie too, as students from various levels like B. Pharm, Pharm D and M. Pharm come together to participate.

Team work can be educational, exhilarating and challenging. The teams Achievers, Inspirers, Sizzlers and Sparklers compete in the event ‘VIJRUMBHANA’. The discrimination among students as seniors / juniors is avoided by grouping the students randomly from first B. Pharm to second M. Pharm. These groups are headed by the nominated faculty Coordinators and student group leaders. They represent the respective teams in competitions through out the year.

‘VIJRUMBHANA’ has a unique flavor and style that makes it a much expected and memorable moment. It is a confluence of ideas, a perfect blend of the arts, the skills and the passion to perform. Students get thoughtful planning, convenient amenities and a warm welcoming environment to participate in all events.

Achievers: Achievers are influenced by motivational reminder “What you get by achieving your goals is not as important as what you become by achieving your goals”.

Inspirers: They are the people filled with enlivening, exacting emotion to complete. This is the power of gathering where actions are guided to be more enhanced, thoughtful and more alive to open their winning self.

Sizzlers: Sizzler team is guided by an unwavering pursuit of excellence. They push the boundaries and surge forward to win. Their most certain way to succeed is always to try just one more time.

Sparklers: They are obviously bonfires raving about success with new strength and new thoughts. They burn to emit colored flames and sparks of victory. Their motivational fire to complete is “the will to win” the desire to succeed, the urge to reach full potential. This is their key that will unlock the door to excellence.

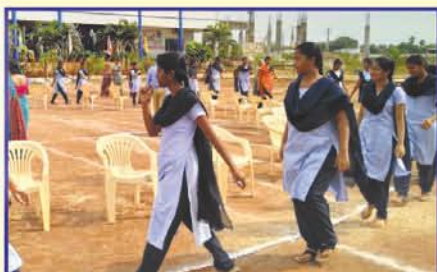




VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN



SPORTS



Ms. B. Harshini,
Pharm. D 3rd year
JNTUK II Team Player
Inter university Table Tennis Tournament
JNTUK South Zone, 2017-18

SPORTS





VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN

CREATORS OF CREATIVITY



CREATORS OF CREATIVITY





VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN



CLANCE AT CULTURALS



CLANCE AT CULTURALS





VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN

CELEBRATIONS



CELEBRATIONS





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4.	Smt. B. Vijaya Lakshmi	Member
5.	Ms. Koduru Lakshmi Sudha, M.A.	Member
6.	Mrs. Vadlamudi Sri Swapna, M.B.B.	Member
7.	Mrs. B. Sree Sangeetha, M.S. (USA)	Member
8.	Mrs. B. Shilpa, B.A	Member



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5.	Dr. K. Padmalatha, M. Pharm, Ph.D. Prof. & Principal, Vijaya Institute of Pharmaceutical Sciences for Women	Co-ordinator



Institutional Animal Ethical Committee (IAEC)

Reg. No: 1581/PO/a/11/CPCSEA

S. No	Name of the Member	Designation
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3.	Mr. D. Yedukondalu , M.V.Sc.	Veterinarian
4.	Mr. A. Jaya Rami Reddy , M.Pharm., (Ph.D)	Scientist Incharge of AHF
5.	Mr. S. Venkateswara Rao M.Pharm., (Ph.D)	Scientist from Different Biological Discipline
6.	Dr. V. Hanumantha Rao , M.V.Sc., Ph.D	CPCSEA Nominee (Main)
7.	Dr. N. V. Sreekanth Babu M.V.Sc., Ph.D	CPCSEA Nominee (Link)
8.	Dr. N. Venkata Rami Reddy M.V.Sc., Ph.D	Scientist from outside the Institute
9.	Sri G. Manjunath	Socially Aware Member



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S. No	Name of the Member	Designation
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3.	Mr. A. Jayarami Reddy Assoc. Professor	Member Secretary
4.	Mrs. M. Vani Asst. Professor	Staff Member
5.	Mrs. D. Santhi Krupa Asst. Professor	Staff Member
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7.	Ms. M. Rupa Durga Devi 1 st M. Pharm	Student Member
8.	Ms. D. Lakshmi 4 th B. Pharm	Student Member
9.	Ms. S. Jyotsna 4 th B. Pharm	Student Member
8.	Ms. K. Malleswari 3 rd B. Pharm	Student Member
11.	Ms. M. Bhavya 3 rd B. Pharm	Student Member



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Sr. No	Name of the Member	Designation
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4.	Mrs. D. Santhi Krupa Asst. Professor Department of Pharmacology	Member
5.	Mr. D. Srinu Naik , Asst. Professor Dept. of Pharmaceutics	Member
6.	Mrs. V. Vishnu Vandana Devi Assoc. Prof. (English Lit.) Dept. of Science and Humanities	Member



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4.	Mr. G. Muthu Bhoopathi Asst. Professor	Placement In-charge
5.	Mrs. K. Swapna	Admin In-charge
6.	Mrs. M. Deva Rani	Store In-charge
7.	Mrs. J. Madhavi Latha	Library In-charge



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4.	Dr. M. Narender Assoc. Professor	Co-ordinator
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6.	Mrs. M. Vani Asst. Professor	Member
8.	Mr. G. Muthu Bhoopathi Asst. Professor	Member



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7.	Mrs. M. Vani Asst. Professor	Staff Member
8.	Ms. K. Sindhu 1 st M. Pharmacy	Student Member
9.	Ms. Y. Ramya 1 st M. Pharmacy	Student Member



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2. Sri. Devineni Uma Maheswara Rao, Minister for Irrigation, Command Area Development & Water Resources Management, Govt. of Andhra Pradesh
3. Smt. Gadde Anuradha, Chair Person, Zilla Parishad, Krishna District
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5. Dr. V. S. S. Kumar, Vice- Chancellor, JNTUK, Kakinada
6. Dr. B. Dinesh Kumar, President - Indian Pharmacological Society (IPS)
7. Dr. T. V. Narayana, Chairman, Indian Pharmaceutical Association (Education)
8. Dr. Prakash V. Diwan, Dep. Director & Head- Pharmacology Division, IICT, Hyderabad
9. Dr. P. B. N. Prasad, Deputy Drugs Controller (India) CDSCCO, Zonal Office, Ministry of Health and Family Welfare, Hyderabad
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11. Dr. M. V. Basaveswara Rao, Special Officer, Krishna University
12. Dr. S. Satyanarayana, Prof. & Principal (Retd.), University College of Pharmaceutical Sciences, Andhra University, Visakhapatnam
13. Dr. Avijit Hazra, Dept. of Pharmacology, IPGME & R, Kolkata
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15. Dr. Ajay Prakash, PGIMER, Chandigarh
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19. Dr. K. Venkaiah, Clinical Studies, National Institute of Nutrition, Hyderabad
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49. Dr. Ch. Ajay Babu, Dept. of Pharmaceutics, MAM College of Pharmacy, Narasaraopet
50. Dr. P. Naga Raju, Dept. of Pharmaceutical Analysis, Hindu College of Pharmacy, Guntur
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53. Dr. Kuchipudi Ajay Kumar, Govt. Music & Dance College, Vijayawada
54. Ms. Satyavani and Mr. Rafiuddin, Members, Self Help Groups, Vijayawada
55. Dr. N. Sreedevi, Managing Director, Femme World, Vijayawada.
56. Dr. C. L. Venkata Rao, Ex-Vice Chairman, Swatch Andhra mission, Vijayawada.
57. Dr. Paruchuri Rambabu, Asst. Director, Drug Controlling Administration, Vijayawada
58. Dr. K. Sri Karuna Murthy, Professor, Dr. Pinnamaneni Siddhartha Institute of Medical Sciences and Research Foundation, Vijayawada
59. Dr. P. N. S. Murthy, Principal and Chairman, Dr. Pinnamaneni Siddhartha Institute of Medical Sciences and Research Foundation, Vijayawada



60. Dr. V. Chandrasekhar, Asst. Prof, Community Pharmacy, Dr. Pinnamaneni Siddhartha Institute of Medical Sciences and Research Foundation, Vijayawada
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62. Ms. V. Padmaja, Volunteers, ISHA Foundation, Vijayawada
63. Mr. Y. Rama Rao, Volunteers, ISHA Foundation, Vijayawada.
64. Mr. A. Bhargav, Volunteers, ISHA Foundation, Vijayawada.
65. Smt. N. Kalyani, Drug Control Officer, Vijayawada
66. Sri Govinda Krishna, Sr. Scientific Officer, Drug Control Office, Vijayawada.
67. Ms. N. Swathi, Counsellor, Community outreach (Retail), Disha Trust, ICICI Academy For Skills, Vijayawada.
68. Dr. T. Tejaswini., Dr. Pinnamaneni Siddhartha Institute of Medical Sciences & Research, Vijayawada.
69. Dr. G. Hemalatha, Dr. Pinnamaneni Siddhartha Institute of Medical Sciences & Research, Vijayawada.
70. Dr. B. Anjana, Dr. Pinnamaneni Siddhartha Institute of Medical Sciences & Research, Vijayawada.
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75. Mr. Suresh Reddy, Team Leader, Visionary RCM Infotech Pvt. Ltd., Hyderabad.
76. Ms. Sai Tejaswi, HR Executive, Visionary RCM Infotech Pvt. Ltd., Hyderabad.
77. Mr. K. Jonathan, Health Educator, Dr. NTR University of Health Sciences, Vijayawada.
78. Dr. A. V. Krishna Raju, Project Manager, Laila Neutraceuticals, Vijayawada.
79. Dr. Sankar, Professor, Pharmacology, Dr. NTR University of Health Sciences, Vijayawada.
80. Sri Ch. Madhu, Chief Editor, The Indians Power, Vijayawada.
81. Sri G. Swamy, Founder, Vay Foundation, Visakhapatnam.
82. Dr. Pattabhiram. T., The Founder, Director (International Operations) , Champions Book of World Records
83. Dr. G. Santhi Devi, Director (Indian Operations) Champions Book of World Records.



PRIZES WON BY STAFF & STUDENTS

S.No.	Staff & Students	Dept./Course	Topic	Conference	Prize
1.	D. Dharani Srividya	IV B. Pharm	Caste & Religion will hamper the development of humanistic society	Essay Writing Competition by Gora Science Centre, Vijayawada on 12/7/2017	3 rd Prize
2.	D. Dharani Srividya	IV B. Pharm	Acid neutralizing capacity and cost effectiveness of antacids sold across retail pharmacies in Vijayawada	Oral presentation competition at 3 rd Indo-Australian conference at VVIP, at Gudlavalleru on 29/12/2017	1 st Prize
3.	K Mounika Sk Sayeeda Sarah Naseerunnisa. Sh	III B. Pharm I B. Pharm III B. Pharm	Women Empowerment & Security	Essay Writing Competition International Women's Day by Vay Foundation at Vishakhapatnam on 6/3/2018	1 st Prize 3 rd Prize Consolation
5.	K. Mounika M. Bhavya K. Mounica M .Teena	III B. Pharm III B. Pharm III B. Pharm III B. Pharm	Ramayana & Mahabharata	A.P. Editors' Association and CBR Academy jointly conducted Essay Writing and Quiz Competition on 30/7/2017	Essay Writing 1 st prize Quiz 3 rd prize
6.	Mrs.V. Vishnu Vandana Devi	Dept. of English	The Retellings of the Mahabharata: A literary contribution to Indian heritage & culture	Two Day national conference on Sustaining cultural heritage of India at Maris Stella college from 26/2/2018-27/2/2018	Best Paper Presenter
7.	Mrs.V. Vishnu Vandana Devi	Dept. of English	Parva- A cultural & historical perspective	Two Day national conference on English language & literature in the era of globalization at Andhra Loyola Institute of Engineering & Technology from 16/2/2018-17/2/2018	Best Paper Award
8.	Mrs. M. Vani	Dept. of Pharmacognosy	e-Poster Hepato protective effects of the floral extracts of <i>Gomphrena serrata</i>	National seminar on Molecular modelling in silico tools in target identification and drug discovery" at KVSR Siddhartha college of Pharmaceutical Sciences, Vijayawada on 15/3/2018	2 nd Prize
9.	Mrs. M. Vani	Dept. of Pharmacognosy	e-Poster A hepato protective alkaloid from the floral extracts of <i>Gomphrena serrata</i>	DST-SERB sponsored National conference & Pharma quiz on Innovative approaches in Pharmaceutical Drug discovery and Development by using QSAR methods" at Nirmala college of Pharmacy, Mangalagiri on 17/3/2018	1 st Prize



ERIPSCON 2017

The institution hosted the Golden Jubilee Celebrations of Eastern Region Indian Pharmacological Society, ERIPS Conference 2017 (**ERIPSCON 2017**) for three days during 23rd – 25th March, 2017. This conference has got the approval for five credits by A.P. Medical Council.

Pre-conference workshop was conducted on the theme *Good Laboratory Practice and Good Clinical Practice* on 23rd March, 2017. Dr. Kamineni Srinivas, Minister for Health and Medical Education, Andhra Pradesh Legislative Assembly was the Chief Guest and Dr. B. Dinesh Kumar, President, IPS was the Guest of Honor. Dr. B. Dinesh Kumar brought out the significance of the theme of the conference in his talk. Prof. N. Harishankar, Scientist, NIN made a presentation on *ISHIQUA A Fish Model for Animal Experiments on GLP Prospective*. Dr. Ajay Prakash, PGIMER, Chandigarh gave his presentation on *Non-Clinical Studies: Building Bridge in Clinical Trials*, and Dr. Girish Gudi, Glenmark gave his talk on *PK/PD in Pre-Clinical Studies*.

Conference was held on 24th & 25th March, 2017 on the theme *Recent Trends in Drug Discovery and Challenges in Drug Therapy*. Chief Guest Dr. V. S. S. Kumar, Honorable Vice Chancellor of JNTUK, Kakinada, Guest of Honor Dr. T.V. Narayana, President, IPA (Ed.), Dr. B. Dinesh Kumar, President, IPS, Dr. Bikash Medhi, PGIMER, Chandigarh, Chief Editor, Indian Journal of Pharmacology, Dr. Avizit Hazra, Department of Pharmacology, IPGME&R, Kolkata, Dr. Prakash V. Diwan, Deputy Director and Head, Pharmacology Division, IICT, Hyderabad shared the dais for the inaugural session along with Chairman and Chief Patron Sri B.S. Appa Rao, Secretary and Patron Sri B. S. Sri Krishna and Principal and Convener Dr. K. Padmalatha. Dr. V. S. S. Kumar in his address reiterated the importance of Pharmacy education and drug therapy and the need to develop more effective drugs, using new technologies. Dr. T. V. Narayana expressed his appreciation towards the institution for hosting the golden jubilee celebrations of IPS in the newly formed state of Andhra Pradesh.

Symposium – 1 was chaired by Dr. Prakash V Diwan, Dep. Director & Head- Pharmacology Division, IICT, Hyderabad and Co-Chaired by Dr. P. Rajeswara Rao, Andhra University, Vishakhapatnam and the theme of the symposium was *Advances in Pharmacology*. Dr. Avizit Hazra, presented his session on *Historical Perspective of Pharmacology*, followed by Dr. Bikash Medhi who spoke on *Pharmacovigilance- Where do we Stand? And Molecular Pharmacology and Personalized Medicine*. Dr. N. Harishankar's explained the *Role of Small Animal in Pre-clinical Toxicology*.

Panel Discussion was coordinated by Dr. Prakash V. Diwan on *Pharmacology Education*. The topic *Pre-clinical Pharmacology, Clinical Pharmacology and Veterinary Pharmacology* were presented by Dr. N. Harishankar and Dr. Bikash Medhi. Dr. G. Srinivasa Rao, Assoc. Dean, NTRCVS, Gannavaram, Andhra Pradesh, gave his presentation on *Veterinary Pharmacology* respectively and Dr. P. Rajeswar Rao, Andhra University, Vishakhapatnam delivered a talk on *Regulatory Pharmacology* as panel members.



Symposium – 2 was conducted on the theme *Advances in Pharmaceutical Science* on 25th March, 2017. The session was chaired by Dr. Ranganayakulu and co-chaired by Dr. Navanath Kalyane. Dr. Harlokesha Narayan Yadav presented his session on *Pre-conditioning of Heart in case of Diabetes & Hyperlipidemia*. Prof. K. V. Ramana Murthy, Department of Pharmaceutics, University college of Pharmaceutical Sciences, Andhra University, presented his session on *Advances in Pharmaceutical Sciences*. Prof. K. P. R. Chowdary, Research Director, Vikas Institute of Pharmaceutical Sciences, Rajahmundry, presented an overview of *Patentable Research in Pharmacy and Nano Technology*. Dr. Naveen, KVSR Siddhartha College of Pharmaceutical Sciences and Dr. Ravi Kumar, Prof. & Head, Dept. of Pharmacognosy, Bapatla College of Pharmacy chaired and co-chaired the session respectively. Prof. R. Naga Raju, Dept. of Pharmaceutics, Sri Padmavathi MahilaViswavidyalayam discussed the topic *Targeted Drug Therapy*. Dr. Kola Vijaya Sekhar, Prof., Guntur, Medical College & Hospital, Guntur presented his views on *Clinician View for New Therapeutic Agents*. Dr. Ch. Ajay Babu, Dept. of Pharmaceutics, MAM College of Pharmacy, Narasaraopet and Dr. P. Naga Raju, Dept. of Pharmaceutical Analysis, Hindu College of Pharmacy, Guntur had chaired and co-chaired this session.

Prof. DuggiralaVisweswaram (Retd.), Senior Pharmacologist, Andhra University, Visakhapatnam was felicitated for his services to the field of Pharmacology. Dr. S. Satyanarayana, Prof. & Principal (Retd.), University College of Pharmaceutical Sciences, Andhra University, Visakhapatnam was conferred upon with *Dr. Lalitha Kameswaram Award*.

Quiz competition was conducted by Lt.Col. Dr. Y. Ashok, Pinnamaneni Siddhartha Medical College, Gannavaram for non-IPS members and participants. Oral and Poster scientific presentations by the participants were evaluated and first, second and third prizes were bestowed on best presentations. IPS members competed for *Prof. G. Achari Award and Prof P. C. Dandiya Award*. Prof. G. Achari Award was won by Sri Ramoji Kosuri from IIT, BHU and Prof P. C. Dandiya Award was bagged by Dr. Ch. Siva Reddy of KVSR Siddhartha College of Pharmaceutical Sciences, Vijayawada. Competitions in cultural activities attracted the audience. Altogether 1235 delegates participated in the conference. The winners received their prizes at Valedictory Programme from the hands of Dr. P. B. N. Prasad, Deputy Drugs Controller (India), CDSCO Zonal Office, Ministry of Health & Family Welfare, Hyderabad, Chief Guest and Lt. Col. Dr. Y. Ashok, Guest of Honor.



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COMPARATIVE *IN VITRO* STUDIES AND BIOEQUIVALENCE ASSESSMENT OF SOME COMMERCIALY AVAILABLE METFORMIN HYDROCHLORIDE TABLETS IN VIJAYAWADA

S. Venkateswara Rao, D. Poornima sai, Ch. Meghana, B. Udaya sri, K. Anitha Jyothi, M. Vikhila, Sk. Rupsana and K. Divya

Metformin hydrochloride tablets prescribed for treatment of non-insulin dependent diabetes mellitus (NIDDM). These tablets manufactured and marketed by various multinational and local companies. There is need for evaluating the bioequivalence of these tablets as a matter of public concern. To compare the differences in dissolution behaviour and asses bioequivalence of some commercially available Metformin hydrochloride tablets in Vijayawada. The objective is to find out potent generic brand and reduce the cost of treatment for diabetes mellitus with respect to its composition and manufacturer. Eight generic brands manufactured by different companies were evaluated. The physicochemical properties, hardness, uniformity of weight, friability, disintegration time and drug content of each brand was determined and compared with each other. The *in vitro* dissolution studies were performed in USP Dissolution Apparatus II using pH 6.8 phosphate buffer solution for 1 h. The bioequivalence was assessed based on *In vitro* dissolution profile and f1 & f2 factors. All the brands were evaluated for various physicochemical properties and the results were within the pharmacopoeia standards. *In vitro* dissolution of all the brands was satisfactory and the brand Obimet® shown highest dissolution of 94.49% within 1 hr. The f1 and f2 values were in the range of 2 – 8 and 74 – 93 respectively. This suggests that release of metformin from all brands were similar with reference. The *in vitro* bioequivalence studies can predict the *in vivo* bioequivalence and to save time & cost. Therefore it is evident that test products were bioequivalent to the reference product and the brand Obimet® could be used as a best generic substitute which reduce the dose and cost of treatment for diabetes mellitus.

Keywords: Metformin hydrochloride, diabetes mellitus, bioequivalence.

FORMULATION AND *IN VITRO* EVALUATION OF TOPICAL DICLOFENAC SODIUM OINTMENT USING DIFFERENT PERMEABLE MEMBRANES

D. Srinu Naik, V. Kalyani, S. Hemalatha, G. Navyatha, P. Lakshmi Prasanna, T. Lakshmi Devi, B. Sravani

Currently, there is a great deal of world-wide interest in the field of transdermal drug delivery and, consequently, broad classes of drugs are being evaluated for percutaneous absorption potential. The advantages of this mode of drug administration are numerous such as patient convenience and therapeutic optimization of drug. Diclofenac sodium ointment was prepared and evaluated for various parameters. The *in vitro* release test is a measure of in process control and a finished product specification. An *in vitro* diffusion cell experiment was designed to demonstrate the rate of drug release from ointment using three different semipermeable membranes and the samples drawn at periodical intervals were analyzed spectrophotometrically. From the results, it was evidenced that egg semipermeable membrane could be suggested as a good candidate for studying the release of drugs.

Keywords: Diclofenac sodium, vehicles, *in-vitro* diffusion, transdermal.



FORMULATION, CHARACTERISATION AND *IN VITRO* EVALUATION OF NOVEL IONICALLY CROSS LINKED CASEIN NANOPARTICLES FOR MEMANTINE HYDROCHLORIDE DELIVERY

S. Venkateswara Rao and Md. Meherunnisa

The objective of the study was to fabricate protein nanoparticles for better controlled and targeting action of drug, which also overcome the problems associated with conventional formulations like multidose therapy, poor patient compliance and high cost. Memantine HCl loaded casein nanoparticles (F1 to F6) were prepared by Ionically crosslinked method. The formulated nanoparticles were evaluated for external morphological characters, determination of particle size analysis, zeta potential, drug content, entrapment efficiency and *in-vitro* release studies. The particle size varied from 148 to 317 nm and zeta potential was in negative and its value found to be - 46.4 mV. The drug content for the Memantine HCl loaded casein nanoparticles varied from $69.5 \pm 7.2\%$ to $87.9 \pm 1.2\%$. The entrapment efficiencies were found to be minimum and maximum of $55.50 \pm 2.4\%$ and $86.30 \pm 3.6\%$. The percentage yields of all formulations were in the range of 48.24 ± 1.24 to $86.13 \pm 1.37\%$. *In-vitro* release of drug follows zero order and showed sustained release behavior for a period of 24 h. The optimized formulation contains 1:3 ratios of STTP & casein and demonstrated successful sustained release. Memantine HCl loaded casein nanoparticle is a potential new delivery system for treatment of Alzheimer's disease.

Key words: Alzheimer's disease, protein nanoparticles, ionically crosslinked method.

***IN VITRO* COMPARATIVE STUDY OF DIFFERENT BRANDS OF RABEPRAZOLE SODIUM AND DOMPERIDONE COMBINATION TABLETS**

S. Venkateswara Rao and Shaik Shameena

In this study six marketed brands of rabeprazole sodium & domperidone combination tablets have been evaluated using physicochemical properties and *in vitro* dissolution test with the object to assess bioequivalence and select a potent generic brand for reducing cost of the treatment. The quality parameters of these tablets like weight variation, hardness, friability, disintegration time were also determined according to established protocols and the results complied with the official specifications. A simple high performance liquid chromatographic (HPLC) method was developed for the simultaneous determination of rabeprazole sodium & domperidone. The retention time of rabeprazole sodium & domperidone were found to be 5 ± 0.2 and 8 ± 0.2 min. Linearity was established in the range 10 – 50 µg / ml respectively. The *in vitro* dissolution studies were performed in USP Dissolution Apparatus II using 0.1 N HCl and pH 6.8 phosphate buffer solution. The amount of rabeprazole sodium & domperidone released at different time intervals were estimated by HPLC method. *In vitro* dissolution of all the brands was satisfactory, the brand Praz-DSR[®] showed higher acidic stability and drug release, respectively 78.40 % of Rabeprazole & 77.3 % domperidone within 45 min. The f1 and f2 values were in the range of 4 – 12 and 74 – 94 respectively. This suggests that release of rabeprazole sodium & domperidone from all brands were similar with reference. Therefore it is evident that test products were bioequivalent to the reference product and the brand Praz-DSR[®] could be used as a best generic substitute which reduce the dose and cost of the treatment.

Keywords: Rabeprazole, domperidone, *in vitro* dissolution test, bioequivalent, high performance liquid chromatography.



COMPARATIVE *IN VITRO* EVALUATION OF ACECLOFENAC AND PARACETAMOL COMBINATION TABLETS MARKETED IN ANDHRA PRADESH

S. Venkateswara Rao and Matangi Anitha

Aceclofenac in combination with paracetamol is now available in the market and indicated in pain, fever etc. These tablets manufactured and marketed by various multinational and local companies. In this study eight marketed brands of aceclofenac & paracetamol combination tablets have been evaluated using physicochemical properties and *in vitro* dissolution test with the object to assess bioequivalence and select a potent generic brand for reducing cost of the treatment. The quality parameters of these tablets like weight variation, hardness, friability, disintegration time were also determined according to established protocols and the results complied with the official specifications. A simple high performance liquid chromatographic (HPLC) method was developed for the simultaneous determination of aceclofenac & paracetamol. The retention time of aceclofenac & paracetamol were found to be 4 ± 0.2 and 3 ± 0.2 . Linearity was established in the range 5 – 25 $\mu\text{g} / \text{ml}$ respectively. The *in vitro* dissolution studies were performed in USP dissolution apparatus II using pH 6.8 phosphate buffer solutions separately for 45 min. The amount of aceclofenac & paracetamol released at different time intervals were estimated by HPLC method. *In vitro* dissolution of all the brands was satisfactory, the brand Spanac-p[®] showed higher drug release, respectively 79.32 % of aceclofenac & 95.04 % paracetamol within 45 min. The f1 and f2 values were in the range of 5 – 13 and 64 – 86 respectively. This suggests that release of aceclofenac & paracetamol from all brands were similar with reference. Therefore it is evident that test products were bioequivalent to the reference product and the brand Spanac-p[®] could be used as a best generic substitute which reduce the dose and cost of the treatment.

Keywords: Aceclofenac, paracetamol, *in vitro* dissolution studies, bioequivalent.

FORMULATION AND EVALUATION OF FEXOFENADINE BUCCAL MUCOADHESIVE PATCHES

Sk. Arifa Begum, A. H. L. B. Sravya, B. G. D. Deepika, G. Naga Manasa, M. Srujana, V. Uma, S. Lakshmi Tejeswari

Mucoadhesive buccal patches for the delivery of fexofenadine were developed by solvent casting technique using various hydrophilic polymers such as polyvinyl alcohol, HPMC K4M, HPMC K15M and eudragit L100. The fabricated formulations were evaluated for various physicochemical as well as mechanical parameters such as thickness, weight uniformity, surface pH, folding endurance, swelling index, drug content, percentage moisture loss, *in vitro* dispersion and *in vitro* residence time. An *in vitro* drug release study was designed and performed using freshly prepared egg membrane as semi-permeable membrane. The optimized formulation F1 showed highest percent of drug release $96.18\% \pm 0.53\%$ at the end of 8 h.

Keywords: Buccal delivery, mucoadhesive patches, polyvinyl alcohol, HPMC, folding endurance.

COMPARATIVE *IN VITRO* STUDIES AND BIOEQUIVALENCE ASSESSMENT OF ATENOLOL AND AMLODIPINE COMBINATION TABLETS

S. Venkateswara Rao and B. Swathi

Amlodipine and atenolol combination is widely used for hypertension treatment as these are more efficacious with low side effects. These tablets manufactured and marketed by various multinational and local companies. There is need for evaluating the bioequivalence of these tablets as a matter of public concern. To compare the differences in dissolution behaviour and assess the bioequivalence of some commercially available amlodipine and atenolol combination tablets. The objective is to find out potent generic brand and reduce the cost of treatment for hypertension with respect to its manufacturer. Eight generic brands manufactured by different companies were evaluated. The physicochemical properties, hardness, uniformity of weight, friability, disintegration time and drug content of each brand was determined and compared with each other. The *in vitro* dissolution studies were performed in USP dissolution apparatus II using 0.1N hydrochloric acid solution for 1 h. The bioequivalence was assessed based on *In vitro* dissolution profile and f_1 & f_2 factors. All the brands were evaluated for various physicochemical properties and the results were within the pharmacopoeia standards. *In vitro* dissolution of all the brands was satisfactory, the brand Amlomed[®] showed higher drug release, respectively 99.49 % of amlodipine & 101.82 % atenolol within 60 min. The f_1 and f_2 values were in the range of 2–10 and 73–93 respectively. This suggests that release of amlodipine & atenolol from all brands were similar with reference. The *in vitro* bioequivalence studies can predict the *in vivo* bioequivalence and to save time & cost. Therefore it is evident that test products were bioequivalent to the reference product and the brand Amlomed[®] could be used as a best generic substitute which reduce the dose and cost of treatment for diabetes mellitus.

Keywords: Amlodipine, atenolol, hypertension, bioequivalence.

EVALUATION OF ANALGESIC ACTIVITY OF AQUEOUS EXTRACT OF *HIBISCUS HIRTUS* LINN IN EXPERIMENTAL ANIMALS

V. Greeshma, Ch. Archana, B. Yamuna, K. Lakshmi Anusha, K. Pallavi, V. Lakshmi Durga, V. Sanghamitra.

Pain is defined as “an unpleasant sensory and emotional experience associated with actual or potential tissue damage” according to the International Association for the Study of Pain. The present study was designed to evaluate the analgesic activity of *Hibiscus hirtus* Linn. Phytochemical screening was conducted for aqueous leaf extracts of the plant using conventional protocol. The analgesic activity was evaluated by three analgesic models such as acetic acid induced writhing, hot plate and tail immersion methods using female Wistar rats. All the extracts (250 mg/kg and 500 mg/kg) and a standard drug (ibuprofen 10 mg/kg) were used in separate groups of rats. Reaction time was measured and compared with control group. It was observed that the extracts showed a dose-dependent analgesic effect in increasing the reaction time in all models. This protective action may be attributed towards the presence of flavonoids and sterols in the plant extracts. Finally, the results concluded that the aqueous extracts of *Hibiscus hirtus* Linn showed dose-dependent analgesic activity.

Keywords: Pain, *Hibiscus hirtus* Linn, ibuprofen, analgesic.



FORMULATION DEVELOPMENT AND *IN VITRO* EVALUATION OF CAPECITABINE MICROSPHERES FOR COLORECTAL CANCER

S. Venkateswara Rao and A. Premavathi

The aim of the present study was to formulate and evaluate capecitabine microspheres for colorectal cancer and to reduce dosing frequency and improve patient compliance. Microspheres were prepared by emulsion solvent evaporation technique using polymers like ethyl cellulose (EC) and HPMC K-100 in different ratios. The prepared microspheres were evaluated for flow properties, percentage yield, drug entrapment efficiency and *in vitro* dissolution studies. Results showed that as the concentration of polymer ratio increases it affects the particle size, percentage yield and drug release from the microspheres. Percentage yield of F6 microspheres was found up to 95.13%. The release study was done simulated intestinal fluid (SIF - pH 7.4) for 24 h and showed that the drug was protected from being release in the physiological environment of intestine and efficiently released in colon (95.85%). The optimized formulation F6 exhibited the drug release in sustained manner and follows zero order, non Fickian diffusion mechanism. Accelerated stability study was carried out for the optimized formulation and results showed that there were no significant changes in percentage drug entrapment efficiency, particle size and *In vitro* controlled release of Capecitabine. The surface morphology analysis formulation F6 showed spherical structure with smooth surface morphology. The prepared microspheres are promising drug delivery for oral sustained administration to targeting colon and provides better kinetic profile with improved bioavailability.

Keywords: Colorectal cancer, microspheres, *in vitro* controlled release.

DESIGN AND EVALUATION OF GEMCITABINE HYDROCHLORIDE MICROSPHERES FOR LUNG TARGETING

Sk. Arifa Begum, M. Sowjanya

The aim of the present investigation was to prepare gemcitabine hydrochloride loaded spray dried polymeric microspheres using poly vinyl alcohol and PLGA in different polymer: drug ratios and to evaluate the obtained microspheres for various parameters such as morphological study, particle size distribution, encapsulation efficiency, drug loading, *in vitro* drug release, drug release kinetics and stability studies. The prepared microspheres were found to be spherical in shape, with a smooth surface and uniform size. Drug loading and % entrapment efficiency values for the prepared gemcitabine HCl PVA microsphere formulations were in the range of $99.27\% \pm 0.52$ to $99.91\% \pm 0.77$ and $100.48\% \pm 0.35$ to $96.37\% \pm 0.20$, respectively. Formulations with increased polymer (PVA): drug ratio (FR4 and FR5) showed a burst drug release followed by a slower release over a period of 12 h. Microspheres with increased polymer (PLGA): drug ratio (FR8 and FR9) showed higher % of drug release $25.78\% \pm 0.65$ and $24.27\% \pm 0.56$ initial burst release, which is a significant amount to serve as the loading dose followed by a very slower release over a period of more than 12 h respectively. This microsphere system allows for a significant initial release of a high loading dose of drug at the site of action that could be further maintained by the system and reduce the number of doses. The polymeric microspheres appear to be a promising new pharmaceutically acceptable carrier which has controlled release properties that can be used as dry powder inhalation products.

Keywords: Microspheres, gemcitabine hydrochloride, spray drying, polyvinyl alcohol, *in vitro* drug release.



DESIGN AND EVALUATION OF BUDESONIDE TABLET FORMULATION FOR COLON SPECIFIC DRUG DELIVERY

**Sk. Arifa Begum, N. Santhoshi, A. Durga Malleswari, P. Prasanna, M. Radhika, I. Madhumathi,
Sk. Shehanaz**

Colon specific tablets of budesonide were developed from budesonide solid dispersions using pectin as enzyme dependent polymer, time dependent polymers like HPMC K4M followed by enteric coating polymers such as Eudragit S100 and cellulose acetate phthalate. Rapid release core tablets of budesonide were prepared using crosscarmellose sodium and crospovidone as superdisintegrants in two different concentrations (2.5% & 5%) by direct compression which provided rapid release within 5 min. Compression coating was carried upon core tablets using pectin and HPMC K4M by direct compression technique. Further, compression coating with enteric polymers was done on coated tablets using Eudragit S100 and cellulose acetate phthalate. FT-IR spectra of drug, SD of drug and optimized coated tablet formulation revealed that drug, polymers and excipients were compatible. Tablets were evaluated for pre-compression parameters and post-compression parameters such as thickness, diameter, hardness, friability, weight variation, drug content and were found to be within the range of pharmacopoeial standards. In vitro drug release studies were performed at different pH conditions (1.2, 6.8 and 7.4). Budesonide compression-coated tablet, enteric coated with Eudragit S100 and cellulose acetate phthalate in the ratio 1:1 would be beneficial in the treatment of ulcerative colitis.

Keywords: Colon specific drug delivery, solid dispersion, enzyme dependent polymer, pH dependent polymer.

PHARMACOLOGICAL EVALUATION OF *SYZYGIUM AROMATICUM* FOR THEIR DIABETIC NEPHROPROTECTIVE ACTIVITY IN ALLOXAN INDUCED DIABETIC RATS

**A. Jayarami Reddy A, G. Sravana Tulasi, N. Srikavya, S. Sulochana,
K. Suvarnamala, G. Jyotsna, Y. Ramya**

Diabetic nephropathy DN is a chronic complication of both type 1 DM due to beta cell destruction – absolute lack of insulin and type 2 DM due to insulin resistance or decreased secretion of insulin. Insulin action or both of them. Adverse side effects of chemical drugs for treatment of diabetes persuaded the using of medical plants. *Syzygium aromaticum* as a traditionally used plant for treatment of diabetes, is packed with powerful aromatic compounds. They give one of the richest antioxidant sources which lower the blood sugar and bear other beneficial health effects. The purpose of this study is to evaluate the effect of oil from *Syzygium aromaticum* on alloxan and ethylene glycol induced diabetic nephropathic rats. In this study, 36 female Sprague dawley rats, body weight of 200-220 g were divided into 6 groups. Diabetic nephropathy was induced by intra peritoneal injection of 80 mg/kg Alloxan and 1ml of ethyleneglycol. The duration of the *Syzygium aromaticum* treatment was 21 days in which single daily dose of extracts (100mg/kg) were oral administered to diabetic rats. Blood glucose levels were estimated with glucometer before treatment, 2h and every week after administration of extract. Treatment with extract of the *Syzygium aromaticum* resulted in a significant reduction in blood glucose and serum albumin and an increase in the creatinine secretion level in blood. Extract of this plant is useful in controlling the blood glucose level. *Syzygium aromaticum* appear to aid in diabetes control and diminution of the complications of the disease such as diabetic nephropathy.

Keywords: Diabetic nephropathy, *Syzygium aromaticum* oil, blood glucose.



EVALUATION OF BACTERIAL RESISTANCE OF CEFADROXIL, CEPHALEXIN AGAINST GRAM POSITIVE AND GRAM NEGATIVE MICROORGANISMS

S. Sundar, N. Srihitha, V. Sowmya, R. Annapoornima, V. Sowjanya,
Md. Shameemunnisa

This study was aimed to overcome the problems of bacterial resistance of antibiotics used for the treatment of diseases. In this aspect, two antibiotics were selected such as cefadroxil and cephalaxin for the evaluation of antibiotic resistance against selected three gram positive microorganisms such as *Bacillus subtilis*, *Staphylococcus aureus* and *Bacillus cereus* and three gram negative microorganisms such as *E. coli*, *Pseudomonas aeruginosa*, *Serratia marcescens*. The selected antibiotics were evaluated by the determination of minimum inhibitory concentration and agar disc diffusion method. According to the results obtained, Cefadroxil was resistant against *Bacillus cereus* (25.6 µg/ml, 10 mm) and *Serratia marcescens* (25.6, 6 mm), sensitive against *Pseudomonas aeruginosa* (6.4 µg/ml, 18 mm), *Bacillus subtilis* (6.4 µg/ml, 30 mm), Intermediate against *E. coli* (12.8 µg/ml, 16 mm), *Staphylococcus aureus* (12.8 µg/ml, 15 mm). Similarly, cephalaxin was resistant against *Serratia marcescens* (25.6 µg/ml, 10 mm), Intermediate against *E. coli* (12.8 µg/ml, 14 mm), *Pseudomonas aeruginosa* (25.6 µg/ml, 14 mm), *Bacillus subtilis* (12.8 µg/ml, 15 mm), *Staphylococcus aureus* (6.4 µg/ml, 16 mm) and sensitive against *Bacillus cereus* (6.4 µg/ml, 18 mm) according to the CLSI report. The increased illness of human beings by the usage of antibiotics frequently without prescriptions is a serious problem that dramatically raises the cost of health care worldwide. So the study was useful and effective for the determination of antibiotic resistance of cephalaxin and cefadroxil for the future treatment in more efficacies with fewer side effects.

Keywords: Bacterial resistance, cefadroxil, cephalaxin, agar disc diffusion, zone of inhibition.

PHYTOCHEMICAL AND *IN VITRO* SUN PROTECTION FACTOR EVALUATION OF *PELTOPHORUM PTEROCARPUM* LEAF EXTRACTS

M. Vani M, K. Padmalatha, K. Sindhu, G. Kathyayini, Y. Hanumantha Madhuri,
P. Krishna Madhuri, K. Geethanjali

The medicinal plants are an important source of inexpensive and practical drugs for people throughout the world. Prolong exposure to UV radiation may initiate the production of reactive oxygen species, which causes oxidative injury and impairment of the antioxidant system. These injuries impair the metabolic pathways. Therefore the present study has been planned to evaluate *in vitro* flavonoid content and SPF of aqueous and ethanolic extracts of the *P. pterocarpum*. The aqueous and ethanolic extracts were determined for flavonoid content, found to be 10 mg/gm and 15mg/gm equivalent of quercetin. The cream and gel formulations were prepared for the extracts and tested for various parameters, further evaluated for Sun protection factor determination where the results were found to be 26.8, 34.7 and 9.70 for cream formulations followed by 15.6, 16.8 and 100 for gel formulations of aqueous, ethanolic extracts compared to marketed product respectively. The ethanolic extract was more offering sun protection than aqueous extract and the responsible compounds were attributed to be flavonoids. Further phytochemical screening is necessary to establish the phytochemical component responsible for the activity.

Keywords: *P. pterocarpum* extracts, sunscreen, UV radiation and flavonoids.



ANTIANGIOGENIC EFFECT OF PITHECELLOBIUM DULCE LEAF EXTRACT USING HEN - CAM MODEL

**D. Santhi Krupa, K. Padmalatha, R. Mounika, M. Alekya, B. Kranthi,
V. Vani Aparna, S. Bhargavi and S. Anusha**

Cancer is a group of diseases involving abnormal cell growth with the potential to invade or spread to other parts of the body. Nourishment and sustainability of cancer cells depends on the blood supply through the newly formed blood vessels of the tumour. The present study aims to determine the antiangiogenic activity of the *Pithecellobium dulce* methanolic leaf extract using the innovative HEN-CAM method. The experimental methods involve the phytochemical analysis of the methanolic extract, performing TLC of the plant constituents, and determining the antiangiogenic activity. All the eggs are incubated for nine days, opened at the marked end and cellulose discs impregnated with drug are placed. Eggs are then replaced in the incubator, and removed from the incubator on the 12th day and the occurrence of haemorrhage; lysis of blood vessels and coagulation was observed and compared among different groups using photomicrography technique. The number of branching points, CAM vascularity was also determined. *Pithecellobium dulce* methanolic leaf extract had prevented blood vessel growth in the egg when compared photographically and prominently decreased the number of branching points, CAM vascularity in the PDMLE treated group than the standard. The plant extracts contain phytochemicals like flavonoids, can act directly on the tumor blood vessels, inhibit the origin of the tumour at their molecular level and produces a strong antiangiogenic effect. Therefore, the plant extracts of *Pithecellobium dulce* can be used as a natural antiangiogenic agent to prevent cancer and further studies are recommended to detect the responsible phytochemicals in the plant extracts of *Pithecellobium dulce*.

Keywords: Cancer, antiangiogenesis, *Pithecellobium dulce*.

SYNTHESIS, CHARACTERIZATION AND BIOLOGICAL EVALUATION OF OXAZOLONE ANALOGS

G. Muthubhupathi, Bhavana Tipirneni, Md.Roshnahara, A. Mounika, Sk. Kajol Oshia, L. Anusha

Oxazolones are five membered heterocyclic compounds containing oxygen and nitrogen as hetero atoms which exist in three isomeric forms, according to the location of the carbonyl group and location of the double bonds. The C-2 and C-4 positions of oxazolone are responsible for their various biological activities such as analgesic, anti-inflammatory, antidepressant, anticancer, antimicrobial, antidiabetic and antiobesity. The present study was performed to enhance the anti-inflammatory activity and to minimize the dose and side effects that were caused due to the over dose of marketed standard drugs. The screening of literature has shown clearly that, the synthesis and characterization of oxazolone derivatives using different aldehyde derivatives (benzaldehyde, 4-fluorobenzaldehyde, 4-chlorobenzaldehyde and furfuraldehydeoxazolone derivatives) revealed that no anti-inflammatory work has been done so far. The functional groups that were present in the synthesised compounds were identified by using FT-IR spectroscopy. The anti-inflammatory activity was performed by using novel oxazolone derivatives (cpd₁, cpd₂, cpd₃, cpd₄) and nimesulide (as standard) on HRBC membrane stabilisation method. The percentage protection was observed by using colorimeter. The novel synthesis of oxazolone derivatives showed significant difference from standard drugs in Percentage (%) Protection especially it was found more in the oxazolone derivative of 4-chloro benzaldehyde. The anti-inflammatory effect of synthesised compounds was significant when compared with the standard drug nimesulide.

Keywords: Oxazolones, benzaldehyde, 4-fluorobenzaldehyde, 4-chlorobenzaldehyde, furfuraldehyde and nimesulide.



THERAPEUTIC FASTING

Fasting a jump start way to health

Fasting can be termed as “Refraining from food or water fully or partially for various reasons”. There are various fasts from fruit fast- water fast- fat fasts, each one have their own aye or nay. Among various fasts religious fasting is the oldest dietary interventions in the world which we Indians thoroughly practice. And there is perhaps important & seldom mentioned one which is “THERAPEUTIC FASTING” – age old but gaining prominence lately.

Historical Evidences

The great Greek Physician, Hippocrates used to advice fasting in disease conditions. They used it for physical & mental clarity, to treat syphilis, epilepsy, jaundice and the list goes on, so it was quite obvious that they believed & relied on fasting than medicine. Dr. Adolph Mayer says that “Fasting is the most effective means for treating any ailment”. There are historical evidences of fasting which dates back to centuries. But now we don’t see modern physicians relying on concepts of fasting. Dr. Jasun Fung says “There is a clear paradigm shift in the way physicians treat, now they are the ones who give you drugs & surgery rather than health” - Sounds undeniable.

Fasting as Medicine

Greatest importance among all the effects was found to be “Rejuvenation” (renewal of youthful characters to cells and tissues). Quite prominent ones being effects on skin such as lines and wrinkles start fading, it treats acne, discoloration and skin attains more youthful glow, *who do not need all these?* **Assimilative powers** of body rapidly increase and fasting thus helps in recovering from deficiency diseases. It gives organs a complete physiological rest. During fast organs will have less workload & can restore their vital energy. This heals broken bones, tissue damages more swiftly, for which evidences are recorded. It is reported to cure varicose veins and hemorrhoids. Recently there’s a lot of buzz on **detox diets** to eliminate toxins from body especially from liver, the forsaken fact is that fasting can do wonders than any detox diet ever. This is not popularized may be because this doesn’t earn any money. So it is clearly evident that fasting has got extraordinary value in treating acute diseases.

Fasting Vs Starvation

There’s a preconceived notion of fasting that it’s a kind of starvation, though both entail abstinence of food but greatly differ in physiological effects. Let us try to draw a clear line between these two. When we consume food our body stores some of its energy for its long term demands. When a person starts fast, body first utilizes this stored energy to nourish itself, next step being people experiencing weight loss in terms of loss of fat, little muscle and water. All organs and tissues are well nourished from fat reserves (Fat- high energy source). There is a limit to this supply. When all the food reserves are exhausted body derives energy from vital tissues. So to keep it simple –

Symptoms & care

There are certain symptoms which indicate end of fasting period. Fairly significant among them are **return of hunger & removal of lining on tongue**. So it is important to keep an eye on symptoms rather than fixing the number of days in fasting way before. Generally on our first day of fast there will be increased desire for food by noon or dusk. This gradually increases on second day and finally reaches its threshold; on the third day **hunger abates and gradually disappears**. People continue to be in this state until natural hunger returns weeks or months later. I really feel one have to look at the symptoms of fasting as manifestations for the health getting better and better. Certainly fasting is not grueling compared to being ill healthy.

As improper administration of certain therapeutic agents leads to undesirable consequences, fasting is no exception from this maxim. Fasting done mindfully works phenomenal. There is nothing in nature which offers permanent remedy to an ailment, if he/she doesn’t give a thought about lifestyle modifications after the use of therapeutic agent.

*Give it a try- if your body applauds & adapts to it -
There you go, you have found your magic bullet.*

Ms. G. Priyanka, Asst. Prof.,
Dept. of Pharmaceutics



INJECTABLE HYDROGELS: A SMART DRUG DELIVERY SYSTEM

Hydrogels are three dimensional, water-swollen, natural and synthetic polymer networks used as scaffolds for tissue engineering or as delivery carriers for therapeutic agents and cells. The presence of high water content in the hydrogels can provide excellent biocompatibility, capability to encapsulate hydrophilic drugs, and structural similarity to native extracellular matrix (ECM) or tissues and also provide spatial and temporal release of loaded therapeutic agents, including chemotherapeutic agents, biological proteins, hormones or cells.

Injectable hydrogels or *in situ*-forming injectable hydrogels is based on the idea that certain biomaterial could be injected as a liquid and then form an *in situ* solid gel. The sol-to-gel phase transition properties of injectable hydrogels allow easy implantation of polymeric materials into the deep sites of body in a minimally invasive manner using a syringe or catheter. They respond to the change in physiological pH and temperature and paid great attention for the controlled release of therapeutic drugs. These hydrogels can be easily prepared by mixing the therapeutic agents with the clear free flowing polymer solutions and injected into the subcutaneous tissue or target site. Solutions upon exposure to different stimuli like pH, temperature, light, enzymes and magnetic field change their chemical and physical properties, transformed to viscoelastic gels behaving as a transitional gel-solution system. Hence, injectable hydrogels can be delivered as controlled release or sustain release delivery vehicles.

Advantages of injectable hydrogels include biodegradable, biocompatible, and minimal invasive, localized, void-filling platform for therapeutic use. Small molecule or protein drugs can be distributed throughout the hydrogel which then acts as a depot for their sustained release at the injury site. These hydrogels can reduce cell aggregation and provide an adhesive matrix for improved cell survival and integration.

Polymers employed in the formulation of injectable hydrogels are natural polymers like Hyaluronic Acid, Chitosan-based Hydrogels, Gelatin, Collagen, Agarose and Matrigel and Synthetic polymers like Poly(N,N-dimethylacrylamide), Poly phosphazene, L-Lysine, α -amino- ω -methoxypoly(ethylene glycol). *In-situ* forming injectable hydrogels is prepared by physical or chemical cross-linking in response to various stimuli. In comparison with chemically cross-linked permanent hydrogel networks, prepared using Michael addition, Schiff base, photopolymerization reactions, injectable hydrogels prepared using physical cross-linking method are reversible.

The potential applications of injectable hydrogels include promoting new cell growth and increasing the rate of tissue repair and improve the bioavailability of drugs in gene therapy, chemotherapy, stimuli-responsive 3D cell culturing, tissue engineering and regenerative medicine and provide controlled delivery throughout the body or at targeted local sites.

Mrs. Sravani Boyapati, Asst. Prof.,
Dept. of Pharmaceutics



REDEFINING HYPERTENSION-NEW UNITED STATES BLOOD-PRESSURE GUIDELINES: AN ASSESSMENT

The American college of cardiology (ACC) in collaboration with the American Heart Association (AHA) have framed new guidelines for the prevention, detection, evaluation, and management of high blood pressure in adults by extending the seventh report of the joint national committee (JNC7) and the expert panel report to include updated data from clinical trials and by accentuating previously under emphasized sections of the 2003 and 2013 reports.

Unlike the previous guidelines, the 2017 guideline emphasized on the individual cardiovascular risk assessment and aggressive blood pressure management in patients with values above 140/80 mmHg, who have a 10-year cardiovascular risk of above 10%. The guidelines stated that patients with blood pressures of 130 to 139/80 to 89 mmHg would still receive non-pharmacologic interventions, unless they had cardiovascular risk. For such patients, a single antihypertensive agent is recommended, along with lifestyle changes.

The new guideline had generated intense discussion and controversy. The major controversy is with respect to the new blood pressure categories which resulted in higher number of people being classified as hypertensive. The new guidelines define normal blood pressure as below 120/80 mmHg and elevated blood pressure as 120 to 129 mmHg systolic pressure and above 80 mmHg as diastolic pressure. As per the older guideline classification, Stage 1 hypertension is defined as 130 to 139 mm Hg systolic or 80 to 89 mmHg diastolic, and Stage 2 hypertension as 140/90 mmHg or higher. What is now defined as Stage 1 hypertension was previously labelled “pre-hypertension” - a term meant to alert the patients and to prompt the physicians to provide lifestyle changes to help delay the development of hypertension.

By reclassifying the blood pressure categories, people formerly considered to have pre hypertension are now classified as having hypertension. By this, the guidelines create a new level of disease affecting people who were previously considered healthy. With the change of definitions, about 46% of the US adults are classified as hypertensive, as opposed to the 32% as per the previous definition. This change is made in hope that in people with cardiovascular risk, earlier intervention is possible resulting in reduced cardiovascular event rates. However, lifestyle modification is still the initial treatment recommended for people with Stage 1 hypertension with a 10-year cardiovascular risk below 10%.

Although the guidelines provide better aspects for high-risk people, there is a concern that with the newer disease definitions, people with lower risk may become a mandate for pharmacologic treatment without consideration of the patient’s risk level.

The primary change in the recommendations with regard to the pharmacologic therapy included elimination of beta-blockers as a first-line therapy, for patients with primary hypertension having no co-existing conditions. However, an individualized approach to hypertension needs to be established to evaluate the best choice for first-line therapy. For example, in patients with volume expansion, treatment with long-acting thiazide-like diuretic may be preferred. Similarly, obese patients or patients with metabolic disorders like diabetes may benefit from a renin-angiotensin blocker or calcium antagonist and those who are hyperadrenergic may require a calcium antagonist like diltiazem or a beta-blocker. Although a detailed discussion of individualized therapy may be beyond the scope of general guidelines, it is possible to consider general patient profiles in recommending more efficient ways to lower blood pressure.

In conclusion, while a blood-pressure treatment target of less than 130/80 mm Hg makes sense for high-risk patients, for everyone else it seems more reasonable to continue defining hypertension as a blood pressure of 140/90 mmHg or higher.

Mrs. V. Greeshma, Asst. Prof.,
Dept. of Pharmacology

AN OVERVIEW ON ANGIOGENESIS

Angiogenesis or Neo-vascularization is the new blood vessel formation process. Generally our body has controlled angiogenesis mediated by some chemicals or signal regulators. Both proangiogenic and antiangiogenic factors are important in angiogenesis.

TYPES OF ANGIOGENESIS

Established along the procedure of the constitution of blood vessels, Angiogenesis is categorized into two types.

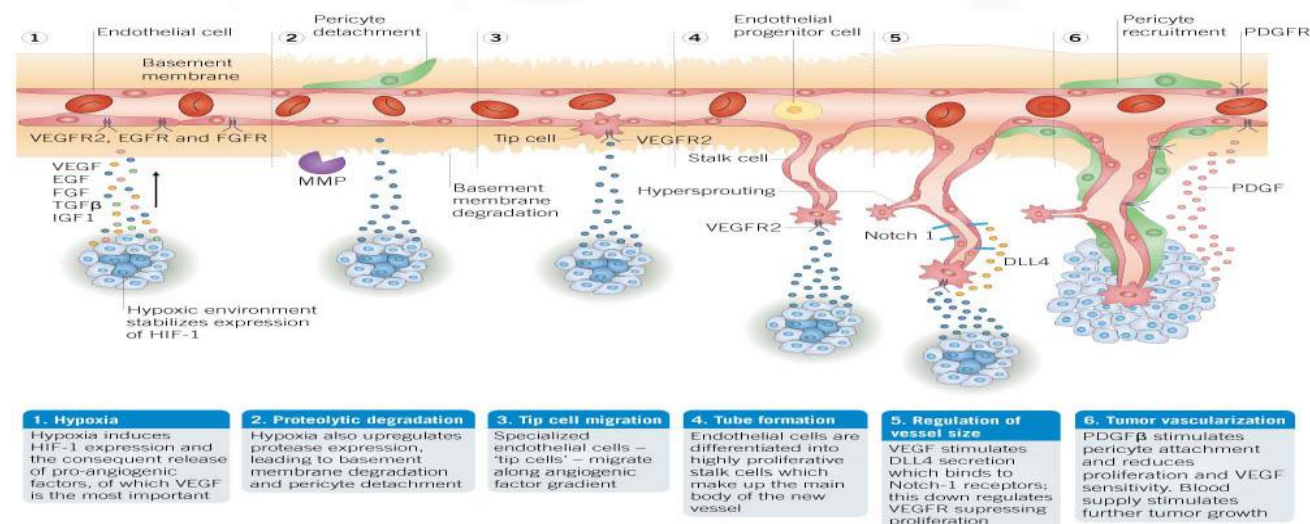
A. Sprouting Angiogenesis

Active receptors present on endothelial cells. They will release proteases that degrade the basement membrane

B. Intussuscepted Angiogenesis

Intussusception, also known as splitting angiogenesis, a new blood vessel is created by the splitting of a pre-existing blood vessel.

THE PROCESS OF ANGIOGENESIS



Step wise development of Angiogenesis

FACTORS INVOLVED IN ANGIOGENESIS REGULATION

The antiangiogenic factors like endostatin, XVIII collagen, angiostatin, tumstatin and proangiogenic factors like vascular endothelial growth factor, Fibroblast growth factor, Granulocyte colony stimulating factor, Angiopoietins and Interleukin-8 are the crucial sensors in regulating angiogenesis.

ANGIOGENESIS-PATHOLOGICAL ROLE

Ocular angiogenesis, in conditions like age-related macular degeneration (AMD), venous obstruction, retinal artery or diabetic retinopathy and retinopathy of prematurity (ROP) increases permeability of blood vessels and leads to retinal edema, bleeding, or fibrovascular retinal proliferation. Intraocular delivery of recombinant viruses



carrying genes made up of angiostatic proteins and small interfering RNA (siRNA) against vascular endothelial growth factor (VEGF) and VEGF receptors, offers the possibility of availability of angiostatic proteins and other angiogenic regulators to the retina.

Female hormones and relaxin can act on the blood vessels and cause angiogenesis of the endometrium, further leads to changes in the mid-late proliferative phase of the cycle which can lead to menstrual disorders. Tumor cells will release basic fibroblast growth factor or other angiogenic molecules that favor endothelial proliferation, which leads to growth and metastasis.

Therapeutically angiogenesis plays a role in wound healing, tissue repair and in ischaemic heart disease to regenerate blood vessels.

ANGIOGENESIS INHIBITORS

The recently discovered naturally occurring anti-angiogenesis has inhibitory proteins. Its high molecular size of 450 KDa, decreases its bioavailability and as it is protein, it undergoes protein inactivation, this limits the use in clinics. ABT-510, a TSP analogue has shown anti-angiogenic activity and it is in phase II clinical trials.

The most recently discovered anti-angiogenesis factor, pigment epithelium derived growth factor (PEDF) secreted from the glycoprotein, belongs to the category of serine protease inhibitors which can act as a potent inhibitor of angiogenesis. Regranex 0.01% is approved by FDA for the treatment of diabetic neuropathic foot ulcers which is under clinical trials. The first approved anticancer agent Bevacizumab, and commercially called Avastin was approved by FDA. It is a recombinant humanised monoclonal antibody directed against VEGF. This promising antibody had shown good results in clinical trials of solid tumours, especially metastatic colon cancer.

CONCLUSION

The research in the past decade has led to major advances in understanding the molecular pathways involved in tumor angiogenesis. This basic research has led to the identification of new targets associated with angiogenesis, leading to the development of an extensive number of preclinical and anti-angiogenesis agents. Ongoing studies of different approaches currently are evaluating some of the molecular targets and agents, with some still in clinical trials, and with data regarding efficacy and safety currently emerging.

Mrs. D. Santhi Krupa., Asst. Prof.,
Dept. of Pharmacology



STATISTICAL MODEL BUILDING IN MEDICAL RESEARCH THE PIECEWISE EXPONENTIAL DISTRIBUTION

Introducing a statistical distribution to model survival outcomes and time-to-event data when failure rate is non-constant by Gang Han, Brandon, Kendall Pye and Hongwei zhao.

What is the Piecewise exponential distribution?

A doctor presented with a severely ill patient needs to first diagnose the illness and then offer a prognosis for how the condition may progress. Patients may want to know how long it will be until they are better, whether different treatments offer different rates of recovery and whether chances are of living a long and healthy life. Doctors can provide estimates in response to these questions thanks to a branch of statistics known as survival analysis, or time-to-event analysis, which analyses the length of time until one or more events occur—such as cancer surgery to tumor recurrence, or the duration of human pregnancy. Survival analysis is a common feature of medical research, but it is used in many other fields of science and engineering.

Different methods can be used to model survival outcomes. One common approach is the Kaplan-Meier estimate (KME), a non-parametric estimate often used to measure the fraction of patients living for a certain amount of time after treatment. Another approach is typically referred to as the exponential distribution. The KME is a good method for visualizing survival outcomes, but the confidence intervals of the estimates are wider than those using other models, which mean greater uncertainty. Exponential survival estimates, in comparison, have less uncertainty than KMEs: when properly used, they require smaller sample sizes about 30% less to achieve the same estimation uncertainty.

However, the use of exponential survival estimates assumes a constant failure rate, meaning that the chance of an event occurring remains the same over time given that it has not yet happened. In many applied settings this assumption can be violated because failure rates can change over time. For example, after surgery the chance of infection typically decreases over time. In these situations we can model survival outcomes using the piecewise exponential distribution, which allows for changes in failure rates while retaining the reduced uncertainty of exponential modeling (compared with KME) if the failure rate is assumed constant within each period. Although some existing literature imposes failure rate change points at all event times, in this article, the piecewise exponential distributions connected with one or multiple change points in failure rate is discussed.

Who discovered it?

Kitchin, Langberg and Proschan first proposed a piecewise exponential estimator (PEXE) of survival probabilities. Variations and extensions of the original PEXE were attempted by Malla and Han *et al.*



When should it be used?

In theory, the piecewise exponential distribution can be used to model any survival distribution. Based on our experience, it is most desirable for small to moderate sample sizes, such as phase I and phase II clinical trials with sample sizes less than 400. The piecewise exponential distribution may be particularly useful in the development of personalized medicine survival outcomes: patients in these trials are typically of a specific genetic subtype, and recruiting enough of them can be time-consuming. Using a more efficient estimate can reduce the time required for a personalized medicine trial or decrease the number of patients needed to enroll, therefore reducing costs and making the study ethically more attractive. However, to take advantage of the exponential distribution without introducing bias in the estimate, one needs to determine time points where the failure rate changes significantly. We can detect these so-called “change points” using a multiple testing procedure incorporating three components: a likelihood ratio test, a backward elimination procedure, and a pool-adjacent violator’s algorithm to impose an optional order restriction. This method was applied to a randomized phase II trial comparing two treatment arms (A and B) for metastatic breast cancer patients. The focus was on progression-free survival – the length time during and treatment that a patient lives with the disease but does not get worse.

When should not be used?

The piecewise exponential distribution should not be used to model categorical and count data, and continuous data negative measurements. For survival data when the sample size is large (e.g. 1000 or more events) and the number of significant change points is substantial (e.g. greater than 10), other parametric models- such as the Weibull and Gompertz distributions –could be more parsimonious and efficient if properly implemented.

Sri Vemuri Srinivas,
Assoc. Prof of Mathematics,



IMPLEMENTATION AND EVALUATION OF CLINICAL PHARMACY SERVICES IN ONCOLOGY CARE SETTING BACKGROUND

Clinical Pharmacists have wider scope of providing patient care services in oncology practice due to complex nature of disease; its treatment related toxicities and predicted compromise in quality of life. A study was conducted to implement and evaluate Clinical Pharmacy services in an oncology care setting. It was a prospective interventional study conducted for a period of one year (April 2016-March 2017) at private academic oncology care setting. Five clinical pharmacy services a. Medicine and therapeutic information (MTI) b. Adverse drug reactions (ADR(s)) reporting and monitoring c. Radiation related adverse event (RRAE(s)) Reporting and monitoring d. Medication therapy management (MTM) and e. Patient medication counselling were implemented. Based on periodic study findings, therapeutic, educational recommendations and interventions were developed and implemented to minimize/prevent treatment related toxicities and medication related problems (MRPs).

A total of 107 Clinical Pharmacy services were provided during the study period. A total number of 53 services were provided to health care professionals out of 107, which included 40 (7.26%) MTI queries, 37 (19.20%) ADRs reporting and monitoring, 64 (20.40%) therapeutic & educational interventions and 17 (3.39%) RRAE reporting & monitoring queries. Remaining 84 (49.72%) were medication counselling services provided directly to patients. The most common MTI queries were requested for adverse drug reactions & their management, followed by dosage adjustments of chemotherapy and biologicals (n=13), supportive care related (n=51), contraindications (n=21) and drug-drug interactions (n=11). A total of 37 ADRs were reported. Vomiting (n=8), alopecia (n=6), diarrhoea (n=8), myelosuppression (n=6), skin rashes & pigmentation (n=3) and myalgia (n=5) were common ADRs. Inappropriate administration, frequency and regimen of anti-emetics (2%), lack of suboptimal supportive care (4%), administration errors (3%), lack of patient education (2%), and inappropriate dosing (3%) were identified as contributing factors for ADRs. Clinical Pharmacy services are useful in improving patient care in terms of medication safety, quality use of medications and overall transition of care.

B. Pragna Malavika,
Asst. Prof.
Dept. of Pharmacy Practice



FUNCTIONAL FOODS AND THE BIO-MEDICALISATION OF EVERYDAY LIFE - A CASE OF GERMINATED BROWN RICE

The article deals with the practical nourishments and the bio-medicalization of regular day to day instance of developed dark colored rice. I concur germinated dark colored rice (GBR) is a practical nourishment, whose advantages for unending infections have been exhibited by logical research on a solitary constituent of GBR, gamma aminobutyric corrosive. This article analyzes the procedures through which the accentuation on biomedical discernment made amid the generation and utilization of useful nourishments is implanted in the entangled social settings of the post-1990s. On account of GBR, the Indian government, sustenance researchers, broad communications and purchasers have added social records to the biomedical comprehension of nourishments. Specifically, purchasers have changed their family units and online groups into a place for reconnaissance prescription. Utilitarian nourishments are inserted in different on-screen characters points of view on what solid substance mean and how and where the dangers of incessant sicknesses ought to be overseen.

Sprouted dark colored rice (GBR) is viewed as entire sustenance, in light of the fact that lone, the peripheral layer i.e. the body of the rice bit is evacuated which makes slightest harm to its wholesome esteem. Dark colored rice can be soaked in water at 30 °C for determined hours for germination to get GBR. Dousing for 3 hrs and growing for 21 hrs has been observed to be ideal for getting the most noteworthy gamma-amino-butyric corrosive (GABA) content in GBR, which is the fundamental explanation for the prevalence of GBR. The admission of GBR rather than white rice enhances the hyper-glycaemia, helps the resistant framework, brings down circulatory strain, represses improvement of disease cells and helps the treatment of nervousness issue. Germination process could be utilized as enzymatic adjustment of starch that influences sticking properties of GBR flour. GBR would enhance the bread quality when substituted for wheat flour. It is presumed that GBR can possibly wind up inventive rice by safeguarding all supplements in the rice grain for human utilization with a specific end goal to make the most astounding incentive from rice.

Dr. N. Prathibha.,
Asst. Prof.,
Dept. of Pharmacy Practice



A REVIEW ON HARMFUL AFFECTS OF FRUCTOSE ON DIABESITY

Fructose intake has experienced a resurgence of interest in the past decade. Fructose is preferred over sucrose because it may aid glycemic control, but also it has been claimed to be more harmful than other sugars, especially with regard to the development of type 2 diabetes, and obesity. The past 30 years have witnessed an even greater increase in consumption, because of the introduction of high fructose corn syrup (HFCS); this phenomenon parallels the rise in obesity, diabetes, hypertension, and kidney disease. In 2004, researchers released data correlating refined carbohydrate intake and diabetes. The use of high-fructose corn syrup and other sweeteners was 2,100 percent higher in 1997 than in 1909 and was associated with a higher rate of diabetes. High fructose corn syrup (HFCS), which contains 55% fructose, is a “modern” sweetening agent. It is now widely used in a variety of food products. “Sweet” beverages such as fruit juices, “salty” or “neutral” tasting foodstuffs such as ketchups, buns, and biscuits come under these. The promiscuous use of HFCS is not due to its health benefits which may be perceived or real, but is because of its easy availability and economic advantage. The increasing usage of fructose based sweeteners is fuelled both by their low cost and prevalent public misconception that this sugar is healthy. Fructose is directly associated with diabetes, especially high-fructose corn syrup.

There are, however, several mechanisms by which fructose may, in the long term induce insulin resistance (Figure 1). Fructose intake may contribute to the development of non-alcoholic fatty liver disease and when associated with a hyperenergetic diet, is expected to increase body weight and body fat mass, which may secondarily cause insulin resistance. Besides a stimulation of lipotoxicity, other mechanisms may also be involved in fructose-induced insulin resistance. Fructose administration produces an oxidative stress through the generation of reactive oxygen species, and triggers an endoplasmic reticulum stress response, which may be associated with impaired insulin signalling. In addition, fructose increases uric acid production due to its complete phosphorylation to fructose-1-phosphate, which is very rapid and produces massive hepatic degradation of ATP to ADP and AMP. The ensuing hyper-uricemia may cause an endothelial cell dysfunction, resulting in an impaired postprandial muscle vasodilation, and this phenomenon may contribute to insulin resistance.

In conclusion, evidence from recent epidemiological and biochemical studies clearly suggest that the high dietary intake of fructose has rapidly become an important risk factor in the development of the metabolic syndrome. There is an earnest requirement for increased public awareness of the risks associated with high fructose consumption and more prominent endeavors ought to be made to reduce the supplementation of packaged foods with high fructose additives.

Dr. M. Tabitha Sharon,
Asst. Prof.,
Dept. of Pharmacy Practice



APTITUDE AND ALTITUDE DECIDE YOUR ALTITUDE

Everyone asks us “Did you have job?” but no one will ask “Did they give job to you?” This means that no one will give job to us. We have to gain it. This means that we need something to gain our job in the future.

Some say that because of lack of communication skills, we missed that job. Not only communication skills, but also some other skills are required to win a job. So, let us see what we want. First important aspect that would give you confidence is that as job is necessary for you, your presence is also very necessary to the organization. It is a win-win situation.

Communication Skills

In any organization so many people work with you, so you need communication skills. All of us think that communication skills mean we have to be perfect in speaking in perfect English. But it is not at all correct. In family functions, we will talk to our relatives, but we will hesitate to talk with our elders because, it could be out of our fear or low confidence levels. But talking to others clearly and fluently and listening to others and understanding properly truly exhibit our communication skills.

To improve our communication skills, it is necessary to improve the ways of expressing our feelings and mingling with others. Conversing with others reduces fear and hesitation.

Aptitude

In campus recruitment process various colleges will conduct aptitude test, and those who pass the test will go for the next level of Technical and HR interviews.

Aptitude exams will include problems on basic arithmetic which test the basic math, reasoning, thinking abilities and self-capacity of the candidate.

HR Interview

At last, in the HR interview, they will observe your way of expression, flexibility and assertiveness. In this round they will see how serious you are about your career and how confident you are of your success in the interview.

They will examine your thought process, your expressions and body language. They will also test how attentive you are, how you respond to your wishes, thoughts, strengths and weaknesses, because they decide your attitude and behavior which in turn, can create an impression on the others in the organization.

In HR interview, fancy language is not necessary. It is easy for anyone to speak in English if one has a good vocabulary and it needs some practice. For example a new person to cricket can also understand about the match by listening to Dhoni’s speeches and Harsha Bhogle’s commentary.

So in campus recruitment it depends on you. Be yourself and be positive about acquiring the job.

It’s true that,

“APTITUDE AND ALTITUDE DECIDE YOUR ALTITUDE”.

Ms. U. Mounica,
II B. Pharmacy



TRICLOSAN IN TOOTH PASTE AND TOOTH BRUSH

Triclosan is a synthetic chemical with antimicrobial properties. The chemical is used in large number of household products like deodorants, cosmetics and soaps *etc.* U.S. FDA has banned triclosan and its usage in soaps. Many types of toothpaste contain triclosan for its antibacterial and antifungal effects. It was found to be a hazardous chemical. The harmful effects are altering hormone regulation, weakening immune system; uncontrolled cell growth, reproductive toxicity and children at an early age get increased chance of developing asthma and eczema. It is lipophilic, gets accumulated in body fat for a long period of time. Its over usage leads to microbial resistance. Triclosan gets absorbed in to tooth brush through tooth paste, gets washed down our drains and reaches ground water systems affecting environment.

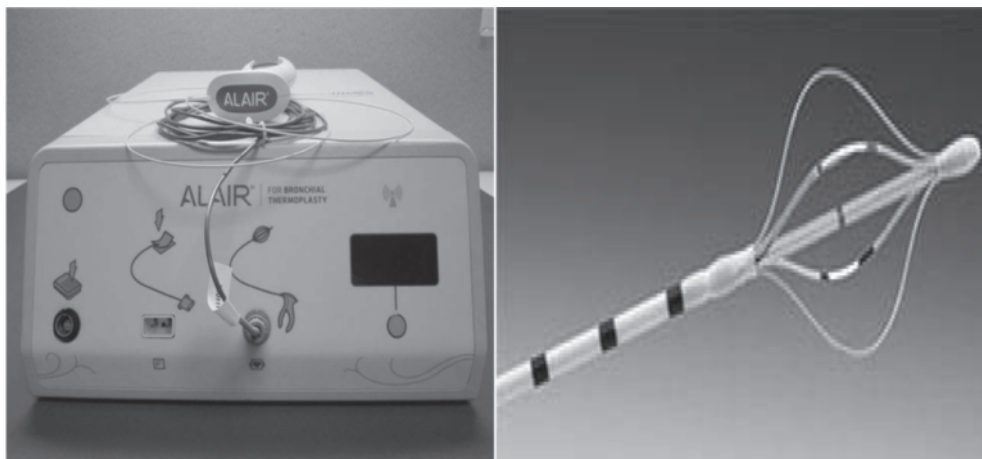
Jie Han and Boashan Xing are environmental chemists; they teamed up with chemists and engineers in Connecticut and New Zealand. The group chooses 22 different types of toothbrushes and 21 types of toothpastes. Six of them contained triclosan. They mixed one part toothpaste with three parts of a chemical mix that mixes saliva. This created “slurry”. It resembled what develops inside the oral cavity while brushing our teeth. They poured the slurry into a vial and brushed the container inner side with the selected toothbrush for three minutes. They repeated this process up to 168 times equivalent to the number of times a person would use a tooth brush over a period of three-months. Most brushes absorbed the triclosan from the toothpaste slurry. The total amount that was absorbed depended on the brush. The researchers reported their findings in November 7, 2017. The data indicates that triclosan containing toothpaste should be changed along with toothbrush to prevent its exposure to environment.

Ms. B. Bindu Sree,
II B. Pharmacy

SURGERY FOR ASTHMA – BRONCHIAL THERMOPLASTY

Asthma is a disorder of the respiratory tract which causes chronic inflammation. The symptoms are breathlessness with wheezing, chest tightness and cough at night or early in the morning. It is characterized by the persistent symptoms, airflow limitations and frequent exacerbations. Asthmatic patients need high doses of medication which may lead to severe adverse reactions. Therefore in order to overcome these problems a novel therapy was found *i.e.* bronchial thermoplasty.

It was approved by the U.S Federal Drug Administration (FDA) in April 2010 in older and patients of 18 years age where the disorder was not controlled by using long acting beta agonists and inhaled corticosteroids. The treatment was meant to reduce muscle mass leading to decreased bronchial constriction by controlling thermal energy to the lung walls. Alair system is used to deliver thermal energy with a single use catheter, radiofrequency electrical generator and an expandable basket containing four electrodes at its distal tip. When the energy is met with tissue resistance it is converted to heat.



Alair System

Catheter

PROCEDURE:

Bronchial thermoplasty is performed in 3 bronchoscopic sessions at 2 to 3 week intervals.

1. The first session includes the therapy to lower lobe of any one of the lung (right or left).
2. The second session involves the treatment for lower lobe of the left over lung.
3. The third session treats the upper lobe of both the lungs.

These sessions are categorized so as to decrease the clinical consequences of widespread irritation of the airways. Hypersensitivity to drugs (prednisone) used due to the presence of an implanted electronic device are contraindications to bronchial thermoplasty.

ADVANTAGES AND DISADVANTAGES:

- ❖ 32% decrease in asthma attacks.
- ❖ 84% reduction in emergency room visit.
- ❖ 73% decrease in hospitalization for respiratory symptoms.

DISADVANTAGES:

- ❖ The cost of three bronchoscopies is too high to afford.
- ❖ Some times may increase the risk of the respiratory symptoms.

CONCLUSION:

Bronchial thermoplasty is a novel treatment for the patients with severe asthma. Summary from clinical trials suggests that patients treated with BT may experience an increase in the quality of life and decrease in the rate of severe exacerbation.

Ms. N. S. S. L. S. Teena
III B. Pharmacy



GANSER SYNDROME

Introduction:

Ganser syndrome is a factitious (pseudo) disorder associated with the central nervous system where a person deliberately and consciously acts as if they are suffering with a physical or mental disorder even if they are not really sick. It is also associated with doing things incorrectly and giving wrong answers to the questions. For example, if we ask what the sum of 2 plus 2 is, the patient may answer other than 4 and believes in what he/ she told.

Other names:

It is also called by other names such as faking mentality, non-sense disorder, balderdash syndrome, and syndrome of approximate answers, pseudo-dementia, hysterical pseudo dementia, and prisoner's psychosis.

It is also known as PRISONS PSYCHOSIS as it is mostly observed in prisoners. They make suicidal attempts in order to obtain sympathy.

Symptoms associated:

- ❖ Amnesia, Fugue (loss of self-identity), conversion disorder associated with visual hallucinations and decreased state of consciousness. Sometimes patient may feel emotional sickness, false belief in which they feel like they are correct.

History:

Ganser syndrome was detected by a German psychiatrist "Sigbert Ganser" in 1898. He identified this disorder in three prisoners in Halle.

Causes:

- ❖ Internal cause is exactly unknown.
- ❖ External factors like severe stress, uncomfortable and unavoidable situations may cause this syndrome.
- ❖ Somatic conversions, confusion.

Risk factors:

- ❖ Schizophrenia, chronic alcoholism, head trauma.
- ❖ Sudden psychological shocks associated with increased hallucinations than that of schizophrenic situations.
- ❖ Inattentiveness and drowsiness.
- ❖ 16 to 18 years age groups are more affected than the older age groups. It is more susceptible in megalomania patients.

Treatment:

- ❖ **Non-pharmacological treatment:** Supportive psychotherapy like counseling, and safety monitoring. Medication is not preferred unless the patient is suffering from anxiety, depression and personality disorders.
- ❖ **Pharmacological treatment:** Drugs like tricyclic anti-depressants (TCA's), Selective serotonin reuptake inhibitors (SSRI's), mono amine oxidase inhibitors (MAO's), nor- adrenergic antagonists, dopamine reuptake blockers.

Ms. U.N.S. Lakshmi Narasa,
III B. Pharmacy



ROLE OF PHARMACIST IN DRUG THERAPY

Today, most of the drugs coming from Pharmaceutical companies are in standardized doses. A pharmacist has a vital role in Indian health care system. A pharmacist is a bridge between a doctor and patients. Pharmacists can counsel and advice the patient to maximize the desired and minimize the adverse effects of the drugs. The basic duty of a pharmacist is to check prescriptions from physicians before dispensing the medication to the patients to ensure that the patient doesn't receive the wrong drugs or take an incorrect dose of medicine.

Dispensing the wrong drugs or giving incorrect usage instructions can have serious consequences for patients, including death. Pharmacists also offer guidance on the side effects and medication which can have and warn against actions that could be dangerous while the patient is using the medicine, such as consuming alcohol or operating heavy machinery. Much of their work is related to patient safety, so a pharmacist makes sure that the patient isn't prescribed a medication that he might be allergic to or that can either interact with the food or any other medicines which are already in use by the patient and treatment receiving from multiple doctors for different complaints, which can make them unhealthy if combined with other drugs or medicines. Pharmacist can provide a check against this possibility.

A pharmacist may offer consultation service for the management of complex diseases, such as diabetes, hypertension, arthritis, etc. And general advice on diet, exercise, and managing stress. Pharmacists may also educate other health care professionals such as physicians or nurses about pharmacology related issues or medication management and contribute most in the campaign to stop the inappropriate use of antibiotics, habit forming and aphrodisiac drugs.

The Hon'ble courts have also underlined the importance of pharmacists by upholding in a number of cases. Services of a pharmacist are not only necessary to ensure supply of medicines in proper but also to check the unauthorized sale of medicines for the purpose other than treatment. It is well known to everybody that a large number of medicines are now being used for purposes of intoxication.

THE HON'BLE COURT, PUBLIC CAN RECOGNIZE YOUR VALUE.

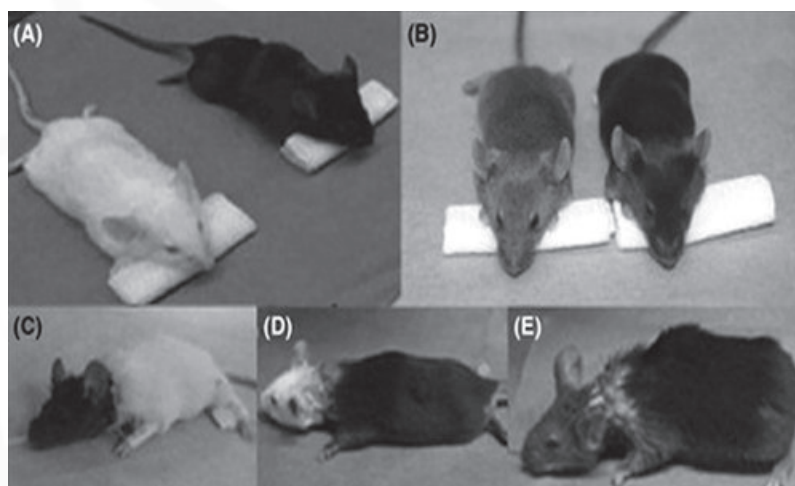
PROUD TO BE A PHARMACIST.

Ms. M. Yamini

III B. Pharmacy

HEAD TRANSPLANTATION

The world's first human head transplantation has been successfully carried out by an Italian neurosurgeon Sergio Canavero who announced an experiment to reattach the head of corpse to a body; it was possible to reattach the spine, nerves, blood vessels, veins and skin from the head to the body. Successful head transplantation will transform to immortality. The process is affordable to rich persons where age old head would be fused to the body of an athlete of 20-30 years of age.



PROCEDURE FOR HEAD TRANSPLANTATION

The head and donor body are cooled down first to 12°C to 15°C so that they last longer without oxygen more than a few minutes. The tissue around the neck is then cut, with the major blood vessels linked to the tiny tubes. The spinal cord is cleaned with a sterilised sharp blade. Next, the two ends of the spinal cord are fused and the head can be moved. Polyethylene glycol is added to encourage the cells to mesh. Stem cells or olfactory ensheathing cells can be introduced to promote the growth of spinal cord nerves. Once the blood vessels and muscles are successfully connected, the patient is kept in coma for one month to limit the newly fused neck movement. The new connections are stimulated by electrodes to strengthen further. The patient would feel their face, able to speak and move, followed by coma. After some time, he will be brought back to lead a normal life.

Ms. R.Gayathri
III B. Pharmacy



TRIPLE CONCURRENT INFECTION

“Triple concurrent infection”, the word itself states that, it is a combination of three concurrent infections, and those infections are Malaria, Dengue and Chikungunya. Recently, it was proven that these three infections can infect a person at a time *i.e.*, together, thus, making the person hub of these infections. Although triple concurrent infections are rare, it makes the treatment difficult and painful to the patient. The diseases of triple concurrent infections are mosquito-borne diseases “and are endemic in our country. Each of these diseases contributes substantially to the morbidity; if not diagnosed and controlled earlier. The clinical features (symptoms) of these three diseases may vary from each other. But, the common features for these three infections include, prolonged fever, backache, joint pain, rashes, headache, running nose etc. These symptoms are causing challenge in diagnostic segregation based on the other symptoms alone.

The researchers at Jamia Millia Islamia have reported two such cases in medical journals of Inter-virology and virus diseases. The first case of this triple concurrent infection was found in a three year old boy in 2016. The second case was found in a 55 year old male patient. The patients of these two cases were reported with high fever along with chills, uneasiness, body pains and headache when visited to the health care centre. They were tested positive for malaria. When the doctors started the treatment for malaria, the results of dengue and chikungunya were awaited to be positive for both. After this incidence, at a conference conducted by medical council with a team of doctors and health care educators, it was concluded that this triple concurrent infection was availed due to the poor mosquito control measures. This increased both female *anopheles* and *Aedes aegypti* populations and became wide spread. According to the records, in India, dengue alone caused 250 deaths in 2017, compared with 245 in 2016. Tamil Nadu had the maximum deaths(63), followed by Maharashtra(41), Kerala(37), and Uttar Pradesh(28). This review is indeed to increase awareness about the clinical significance and the importance of these co-infections in our region.

Ms. K. Bhanu Sri Chandana,
II B. Pharmacy

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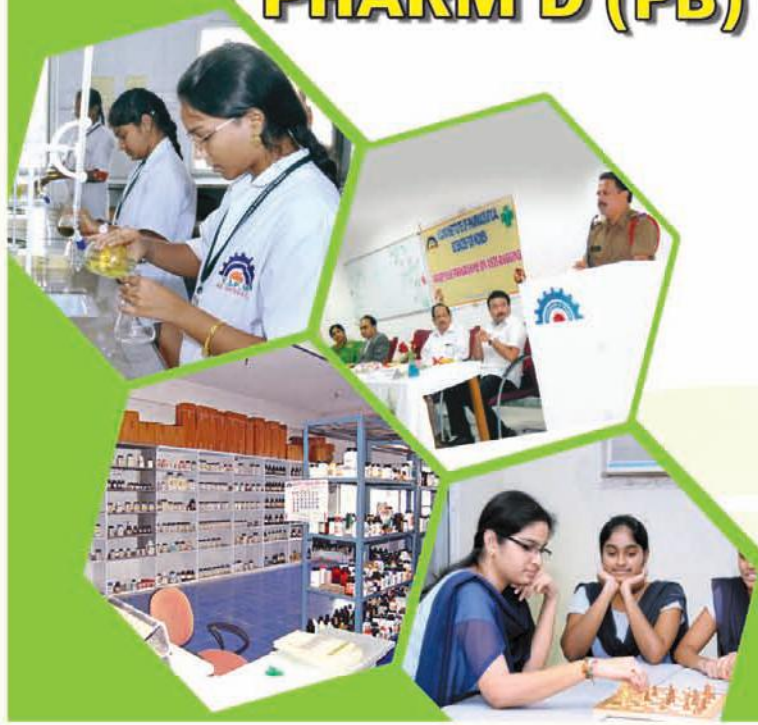
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