SRK FOUNDATION
VIJAYAWADA

VEPA 2015 2016

THE VIJAYA PHARMACY

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN

ENIKEPADU, VIJAYAWADA - 521 108.

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 S. Appa Rao
Founder Chairman

Sri Boyapati Srinivasa Appa Rao garu is an eminent industrialist with expertise in the field of education. As a Mechanical Engineer, he started various industrial units 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 a member of Central Small Scale Industries Advisory Board and State Small Scale Industries Advisory Board.

He is instrumental in establishing the Siddhartha Academy of General & Technical Education by being one of 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. He is serving the association as the President for the past six years.

As one of the pioneering educationists of the city, he desires of establishing Research and Development wing for inculcating scientific outlook, humanism, the spirit of equity and reform among the student community. His objective is to produce world class engineers and pharmacists endowed with human values to serve the society and to bridge the gap between industry and the educational institutions. He aims at promoting women empowerment through educational institutions exclusively for women, which in turn help the society to grow.

Sri B.S. Appa Rao garu, laid the foundation for S.R.K. Group of Institutions which he aims to develop as model institutions for enhancing the quality of education and research. 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 his dynamic leadership, in pursuing his objectives.

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
Member, SRK Foundation

Smt. Boyapati Vijaya Lakshmi, a woman of excellence with a blend of social service and philanthropy is a blessing in disguise to the 'Vijaya Group of Institutions' 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. Apparao, and also she is the woman behind the flourishing institutions.

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'. 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. Apparao, and today the seed has witnessed as a growing tree with all its blooming branches, spreading the essence of women education.

An embodiment of Indian family traditions and values, she has been an inspiration for thousands of young women engineers, pharmacists and business managers.

❀❀❀

Chairman's Message.....

I pass on my good wishes to the Principal, Staff and Students for their relentless effort in bringing out venture. I wish the magazine stands as a source of guidance for the future batches of students in their choice of activities and in elevating the hidden talents among the students. It serves as a platform for exhibiting their latent creative talents and skills.

The profession of Pharmacy is a research based segment which is advancing at a fast pace. To maintain quality standards in Pharmacy education is our basic premise. Our motto is to equip our pharmacists to face the key challenges that they encounter with, in future and take a strong foothold according to the changing demands of their professional world.

I call upon the new generation faculty in the field of Pharmacy to identify the current problems and issues which need to be addressed and to predict the future performance of the students with total certainty. Consequently, they develop a true understanding and acquire knowledge, skills, and values the instructor or the institution has set out to impart. To keep themselves abreast of the rapid changes taking place in the pharmaceutical field, the magazine would be a source of the latest information to the students and faculty.

I extend my blessings to the young Pharmacists, working tirelessly to achieve their goals. I wish VEPA - The Vijaya Pharmacy", would continue to inspire the next generation with its competence and be in the pink of health.

Wish you all a bright future ahead….

(B.S. APPARAO)
Chairman

V I P W

Secretary's Message...

As the Indian pharmaceutical sector has seen its fortunes rising well trained human resources to contribute to its growth.

We at S.R. K. Foundation caters to the innovative and realistic methods for students thriving on multi-tasking through your unbridled energy and enthusiasm that help you being productive and and fulfilling your careers.

I wish the budding professionals to focus on skills in demand, which speaks about your readiness to take on the challenges ahead.

Every individual must realize his/her social responsibility and contribute his/her mite to make this world a better place to live in.

I hope Vijaya Institute of Pharmaceutical Sciences for Women, would take that extra mile to expand its horizons through its "VEPA - The Vijaya Pharmacy", as a Pharmaceutical knowledge hub.

Wish you a vibrant future ahead . . .

(B.S. Sri Krishna)
Secretary

V I P W

Message...

It gives me an immense pleasure to know that Vijaya Institute of Pharmaceutical Sciences for Women is going to release second issue of college magazine shortly.

I am happy to know that the college is contributing the needs of Healthcare System, Community Pharmacy, Clinical Pharmacy, Pharmaceutical Industries and Research & Development through Pharmacy Education. I hope the magazine will reflect the hidden potential and useful articles of students and faculty of the college.

I convey my best wishes to the Principal, Editorial members and Students for bringing out the second issue of College Magazine.

V I P W

Dr. U. Surya Kumari
MBBS, MD (OBGY), M.Ch (Genitourinary Surgery)
Superintendent,
Government General Hospital,Vijayawada

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
ASSOCIATE PROFESSOR - SIDDHARTHA MEDICAL COLLEGE, VIJAYAWADA.
DEPUTY CIVIL SURGEON - GOVT. GENERAL HOSPITAL, VIJAYAWADA.

Message...

V I P W

I am indeed very much delighted to contact you, through this brief communication.

Pharmacy today is at the cross roads of a very vibrant and dynamic health care environment.

Dedicated principal, motivated and well trained faculty, best location, quality laboratories, wi-fi facility, well-furnished hostel, attainment of quality standards, innovative projects and entrepreneurship is sure to take this institute to the top order for the benefit of tomorrow's pharmacy industries.

It is sure that, the pharmacy students of your institute will come out with flying colors in their endeavor in pursuit of the successful career and prosperity.

(Dr. Kola Vijaya Sekhar)

Principal's Message.....

Dear Achievers,

You have brains in your head.
You have feet in your shoes.
You can steer yourself any direction you choose.

- Dr. Seuss

Today education means much more than merely acquiring knowledge. It is the acquisition of knowledge and skills, which builds one's character and improves the required skill-set for the employability. I am sure, the incandescent stars of VIJAYA would march ahead and achieve the objectives of education to build a stronger and brighter India.

VIPW has earned a distinguished reputation in academics and sports at the University and State levels as well. All this has been possible with the prospective measures initiated by the Hon. Chairman Sri Boyapati Apparao garu, steps taken by the College administration, the willing contribution of the teaching and non-teaching staff and the over whelming response and enthusiastic participation of my dear student achievers in the college activities.

VIPW enjoys the utmost privilege of a healthy and harmonious ambient working environment and the credit goes to our elite college management. A happy blend of conventional and modern education is enjoyed by the students on the campus. Our motto is to empower the students to carve a niche in today's competitive world by widening their perspectives, retaining the intellect of mind and professional ethics, is thus achieved.

In the perspective of a vast changing scenario of Globalization, students need to be on the winning edge in the field of research and information. They need to equip themselves by the exposure they draw from the expert views in various seminars and workshops, and by using the knowledge resources in their vicinity.

I swear VIPW would play a meaningful role in the competitive times ahead and scale new heights. I pray for the future growth and prosperity of our college and wish the management, faculty members, staff and students, all success in the years to come.

(Dr. K. Padmalatha)

V I P W

Editor Speaks. . .

"Dreams don't work unless you do"

I deem it a great pleasure to pen a few words for the second issue of our college magazine 'VEPA – THE VIJAYA PHARMACY, 2015-16'.

The magazine is exclusively meant to churn out the latent writing talent of the students and faculty which evinces their immense potential in grooming their personality. It also comprises a year's events that took place on the campus.

I am proud to say that VEPA is an embodiment of the encouragement rendered by the management coupled with active and enthusiastic force of the students and faculty members. The present issue of VEPA is enriched with some valuable papers. I truly hope that they appeal to our common readers.

I would like to extend a special thanks to the editorial team for designing VEPA to better, what has been previously achieved. I thank Girish Media for bringing out our magazine in eye-pleasing vibrant colours.

V E P A

About the College...

Vijaya Institute of Pharmaceutical Sciences for Women (VIPW) is established in the year 2009 by "S.R.K. FOUNDATION" under the Chairmanship of Sri. Boyapati Srinivasa Appa Rao, a renowned Educationalist and Industrialist having more than three decades of rich experience in promoting and administering the professional colleges.

The institution is committed to provide quality education and empower women in the field of pharmacy to cater the needs of the society in health care sector and also to uplift the socio-economic status of women 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 JNTU Kakinada and is Certified by ISO 9001-2008.

The institution is offering B. Pharmacy (100 Seats), M. Pharmacy in Pharmacology (15 Seats), Pharmaceutics (15 Seats), Ph. Analysis & Quality Assurance (15 Seats) and Pharm D (30 Seats).

The Institution has received NEA Award 2015 (National Andhra Pradesh Education Awards) for "Excellent Co-Curricular Activities for Women students in Andhra Pradesh".

The institution has obtained the MOU with Government General Hospital, Vijayawada which is 730 bedded teaching hospital with more than ten departments for imparting the clinical training for Pharm D and Pharm D (Post Baccalaureate) courses.

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 worshiped 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 the 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 the 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 the 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, embarked on extensive research on Neem felt that Neem 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 women from S.R.K. Foundation. The empowerment of women speaks of humanism. The luminaries who empower 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.*

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

*"**E**ducation, 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".*

P*harma professionals endowed with patience, tolerance, ambiance and dedication are in great need to the 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.*

A*s the essence of health care is human service, VIPW aims to train pharmacists who build ambiance with the society, and who 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' *will fully stands as an example to the ultimate pearl of wisdom by Albert Einstein, "A man's ethical behaviour should be based effectually on sympathy, education, and social ties and needs; no religious basis is necessary".*

Institute Achievements

Certificate

Breakthrough Management Quality Registrar (BMQR)

Certifies that the Quality Management System of

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN
Enikepadu, Vijayawada - 521 108. Krishna District,
Andhra Pradesh, India.

has been assessed and found to be in accordance with the requirements of the quality standards

ISO 9001:2008

for the following scope of certification

PROVIDING QUALITY EDUCATIONAL SERVICES LEADING TO BACHELOR OF PHARMACY

Further clarifications regarding the scope of this certificate and applicability of ISO 9001:2008 requirements may be obtained by consulting the organization.

Original Certification Date	: 17/10/2011
Current Certification Date	: 04/10/2014
Third Surveillance Due on	: 03/10/2015
Fourth Surveillance Due on	: 03/10/2016
Certificate Expiration Date	: 03/10/2017

Surveillance Audit

BMQR ISO 9001 CERTIFIED

Certificate No : AB09IS11024

AIAO-BAR QMS ACCREDITED USA

For BMQR

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nixi

IInd National Andhra Pradesh Education Summit & Awards 2015

NEA National Andhra Pradesh Education Summit & Awards

IInd National Andhra Pradesh Education Summit & Awards 2015
28th May, 2015
Hyderabad
Presented to

Vijaya Institute of Pharmaceutical Sciences For Women

Excellent Co-Curricular Activities for Women Students in Andhra Pradesh
In
August Presence of

Brig M N Venugopal, VSM (Retd)
Chief – Admin & Pers
Engineering Staff College of India

Hon'ble Dr. K Lal Kishore
Vice Chancellor
Jawaharlal Nehru Technological University, Anantapur

Hon'ble Dr. Ghanta Subbarao
Secretary Skill Development, Government of A.P
&MD, APSSDC

Mr. Vivek Reddy
Ambassador
Telecom Sector Skill Council

Prof. NK Goyal
President
CMAI Association Of India

Jointly Hosted with National Conference on Entrepreneurship

preisident_cmai@cmai.asia www.cmai.asia www.nationaleducationaward.com

Momentous Moments

ACADEMIC EXCELLENCE

Ms. Md. Nowrin Sultana
University Topper - B.Pharmacy [2010-14 Batch]
Received Gold Medal From Prof. V.S.S. Kumar, Hon'ble VICE-CHANCELLOR,JNTUK Kakinada

CLASS TOPPERS

M. PHARM 2013-15

Ms. G. Alekya
Dept. of Pharmaceutics

Ms. Ch. L. Vara Tejaswini
Dept. of Pharmacology

Ms. K. Vijaya Lakshmi
Dept. of Ph. Anal. & QA

M. PHARM 2014-16

Ms. K. Deepthi
Dept. of Pharmaceutics

Ms. Md. Nowrin Sultana
Dept. of Pharmacology

Ms. A. Alekhya Prasanna
Dept. of Ph. Anal. & QA

2014-2015

Ms. Nadipalli Mamatha Sri
1st B. Pharm

Ms. Koleti Sindhu
2nd B. Pharm

Ms. Gummadi Hela Sri
3rd B. Pharm

Ms. Kota Mounika
4th B. Pharm

SRK FOUNDATION
VIJAYAWADA

ORGANIZING COMMITTEE

Sri B.S. Appa Rao
Chairman

Prof. Dr. K. Padmalatha
Principal

Sri B.S. Sri Krishna
Secretary

Mr. Sr. Venkateswara Rao
Sr. Asst. Professor, Academic In-charge

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

Mr. D.Srinu Naik
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)

Mr. A.V.S. Ravi Sainadh
M. Pharm., (Ph.D)

Mrs. D. Santhi Krupa
M. Pharm.,

Mrs. G. Santhi
M. Sc., (Pharmacology)

DEPARTMENT OF PHARMACY PRACTICE

Dr. Dinesh Kumar Meena
B. Pharm., Pharm D (PB)

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

Mrs. A. Indira Priyadarshini
M. Pharm. (Ph. Practice)

Mrs. K. R. Rajeswari
M. Pharm.

DEPARTMENT OF PHARMACEUTICAL CHEMISTRY

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M. Pharm., Ph.D

Mr. G. Muthu Bhoopathi
M. Pharm., (Ph.D)

Mr. I. Madhusudhana Reddy
M. Pharm., (Ph.D)

Ms. M. Tejaswi
M. Pharm.

Mr. N. Vijay Kumar
M. Pharm.

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SRK FOUNDATION
VIJAYAWADA

DEPARTMENT OF PHARMACEUTICS

Dr. A. V. Badarinath
M. Pharm., Ph.D

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

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

Mr. M. Srinivasa Rao
M. Pharm.,

Mr. S. V. Suresh Babu
M. Pharm.,

Mr. P. Sai Krishna
M. Pharm., (Ph.D)

Mr. D. Srinu Naik
M. Pharm.

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

Mrs B. Hemalatha
M. Pharm.,

Mrs. G. Alekya
M. Pharm.,

DEPARTMENT OF PHARMACEUTICAL ANALYSIS

Dr. Suman Pattanayak
M. Pharm., Ph.D

Mrs. D. Deepika
M. Pharm.,

Ms. T. Saipriya
M. Pharm.,

DEPARTMENT OF BIOSTATISTICS

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

DEPARTMENT OF PHARMACOGNOSY AND BIO-TECHNOLOGY

Dr. B. Parimala Devi
M. Pharm., Ph.D

Dr. Mukesh Kumar Das
M. Pharm., Ph.D

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

Mr. S. Sundar
B. Pharm., M.Tech (Bio-tech), (Ph.D)

GLANCE AT RESEARCH FACILITIES


Water's HPLC


UV Spectorphotometer


PA & QA Research Lab


PA & QA Lab


PA & QA Research Lab


Brookefields Viscometer


Pharmaceutics Research Lab

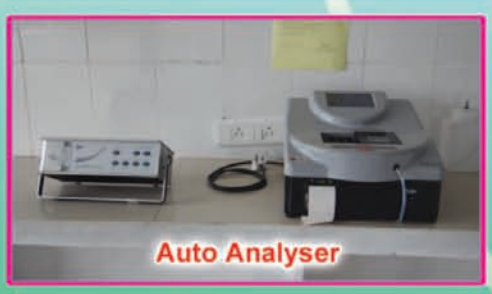
Tablet Punching Mechine


Pharmaceutics Research Lab


Rotary Evaporator


Pharmaceutics Research Lab

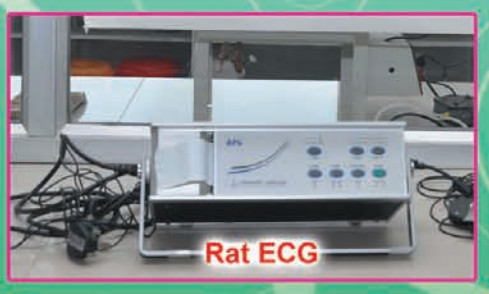

Cooling Centrifuge


Auto Analyser


Langendorff Apparatus


Pharmacology Research Lab


Animal House


Rat ECG

GLANCE AT LAB FACILITIES


Pharmaceutics Lab


Pharmaceutical Technology Lab


Ph. Analysis Lab

Ph. Chemistry Lab


Ph. Microbiology Lab


Dispensing Lab


Pharmacology Lab


Computer Lab


Human Anatomy & Physiology Lab


Ph. Chemistry Lab


Medicinal Garden


Library


Museum


Stores


Library


Dosage Forms


Machine Lab

4th B. Pharmacy
[2012 - 2016]

3rd B. Pharmacy
[2013 - 2017]

2nd B. Pharmacy
[2014 - 2018]

1st B. Pharmacy
[2015 - 2019]

1st Pharm D
[2015 - 2021]

M. Pharmacy

Non teaching Staff

Glance at Training on Fire & Safety









VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN

GLANCE AT WORKSHOP






A WORK SHOP ON "CURRENT RESEARCH TRENDS IN PHARMACOLOGY & DRUG DISCOVERY" 29th & 30th JANUARY 2016






GLANCE AT WORKSHOP

GLANCE AT WORKSHOP

A NATIONAL SEMINAR ON "EMERGING TRENDS AND INNOVATIONS IN DRUG DELIVERY" 18th & 19th MARCH 2016

GLANCE AT WORKSHOP

GLANCE AT CERTIFICATE / TRAINING PROGRAMMES










Dr. Jagannath Rao, a recipient of Prestigious "Rajiv Gandhi Excellence Award, Chhatrapati Shivaji State Award and Suvarna Karnataka Seva Award" conducts the workshops on "Personality Development" to train the students about the "Scretes of Success & Mind Power" for their success and happiness in both working and social life of every individual.

Mr. L.V.Gangadhar Rao, being specialized in Soft Skill Training Programmes, he has trained students and professionals at various levels of Personality Development, Presentation Skills, Team Building, Leadership Skills, Interviewing Skill, Business Communication Skills, Emotional Intelligence and Competency Building etc.

In addition to B. Pharmacy, students are offered certificate courses in Pharmacovigilance, Clinical Data Management and SAS through Genesys Academy. Mr. B. Chaitanya Varma, Director of Genesys Academy has introduced various tailor made courses that suits the industry needs and prepares the candidates to take up the challenges.

GLANCE AT CERTIFICATE / TRAINING PROGRAMMES

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN

SRK FOUNDATION
VIJAYAWADA

GLANCE AT IPC & INDUSTRIAL VISIT

GLANCE AT IPC & INDUSTRIAL VISIT

'PHARM D' STUDENTS AT HEALTH CAMPS













'PHARM D' STUDENTS AT HEALTH CAMPS

SRK FOUNDATION
VIJAYAWADA

GLANCE AT MORAL CLASSES

GLANCE AT MORAL CLASSES

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN

GLANCE AT WOMEN'S DAY-2K16

GLANCE AT WOMEN'S DAY-2K16

SRK FOUNDATION
VIJAYAWADA

GLANCE AT WOMEN'S DAY-2K16

GLANCE AT WOMEN'S DAY-2K16

'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.

CULTURAL EVENTS

CULTURAL EVENTS

CREATORS OF CREATIVITY

CREATORS OF CREATIVITY

SRK FOUNDATION
VIJAYAWADA

SPORTS












SPORTS

CELEBRATIONS











CELEBRATIONS

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GOVERNING BOARD MEMBERS

Sr. No	Name of the Member	Designation
1.	**Sri B. S. Appa Rao**, BE Chairman, SRK Foundation	Chairman
2.	**Sri. B. S. Sri Krishna,** MSEM (USA) Secretary, SRK Foundation	Secretary
3.	**Dr. M. Sailaja,** B.Tech, MS (USA), Ph.D Professor, Department of ECE University College of Engineering, JNTU Kakinada	JNTUK Nominee
4.	**Dr. G. Nagarjun Reddy**, M.Pharm, Ph.D Prof. & Principal, KLR Institution of Pharmacy Director, KLR Institutions, Paloncha	Academic Member
5.	**Dr. K. Padmalatha**, M.Pharm, Ph.D Prof. & Principal, Vijaya Institution of Pharmaceutical Sciences for Women	Co-ordinator

IAEC MEMBERS

Sr. No	Name of the Member	Designation
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3. Dr. Ananth Naik Nagappa, Prof., Dept. of Pharmaceutical Management, MCOPS, Manipal University, Manipal.
4. Dr. Satheesh S Gottipati, Assoc. Prof., & Dean, Dept. of Pharmacy Practice, Vignan Pharmacy College, Vadlamudi, Chebrolu (M), Guntur.
5. Dr. Ranganayakulu, Prof., & Principal, Sri Padmavathi School of Pharmacy, Tirupati.
6. Smt. K. Rama Devi, President, Association of Lady Entrepreneurs of India, Member Prime Ministers Task Force on MSME, Govt. of India., Hyderabad.
7. Dr. B. Dinesh Kumar, President, Indian Pharmacological Society (IPS), Scientist – F, FDTRC, National Institute of Nutrition, Hyderabad.
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13. Smt. Dr. V. Naga Lakshmi, Joint Managing Director, IMIS Pharmaceuticals Pvt. Ltd., Vijayawada.
14. Smt. Shaik. Shereen Begum, Deputy Superintendent of Police CID, Vijayawada.
15. Dr. Y.V.V. Ravindra Prasad M.Sc., (Psychology), Ph.D, Sumana Psychology Centre, Vijayawada.
16. Dr. G. Vijay Kumar, Prof., & Principal, AKRG College of Pharmacy, Nallajerla, West Godavari District.
17. Sri. Raghupathi Rao Garu, Editor, Thakshnam Monthly, Tirupathi
18. Sri. Sudhakar Deshpande, Professor, Jiddu Krishnamurthi Centre, Hyderabad.
19. Dr. Byri Srinivas, Superintendant, MSR Arogyalayam, Vijayawada.
20. Sri. Sivaram, Philosopher & Educationalist - STEP (Student, Teacher, Educators & Parents) Organizier, Kunchanapalli, Vijayawada.
21. Dr. Ch. Ajay Kumar, Kuchipudi Lecturer, Government Dance and Music College, Vijayawada.
22. Dr. B. Venkateswarlu, Professor, Vinayaka Missions College of Pharmacy, Salem, Tamilnadu.

23. Dr. Gopal Rao, Professor, Ramakrishna College of Pharmacy, Coimbatore, Tamilnadu.
24. Dr. P. Selvamani, Asst. Prof., Dept. of Pharmaceutical Technology, Centre for Excellence in Nanobio Translational Research, Anna University, Chennai.
25. Dr. S. Latha, Asst. Prof., Dept. of Pharmaceutical Technology, Centre for Excellence in Nanobio Translational Research, Anna University, Chennai.
26. Mr. V. Sarath Kumar, Manager Diabetes Team, AstraZeneca Pharma India Ltd., Hyderabad.
27. Dr. A. Lakshmana Rao, Prof. & Principal, V.V.Institute of Pharmaceutical Sciences, Gudlavalleru.
28. Dr. Panda Subhranshu, Prof. & Principal, Vikas College of Pharmacy, Vissannapeta.
29. Mr. John Jills, Assistant Manager, Talent Acquisition, AGS Health Chennai.
30. Dr. V. Sai Kishore, Prof., Dept. of Pharmaceutics, Bapatla College of Pharmacy, Bapatla.

PRIZES OWNED BY STUDENTS

S.No	Name of Student	Topic	Conference	Prize
1.	Ms. K. Manasa	Mucoadhesive Drug Delivery System	Vallabhaneni Venkatadri Institute of Pharmaceutical Sciences, Gudlavalleru, Krishna District.	First
2.	Ms. S. N. V. Sai Bhargavi	Responsible Use of Antibiotics	67th IPC, JSS University, Mysuru, Karnataka.	First
3.	Ms. B. Harsshene & T. Priyamvada	CHIPSORIEE (Table Tennis)	Chebrolu Hanumaiah Institute of Pharmaceutical Sciences, Guntur District.	First
4.	Ms. B. Harsshene	JNTUK University National Games (Table Tennis)	JNTUK, Kakinada.	Third
5.	Ms. M. Bhavya	Ambedkar Quiz Competition	Prasar Bharati Doordarshan Kendra, VJA	Merit
6.	Ms. K. Malleswari	Ambedkar Quiz Competition	Prasar Bharati Doordarshan Kendra, VJA	Merit

LIST OF PUBLICATIONS

1. Sk. Arifa Begum, D. Basava Raju. Development & Evaluation of Mucoadhesive Microspheres of Roxatidine acetate HCl. International Journal of Pharm Tech Research 2016; 9(2): 124-133.

2. Sk. Arifa Begum, D. Basava Raju. Formulation Development and Evaluation of Cimetidine Floating Microspheres. International Journal of Pharm Tech Research 2016; 9(2): 182-192.

3. M. Vani, K. Padmalatha, Badri Nagini, Saikam Naga Mounika, Rajulapati Jyothi, Varikutti Bhavani. Pharmacognostical, Quantitative phytochemical and *in-vitro* Anti-oxidant studies on the root extracts of Typha angustata Bory and chaub. Research Journal of Pharmaceutical, Biological and Chemical Sciences 2016;7(1): 2043-2058.

4. B. Parimala Devi. Impact of medicinal plants against malnutrition among women : An overview. Journal of Medicinal Plants Studies 2016:4(1):107-110

5. Sk. Arifa Begum, D. Basava Raju, T. Rama Mohan Reddy, D.V.R.N. Bhikshapathi. Design & *In Vitro* Evaluation of Floating Microspheres using Roxatidine acetate HCl. American Journal of Pharm Tech Research 2015; 6(1): 126-138.

6. Sk. Arifa Begum, D. Basava Raju, T. Rama Mohan Reddy, D.V.R.N. Bhikshapathi. Formulation and Evaluation of Mucoadhesive Microspheres containing Cimetidine. American Journal of Pharm Tech Research 2015; 6(1): 139-152.

7. Gunji Venkateswarlu, T. Swarupa Rani, M. Vani, P.A.J. Vineela. *In-vitro* anti-cancer activity of petroleum ether extract of *Cynodon dactylon*. Journal of Pharmacognosy and Phytochemistry 2015; 4(1):164-168.

8. S. Sundar, T. Jayasree, D. Ditya, J. Sanjana, M. Sowmya and S. Jahnavi. Antimicrobial activity of aminoglycoside antibiotics combined with clove and ginger. World Journal of Pharmacy and Pharmaceutical Sciences 2015; 4(6): 1515-24.

9. Suman Pattanayak, A. Alekhya Prasanna, Ch. Kiranmayi and K. Padmalatha. Analytical UV Spectrophotometric Method Development and Validation for the Estimation of Mycophenolate Mofetil. Asian Journal of Pharmaceutical Analysis 2015; 5(4): 209-213.

SYNERGISTIC ACTIVITY OF AQUEOUS EXTRACTS OF *MOMORDICA CHARANTIA* FRUIT AND *TEPHROSIA PURPUREA* HERB IN ALLOXAN INDUCED DIABETIC RATS

K. Radha, A. Jaya Rami Reddy & K. Padmalatha Dept. of Pharmacology

Diabetes is a metabolic disorder of multiple etiologies with escalating raise in population. The aim of present day study was to evaluate the synergistic activity of fruit extract of *Momordica charantia* and whole plant extract of *Tephrosia purpurea* in Alloxan induced diabetic rats. Six groups of female wistar rats, each containing six rats were used for the experiment. Biochemical parameters like blood glucose lipid profile and liver enzymes were determined using analytical kits. The blood glucose values were significantly ($P<0.05$) reduced for Group 5A (83 ± 2.4 mg/ dl) when compared to normal group (102 ± 1.9 mg/dl). The body weights of synergistic groups were comparable to that of normal group. The synergistic G-6C & G-6D has shown a decrease in HDL (31 ± 2.3, 32 ± 2.1 mg/dl) levels compared to standard group (36 ± 1.4 mg/dl). Liver enzymes like ALT & AST were decreased for G-6B (25 ± 3.3, 55 ± 1.9 mg/dl) when compared to that of standard group (29 ± 2.0, 73 ± 1.4 mg/dl). The weights of liver and pancreas were increased in all drug treated groups when compared to normal group. The weight of kidney has increased for G-5 animals. The synergistic groups (G-6A, G- 6B & G-6C) groups had shown a greater restoration of the islets when compared to other groups. In conclusion the combinations of extracts (MC& TP) possess anti- diabetic effects.

KEYWORDS: Diabetes Mellitus, *Momordica charantia, Tephrosia purpurea,* Alloxan.

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A PROSPECTIVE, COMPARATIVE, OPEN LABEL, RANDOMIZED PHASE III STUDY TO COMPARE THE SAFETY & EFFICACY OF ETANERCEPT AGAINST ENBREL IN PATIENTS WITH ACTIVE RHEUMATOID ARTHRITIS

K. Sree Mounika and K. Padmalatha, Dept. of Pharmacology

Rheumatoid arthritis is a chronic, systemic inflammatory disease and also a most common auto immune disease of multiple etiologies which is more common in women. The aim of present study is to compare the safety and efficacy of investigational Etanercept against Enbrel in patients with active rheumatoid arthritis. Out of a total of 169 patients were screened, 107 patients were enrolled of which 82 patients were randomized to test Etanercept arm and 25 patients were randomized to Enbrel® arm. Efficacy evaluation, pharmacokinetic evaluation, safety evaluation, clinical laboratory evaluations are determined by using validated bioanalytical methods. ACR20 response rate of 83.95% in test arm as compared to 84% in reference arm, ($p >0.05$) in study population. ACR50 response rate of 53.09% in test arm as compared to 36.00% in reference arm, (p value = 0.1716) in study population. Changes from baseline in DAS-28 score was 2.08 in test arm & 2.00 in reference arm, (p value = 0.7737) in study population. Changes in HAQ score from baseline at end study 0.69 in test arm as compared to 0.71 in reference arm, (p value = 0.8939). Out of 107 randomized patients, total 28 adverse events (21 in test arm and 7 in reference arm) were reported during the conduct of the study. There were no clinically relevant changes in vital signs or biochemical parameters throughout the study. T_{max} 72 h was observed in both the groups, AUC_{0-168} values were 545485.46 ± 141357.91 in test arm and 568740.27 ± 185718.84 in reference arm, C_{max} values were 4596.74 ± 1285.35 in test arm and 4734.08 ± 1575.65 in reference arm. It is concluded that, similar to Enbrel®, Test Etanercept has good safety profile in the treatment of rheumatoid arthritis patients.

KEYWORDS: Rheumatoid arthritis, Investigational Etanercept and Enbrel®.

A PROSPECTIVE, COMPARATIVE, OPEN LABEL, RANDOMIZED, PHASE III STUDY TO COMPARE THE SAFETY & EFFICACY OF Peg EPO AGAINST MIRCERA, PATIENTS IN THE TREATMENT OF ANEMIA DUE TO CHRONIC KIDNEY DISEASE

Ch. Lakshmi Vara Tejaswini and K. Padmalatha, Dept. of Pharmacology

The present research was done on phase III clinical trial to compare the safety and efficacy of Pegylated Erythropoeitin against Mircera, patients in the treatment of anemia due to chronic kidney disease by following ethical consent principles. As a prospective study of clinical trial based on some assumptions by making a protocol and following the trial schedule to ensure that study is reliable. The following procedure screening of patient, collection of blood samples, randomisation, IP Administration, concomitant medication, adverse event monitoring, inject site reaction observance and all relevant observations were recorded in CRF/ ECRF. Total 165 are screened, based on selection of population total 99 subjects are completed the study in that 76 were reffered to test arm and 23 reffered to Reference arm. The result of the study was good to test arm compared against to refference arm that is safety and efficacy of test arm was found to 95% reliable and well tolerated.

KEYWORDS: Phase III Clinical trial, Ethical consent, Randomisation, Safety and Efficacy.

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FORMULATION DEVELOPMENT AND *IN VITRO* EVALUATION OF DELAYED RELEASE PELLETS OF LANSOPRAZOLE BY FLUID BED COATING TECHNIQUE

G. Alekhya and S. Venkateswara Rao, Dept. of Pharmaceutics

Lansoprazole is a proton pump inhibitor degrades in acidic environment of stomach, lead to therapeutic inefficacy. It is necessary to bypass the acidic pH of the stomach, which can be achieved by formulating delayed release dosage forms. The aim of the present study was to develop a pharmaceutically equivalent, stable, cost of effective and quality improved formulation of lansoprazole delayed release pellets. The formulation process was carried out in fluid bed dryer (FBD) by suspension layering technique and comparing it with marketed dosage form (Prevacid® 30 mg). The preparation contained eight formulations by drug loading (F1 – F4) and enteric coating (F5 – F8) steps. The acid resistance of pellets was increased by enteric coating (10%, 15% & 25%) with Eudragit L30 D55 & PEG 6000. The prepared enteric coated pellets were evaluated for the various parameters like size analysis, scanning electron microscopy (SEM), bulk density, tapped density, Carr's Index, Hausner's ratio, Angle of repose, drug content, moisture content and *In vitro* dissolution studies. Formulation F8 pellets were found to be optimum and were filled into capsules. The dissolution comparisons against the reference product approach using dissimilarity (f1) and similarity factor (f2) were found to be 4 and 78, represented closeness between two profiles. The optimized formulations were subjected for accelerated stability studies as per the ICH guidelines and there were no changes observed after 90 days.

KEYWORDS: Fluid bed dryer, Acid resistance, Enteric coating and Accelerated stability.

FORMULATION AND *IN-VITRO* EVALUATION OF BUCCOADHESIVE TABLETS OF AN ANTIHYPERTENSIVE DRUG: PERINDOPRIL

R. Chamundeswari and S. Venkateswara Rao, Dept. of Pharmaceutics

The present study was aimed to formulate and evaluate buccoadhesive tablets by direct compression technology using Perindopril as antihypertensive drug and poly ethylene oxide and carnauba wax as mucoadhesive polymer and release retardant. Buccoadhesive tablets were prepared to prevent the gastric degradation of drug so as to improve the bioavailability of drug with reduction in dose and dose related side effects. The compressed tablets were evaluated for post compression parameters like thickness, diameter, hardness, uniformity of weight, friability, drug content, surface pH, swelling index, bioadhesive strength, *ex-vivo* residence time, *In vitro* dissolution studies and drug permeation through porcine buccal mucosa. It was found that the results comply with official standards. FTIR studies showed no evidence of interactions between drug, polymers and excipients. The *in vitro* release was studied using pH 6.8 phosphate buffer solution and USP type-II dissolution apparatus. The best *in-vitro* drug release profile was achieved with the formulation F4. The surface pH, bioadhesive strength and swelling index of formulation F4 was found to be 6.43, 20.36 gm and 127.62. The *in vitro* release study revealed that the prepared tablets of F4 were able to sustain the drug release for 8 hrs with desired therapeutic concentration. The drug release followed diffusive mechanism with first order release kinetics. Stability studies indicated that the developed tablets were stable and retained their pharmaceutical properties at 40°C (RH = 75%) for a period of 3 months.

KEYWORDS: Direct compression technology, Bioadhesive strength, Sustain release, Diffusion and *In vitro* release.

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ISOLATION, CHRACTERIZATION AND EVALUATION OF *TRIGONELLA FOENUM GRAECUM*– A NATURAL MUCILAGE AS DISINTEGRANT IN TABLET FORMULATIONS

K. Durga Reshma and S. Venkateswara Rao, Dept. of Pharmaceutics

In the present study, Polysaccharide mucilage derived from the seeds of *Trigonella foenum-graceum* L (fenugreek) was investigated as disintegrant for use in mouth dissolving tablet formulations containing Amlodipine besylate. Mucilage extracted from fenugreek seeds were subjected to toxicity studies, it showed that extracted mucilageis devoid of toxicity. Fast disintegrating tablet (FDT) of Amlodipine besylate was formulated using different concentration (1, 2, 3, 4, 5 and 6% w/w) of natural super disintegrant as isolated fenugreek mucilage. Therefore, totally six formulations were developed F1–F6 and all the formulations were evaluated for pre and post compression parameters and the results were within the acceptable limits. The formulated tablets had good appearance and better drug release properties. Disintegration time and drug release were taken as the basis to optimize the rapidly disintegrating tablet. Prepared tablets were evaluated for thickness, hardness, friability, uniformity of weight, disintegration time, wetting time and dissolution study. Fenugreek mucilage in the concentration of 6 % gives shorter disintegration in 20 sec. showing 100% drug release within 14 min. were selected as the optimized formulation (F6). The data of the *In-vitro* release of F6 was fitted into different kinetic models to explain the release kinetics. The drug release followed the first order release kinetics and Higuchi's model indicates the mechanism of drug release was diffusion. Hence, studies indicated that the extracted mucilage is a good pharmaceutical adjuvant and showed better disintegrating property in the formulations of FDTs.

KEYWORDS: Fast disintegrating tablet, Fenugreek mucilage, Super disintegrant, Pharmaceutical adjuvant and Non–Fickian diffusion.

DESIGN, OPTIMIZATION AND *IN VITRO* EVALUATION OF CAPTOPRIL LOADED FLOATING MICROSPHERES BY NON AQUEOUS SOLVENT EVAPORATION TECHNIQUE

Md. Jaha Sultana and S. Venkateswara Rao, Dept. of Pharmaceutics

The aim of the present study was to design and optimizethefloating microspheres of Captopril, an antihypertensive. Floating microspheres were prepared for the improvement of bioavailability of Captopril by retaining in the stomach for prolonged period of time by non-aqueous solvent evaporation technique using polymers like ethyl cellulose (EC) and Eudragit RS-100 in different ratios. The prepared floating microspheres were evaluated for micromereticproperities, percentage yield, *in vitro* buoyancy, drug entrapment efficiency and *in vitro* dissolution studies. Results showed that as the concentration of polymer increases it affects the particle size, percentage yield, *In vitro* buoyancy and drug release from the microspheres. Percentage yield of F6 microspheres was found up to 95.13%. The floating microspheres of optimized formulation F6 exhibited the prolonged drug release of 95.85% in sustained manner up to 24 hours and remain buoyant more than 12 hours. Formulation F6 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, percentage buoyancy and *In vitro* controlled release of Captopril. The surface morphology analysis formulation F6 showed a hollow spherical structure with a smooth surface morphology. The developed floating microsphere system is a promising floating drug delivery system for oral sustained administration of Captopril.

KEYWORDS: Antihypertensive, Micromeretics, Buoyancy and Non Fickian diffusion.

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FORMULATION AND EVALUATION OF NICARDIPINE HCl SUSTAINED RELEASE PELLETS USING SOLUTION LAYERING TECHNIQUE

B. Sirisha and S. Venkateswara Rao, Dept. of Pharmaceutics

The present research was engrossed on the development and evaluation of sustained release pellets of Nicardipine HCl with different grades of ethyl cellulose like ethyl cellulose N_{10}, N_7 and N_{20} by employing solution layering technology. Pellets were prepared and evaluated for bulk density, tapped density, compressibility index and angle of repose, shows satisfactory results. Formulation was optimized on the basis of acceptable pellet properties (friability, drug content and moisture content) and *in-vitro* drug release studies. The *in-vitro* release studies of pellets were carried out in 0.1N HCl for 2 hours and 6.8 PH phosphate buffer for 18 hours. The studies indicated that the drug release can be modulated by varying the concentration of the polymer. The optimized formula showed zero order release and diffusion rate controlled mechanism. The formulations were subjected for accelerated stability studies and there were no changes in appearances and percentage drug content of pellets stored at 40°C/75% RH. The formulations were further characterized to identify any possible interactions by FTIR spectroscopy. The surface morphology of the pellets was studied by scanning electron microscopy.

KEYWORDS: Pellets Sustained release, Solution layering technology and *In-vitro* release studies.

DESIGN AND DEVELOPMENT OF ORALLY DISINTEGRATING TABLETS OF LANSOPRAZOLE PREPARED BY DIRECT COMPRESSION METHOD USING DIFFERENT SUPER DISINTEGRANTS

B. Bhavya and S. Venkateswara Rao, Dept. of Pharmaceutics

Lansoprazole a proton pump inhibitor is unstable in the acidic conditions of gastric fluid. Its stability can be improved by developing an orodispersible tablet by direct compression method using fenugreek extract, crosscarmellose sodium & sodium starch glycollate as super disintegrants. The main objective of this study is to compare the effect of three super disintegrants at different concentrations like 10 mg, 15 mg & 20 mg. The drug-excipient compatibility was investigated by FTIR and found that there was no interaction between drug and excipients. Therefore totally nine formulations were developed F1–F9 and all the formulations were evaluated for pre and post compression parameters and the results were within the acceptable limits. Among which the formulation F6 was the optimised one which contains 20 mg of crosscarmellose sodium. It exhibited quick wetting time 7 sec, least disintegration time 16 sec, high water absorption ratio 99.86, less dispersion time 9 sec and rapid drug dissolution rate with 100 % at 8 min. The data of the *In-vitro* release of F6 was fitted into different kinetic models to explain the release kinetics. The drug release followed the first order release kinetics and Peppas model indicates the mechanism of drug release was Non–Fickian diffusion.

KEYWORDS: Orodispersible tablet, Proton pump inhibitor, Super disintegrant, *In vitro* release and Non–Fickian diffusion.

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FORMULATION AND EVALUATION OF DULOXETINE HYDROCHLORIDE DELAYED RELEASE PELLETS WITH THE AID OF NON IONIC BARRIER LAYER

P. Vijaya Sri and P. Sai Krishna, Dept. of Pharmaceutics

Duloxetine HCl which is categorized as anti-depressant drug had acquired a centre stage in the arena of pharmaceutical research and development to overcome its acid liable nature in the GIT and also to overcome its interaction with the enteric polymer. During its shelf life, Duloxetine HCl reacts with enteric polymers like hydroxypropyl methylcellulose phthalate (HPMCP), hydroxypropyl methyl cellulose acetate succinate (HPMCAS) and form impurities like pthalamide and succinamide respectively. Hence with the main objective to prevent the drug and enteric polymer reaction, total 9 formulations (F1 – F9) of Duloxetine HCl pellets were prepared with different concentrations of opadry white as barrier layer / non interactive layer and HPMC E5 as enteric polymer by suspension layering technique in the fluidized bed processor. After 3 months of accelerated stability studies at 40 °C and 75 % RH, F8 and F9 formulations have not shown any significant change in assay and *In vitro* drug release. So, 20 % and 22.5 % of barrier layer coating was found to be effective to prevent the drug - enteric polymer reaction during shelf life. The optimized formulations F8 and F9 studied for different kinetic models revealed that the drug release from both formulations followed the first – order kinetics and mechanism of drug release was found to be non-Fickian diffusion.

Key Words: Duloxetine HCl, delayed release systems, enteric coating, barrier layer, stability.

FORMULATION AND EVALUATION OF IMMEDIATE RELEASE CLOPIDOGREL BISULPHATE TABLETS

A. Sri Divya and A.V. Badrinath, Dept. of Pharmaceutics

Clopidogrel bisulphate being anti platelet drug, it is widely used to inhibit blood clots in coronary artery diseases, peripheral vascular disease and cerebrovasular diseases. This research work was aimed to formulate and evaluate Clopidogrel bisulphate immediate release tablets which are dissolution equivalent to innovator's formulation "PLAVIX". Clopidogrel bisulphate immediate release formulations were developed by using various super disintegrants Sodium Starch Glycollate (SSG), Croscarmellose (CM) etc, Preformulation studies like drug solubility, drug-excipient compatibility were studied. About nine formulation blends (F1 – F9) were prepared by changing the various ratios of super disintegrates and by keeping the drug amount constant. All the prepared blends were subjected for flow properties like bulk density, tapped density, angle of repose, compressibility index, Hausners's ratio etc,. The drug excipient powder blends were compressed into tablets using rotary tablet punching machine by direct compression method.The resulted formulations were subjected to various evaluation parameters like weight variation, thickness, hardness, friability, disintegration and dissolution. The dissolution studies for the innovators product "PLAVIX" was carried out and the obtained results were compared with that of the prepared formulations. Among all the nine formulations, F-1 shows 'high similarity factor' (f2) and 'less dissimilarity factor' (f1) with the innovators product.Hence, it was concluded that F1 formulation is found as best and it is dissolution equivalent to innovators product "PLAVIX".

KEYWORDS: Clopidrogrel bisulphate, Immediate release, Dissolution equivalent, PLAVIX.

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PREPARATION AND EVALUATION OF MATRIX SUSTAINED RELEASE PELLETS OF NIFEDIPINE USING SOLUTION LAYERING TECHNIQUE

V. Pooja Priya and Sk. Arifa Begum, Dept. of Pharmaceutics

Nifedipine (NIF) is an antihypertensive drug, having a low elimination half-life of 2 h. NIF is poorly soluble in water and shows irregular bioavailability upon oral administration. Hence, it requires multiple dosing to maintain therapeutic drug concentration in blood. The objective of the study is to prepare NIF matrix sustained release pellets by fluidized bed coating technology, coating them with the mixture of Ethyl cellulose 45cps as film former in increasing concentrations and Hydroxy Propyl Methyl Cellulose (HPMC) E5 as rate controlling polymer to form a stable matrix and achieve the sustained release of the drug. The pellets were analyzed for the parameters such as particle morphology, bulk density, tapped density, Carr's index, Hausner's ratio, friability, drug content, *in-vitro* drug release and the results were found to be within the limits. The drug release kinetics was explained by using Zero order, First order, Higuchi and Peppa's equations. Stability studies were conducted for the optimized formulation at 40°C /75% RH for 2 months.

Keywords: Nifedipine, matrix sustained release, fluidized bed coating, *In-vitro* drug release studies, stability studies.

FORMULATION AND EVALUATION OF VENLAFAXINE HYDROCHLORIDE SUSTAINED RELEASEPELLETS

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In the present study, Sustained release pellets of Venlafaxine Hydrochloride, an Antidepressant drug were developed by drug loading (HPMC E5, PVP K29/32, Klucel- LF) on Sugar spheres followed by spraying barrier coating solution using HPMC E5. Functional coating was done using Ethyl Cellulose 45cps polymer using Fluidized Bed Coater and evaluated for the release characteristics of the drug. The *In-vitro* drug release studies of Venlafaxine Hydrochloride from these sustained release pellets were carried out in phosphate buffer solution, pH 6.8 for 18 hrs using USP-II method. Polymer content with lowest concentration of Klucel-LF on the pellets showed highest Sustained release rate of the drug. The sustained release capacity decreased with the increased concentration of Klucel-LF. The release mechanism was studied and explained with Zero Order, First Order, Higuchi and Korsmeyer-Peppas equations. Stability studies were conducted at 40°C /75% RH for 2 months.

Key words: Venlafaxine Hydrochloride, Ethyl Cellulose, Hydroxy Propyl Methyl Cellulose, Klucel – LF, release kinetics, sustained release pellets.

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SIMULTANEOUS ESTIMATION OF CITICOLINE AND PIRACETAM USING RP-HPLC METHOD

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The RP-HPLC was developed and validated for simultaneous estimation of Citicoline and Piracetam in bulk drug and in combined dosage forms. RP-HPLC separation was achieved on a Hypersil BDS (250 x 4.6 mm, 5ìm) with ammonium di-hydrogen ortho phosphate buffer 100%, pH 3.5 (adjusted with ortho - phosphoric acid) and detection at 210 nm. The flow rate was kept at 1.0mL/min and injection volume 20 ìl. The separation was performed at 25^0C. Retention time of Citicoline and Piraceam was found to be 3.192 and 10.723 minutes respectively. Linearity of the method was found to be for Citicoline 25-75 µg/ml and for Piracetam 40-120 µg/ml respectively. The correlation coefficient of Citicoline was found to be 0.9997 and Piracetam is 0.9996. Accuracy of the method was determined and was found to be 98.98% for Citicoline and 99.52% for Piracetam respectively and precision of the method was demonstrated which less than 2%. The systemic suitability parameters such as theoretical plates and tailing factor were found to be 6745 & 1.24 and 14632 & 1.37 respectively for Citicoline and Piraceam. This method was validated according to ICH guidelines and can be used for routine analysis.

Keywords: Citicoline, Piracetam HPLC and ICH Guidelines

POLYMERIC MICELLES: A TOOL FOR SOLUBILITY ENHANCEMENT

INTRODUCTION:

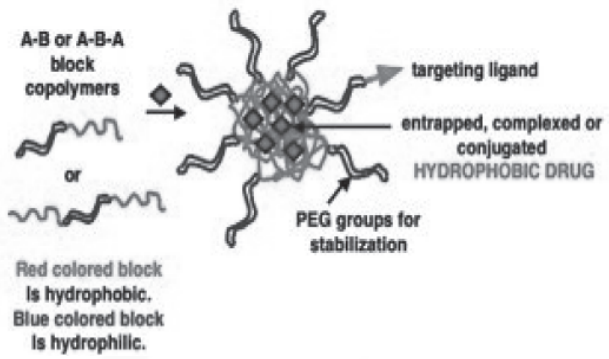
Poor aqueous solubility of a drug entity can be addressed with various pharmaceutical particle technologies. The particle technologies can be divided into two categories; the conventional methods and the newer, novel particle technologies. The conventional methods of size reduction involve mechanical micronization techniques that are simple and convenient methods to reduce the drug particle size and increase the surface area and thus enhance the solubility and dissolution of poorly soluble drugs. The conventional particle technologies are limited for some drugs due to their low efficiency and or their chemical degradation resulting in non-uniform sized particles. The newer novel particle techniques can overcome the limitations of the conventional methods and are more efficient methods of formulating poorly soluble drugs. The novel methods are developed from conventional methods where the basic principle remains the size reduction for solubility improvement. The use of polymers, cyclodextrins and liposomes for formulating poorly soluble drugs has been providing wide applications in improving the solubility as well as stability of the drug formulations. This article highlights the polymeric micelles for improving solubility, dissolution and bioavailability of drugs with poor aqueous solubility.

POLYMERIC MICELLES:

Polymeric micelles have emerged as potential carriers for poorly soluble drugs by solubilising them in their inner core and offering attractive characteristics such as a generally small size and a tendency to targeted delivery of poorly soluble drugs to various pathological sites in the body.

Characteristics:

Polymeric micelles are particles with diameter smaller than 100 nm formed by amphiphilic polymers dispersed in an aqueous media, and characterized by a core shell structure which may have an A-B di-block structure or an A-B-A multi-block structure or a graft co-polymer (hydrophilic backbone chain of a polymer grafted with hydrophobic blocks). Thus in a polymeric micelle, the hydrophobic fragments form the core of the micelle, while hydrophilic fragments form the micelle's corona. The nonpolar molecules are solubilized within the hydrophobic core while polar molecules will be adsorbed on the micelle surface and the substances with intermediate polarity will be distributed along surfactant molecules in intermediate positions. The shape of the micelles is also governed by the length of the hydrophobic core and the hydrophilic corona. The micelles are spherical when the hydrophilic segment is longer than the core block while an increase in length of the core segment beyond than that of the corona-forming chains may result in various non-spherical structures including rods and lamellae.



Preparation:

There are mainly two different processes for drug-loading into the polymeric micelles; the first method is the direct dissolution method and the second method is the preparation of drug loaded micelles by solvent removal. The direct dissolution method is a simple method, mostly employed for moderately hydrophobic copolymers. It involves dissolving the block copolymers along with the drug in an aqueous solvent, which may require heating to induce micellization. The second category of drug-loading method is applied for amphiphilic co polymers which are not readily soluble in water and require an organic solvent common to both the copolymer and the drug. Micelle formation depends upon the solvent removal procedure which can be one

among the several methods like dialysis, oil-in-water emulsion method, solution casting and freeze-drying.

Dialysis can be used for water miscible organic solvents whereby micellization occurs due to slow removal of organic phase. The solution-casting method involves evaporation of the organic phase to yield a polymeric film, which upon rehydration with a heated aqueous solvent produces drug loaded micelles. The oil-in-water emulsion process is useful for physical entrapment of a hydrophobic drug which involves the use of a nonwater-miscible organic solvent. All of these methods, after sterilization and freeze-drying steps, can be used to produce injectable formulations.

Advantages :

- Incorporate several poorly soluble drugs, inexpensive, safe and stable drug carriers.
- Capsulated drug can be targeted to organs or tissues of interest which can be achieved via the enhanced permeability and retention (EPR) effect.
- Site specific targeting of polymeric micelles is possible by preparing thermo or pH sensitive block co-polymers.
- A vector molecule such as antibody, peptide, lectin, saccharide, hormone and some low molecular-weight compounds can be attached to the surface of micelles that helps in targeting against specific ligands at specific site of interest.

Applications:

- This polymeric system is a safe and less toxic alternative to formulations that use vehicles like dimethyl sulfoxide, ethanol and tween 80 which are undesired due to toxicities.
- Polymeric micelles have been the subject of interest for delivery of poorly soluble anticancer drugs. The amphiphilic block copolymers consisted of a micellar shell forming poly (ethylene glycol) (PEG) block and a core-forming poly (2-(4-vinylbenzyloxy)-N,N-diethyl nicotinamide) block, suggested as a novel polymeric micelle system for solubilising and enhancing the bioavailability of poorly soluble anticancer drugs.
- Therapeutic agents other than anticancer drugs can also be solubilized by using polymeric micelles. An antifungal drug, amphotericin B, has been solubilized successfully by the use of micelles of poly(ethylene oxide)-block-poly(b benzyl-L-aspartate) where the drug was loaded into the micelles using dialysis procedure.

CONCLUSION:

Polymeric micelle systems are novel drug carrier systems that not only enhance water solubility of many hydrophobic drugs, but also are applicable in drug targeting, formulating unstable drugs and reducing the adverse effects. Due to their wide applicability to large group of therapeutic compounds, drug-loading into polymeric micelles is a promising particle technique for formulating other poorly soluble drugs in the future.

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NANOTECHNOLOGY BASED ANTI-CANCER DRUG DELIVERY SYSTEMS: CURRENT TRENDS & PERSPECTIVES

Introduction:

Low aqueous solubility, pharmacokinetics, bio distribution profiles and high toxicity issues are frequent problems that prevent full exploitation of the therapeutic potential of anticancer drug. Nanotechnology based drug delivery systems have been developed as strategies to overcome many of the obstacles that are associated with conventional formulations. The principle aim of using advanced drug delivery systems in pharmaceutical delivery is to enable efficient delivery at the appropriate level of therapeutic agents to the target sites with reduced side effects to the patient. Given the benefits that nanotechnology offers, much effort has focused on producing nanoparticles for the delivery of anticancer drugs. These nano systems can be modified to achieve desirable biological properties like long circulation in the blood stream or targeting properties.

Cancer Disease:

Cancer is a leading cause of death worldwide. About nine million people were died in 2015 worldwide and projected to 12 million deaths by 2030. The most frequent cancer types worldwide are (a) among men: lung, stomach, liver, colorectal, esophagus and prostate; and (b) among women: breast, lung, stomach, colorectal and cervical.

Cancer Nanotechnology:

Nanotechnology is a "disruptive technology" which drives a new generation of cancer preventive, diagnostics and therapeutic products, resulting in dramatically improved cancer outcomes. Nanoparticles drug delivery using biodegradable polymers is expected to provide a more efficient way to overcome some of these problems. The pharmacological properties of a polymer-drug conjugate can be manipulated by changing the physical and chemical properties of the drugs based on nano scale. A vast array of nano-sized delivery systems has been developed and these are largely formed from polymer and lipid materials. The lipid-based systems include liposome, poly (ethylene glycol)–lipid micelles and lipid–drug complexes, while the polymer-based delivery vehicles comprise nanoparticles, nanospheres, polymer–drug conjugates, block copolymer micelles, block copolymer vesicles as well as others.

Nanomaterials for Cancer Therapy:

Various nanoparticles based delivery systems with their therapeutic and diagnostic uses in cancer therapy.

Nanoparticle based delivery systems	**Therapeutic and diagnostic use**
Liposomes	Controlled and targeted drug delivery; Targeted gene delivery.
Nanoshells	Tumor targeting
Fullerene based derivatives	Targeting and organ imaging agent
Carbon nanotube	Drug gene and DNA delivery; Tumor targeting
Dendrimers	Targeted drug delivery
Quantum dots	Targeting and organ imaging agent
Gold nanoparticles	Targeting and organ imaging agent
Solid lipid nanoparticle (SLN)	Controlled and targeted drug delivery
Nonowires	Targeting and organ imaging agent
Paramagnetic nanoparticles	Targeting and organ imaging agent

Liposomes:
Cancer chemotherapeutic drugs and other toxic drugs like amphotericin and hamycin, when used as liposomal drugs produce better efficacy and safety as compared to conventional preparations.

Nanoshells: Nanoshells consist of nanoparticles with a core of silica and a coating of thin metallic shell. These can be targeted to desired tissue by using immunological method which is being evaluated for cancer therapy

Fullerene: Fullerenes (carbon allotrope) also called as "bucky balls" .The buckminster fullerene is the most common form of fullerene measuring about 7 Å in diameter with 60 carbon atoms arranged in a shape known as truncated icosahedrons

Carbon Nanotubes: Carbon nanotubes are cylinders of one several coaxial graphite layers with a diameter in the order of nanometers. They can be classified into two general categories based on their structure: single-walled carbon nanotubes(SWCNTs) and multiwalled carbon nanotubes (MWCNTs) . Heating of organs and tissues by placing multifunctional nanomaterials at tumor sites is emerging as an art of tumor treatment by "nanothermal therapy".

Dendrimers: Dendrimers are artificial macromolecules with tree- like structures in which the atoms are arranged in many branches and sub branches radiate out from a central core. That it is possible to control their molecular properties, such as size, shape, dimension, and polarity, which depend on the branched monomer units. Based on the specific properties, the dendrimers are used in in the development of anticancer drug delivery systems.

Quantum Dots: **(QD)** Quantum dots are inorganic fluorescent semiconductor nanoparticles composed of 10–50 atoms .Their sizes and shapes which determine their absorption and emission properties can be controlled precisely. Targeted ligands have been attached to QDs in order to achieve specific targeting for tumor cell labeling. Thus, they are assured to be chosen as long-term, high- sensitivity imaging agents applied for the detection and diagnosis of cancer in vivo.

Solid Lipid Nanoparticles (SLNs): They are particles of submicron size (50 to 1000 nm) made from lipids that remain in a solid state at room as well as body temperature. Various anticancer agents like doxorubicin, daunorubicin, idarubicin, paclitaxel, camptothesins, etoposide, etc have been encapsulated using this nanotechnological approach.

Nano Wires: Nanowires are glowing silica wires in nanoscale, wrapped around single strand of human hairs. The nanowire-based delivery enables simultaneous detection of multiple analytes such as cancer biomarkers in a single chip, as well as fundamental kinetic studies for bio- molecular reactions. Protein coated nanowires have potential applications in cancer imaging like prostate cancer, breast cancer and ovarian malignancies.

Gold Nanoparticles: Gold nanoparticles have been used as contrast agents in vitro based on their ability to scatter visible light. Successfully used gold nanoparticles conjugated to EGFR antibodies to label cervical biopsies for identification of precancerous lesions. In a subcutaneous model of colon cancer, it was demonstrated that systemically delivered gold nanoparticles conjugated to tumor necrosis factor (TNF) accumulated in tumors.

Paramagnetic Nanoparticles: Paramagnetic nanoparticles are being tried for both diagnostic and therapeutic purposes. Diagnostically, paramagnetic iron oxide nanoparticles are used as contrast agents in magnetic resonance imaging. These have a greater magnetic susceptibility than conventional contrast agents. Targeting of these nanoparticles enables identification of specific organs and tissues. Magnetic nanoprobes are used for cancer therapy.

Future Directions
The first major direction in design and development of nanoparticles are monofunctional, dual functional, tri functional and multiple functional probes. Bioconjugated QDs with both targeting and imaging functions will be useful in targeted tumor imaging and molecular profiling applications. Consequently nanoparticles with three functional groups could be designed for simultaneous imaging and therapy with

targeting. The second direction is to study nanoparticle distribution, metabolism, excretion and pharmacodynamics in *in vivo* animal models. These investigations will be very important in the development and design of nanoparticles for clinical applications in cancer treatment.

Conclusion:

Cancer nanotechnology field has the potential to better monitor therapeutic efficacy, provide novel methods for detecting and profiling early stage cancers. Nano materials have unique features that are attractive, and can be applied to biosensing. The development of various nano materials and nanotechnology has enabled detection of cancer biomarkers with great precision and sensitivity that could not be achieved before. As well, various new biomarkers can be discovered and verified with such sensitive tools. It is therefore highly anticipated that in the near future, nanotechnology shall help to detect cancer at an early stage and monitor the disease with much greater precision.

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GLUTATHIONE- THE MASTER ANTIOXIDANT AS VITAL AS OXYGEN FOR HUMAN LIFE

INTRODUCTION

Glutathione is a small protein produced naturally in body and plays three important roles i.e. Antioxidant, Immune booster and detoxifier thus also knows as the body's essential health AID. Glutathione referred as master antioxidant and protects health naturally by reducing the negative impact of stress hormone, proper cell oxygenation, inhibits cellular mutagens and also warding off hazardous cellular invaders. It neutralizes toxic peroxides and provides antioxidant defense mechanism in all mammalian cells.

"No other antioxidant is as important to overall health as glutathione. It is the regulator and regenerator of immune cells and the most valuable detoxifying agent in the human body"

Role 1: Antioxidant

Antioxidants are valuable in the treatment and prevention of that disease which involves oxidative attack by free radicals. Free radicals play causative role in all shots of illness like heart disease, cancer, diabetes and aging. Glutathione, Vitamin C, vitamin E and selenium are naturally occurring antioxidants acts by neutralizing free radicals. Glutathione referred as the master antioxidant as its presence increases the effectiveness of other antioxidants like vitamin c, vitamin E, lipoic acid and selenium.

Role 2: Detoxifier

Liver is the primary organ for the detoxification. Glutathione in liver eliminate toxins like pollutants, heavy metals, carcinogens, and radiation damage and drug metabolites by a primary mechanism of known as glutathione conjugation.Glutathione also helps in safe and efficient elimination of fat soluble toxins by converting them into water soluble forms.

Role 3: Immune system enhancer

White blood cells are the front line of the immune system. Glutathione serves as food for immune system as it regulates the healthy growth and development of immune cells by increasing W.B.C. production. High level of glutathione produces better ability to prevent illness, disease as well as degenerative process of aging

CONCLUSION

The evidence is strong and consistent that glutathione depletion renders liver cells susceptible to the damaging effects of various drugs and other toxins, contributing to advancing liver disease. Boosting glutathione level helps to support immune function, provide important antioxidant protection to all body cells and also important in the nutritional management of chronic liver infection, liver diseases and HIV infection.

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CANCER VACCINES

Introduction:

In cancer, the body cells become abnormal and divide without control. They may spread through blood or lymphatic system to other parts of body. If the spread is not controlled, cancer can result in death. The cancer can weaken the immune system by invading the bone marrow. Chemotherapy and radiotherapy can weaken immunity by causing a drop in the number of white blood cells made in the bone marrow. There are new treatments aim to use the immune system to fight cancer.

Vaccines:

Vaccines have been used for many years as a way of preventing certain infectious illnesses for example, 'flu, tuberculosis (TB), measles, mumps, typhoid and German measles. Vaccines stimulate the body's immune system to recognise and fight abnormal 'foreign' cells in the body, such as viruses and bacteria.

The Aim of Cancer Vaccines:

The aim of cancer vaccines is to stimulate the immune system to be able to recognise cancer cells as abnormal and destroy them. Some vaccines for particular cancers have been developed and are being tested to see whether they can treat a cancer, or help to stop it from coming back after cancer treatment. Probably the most promising form of cancer treatment is immunotherapy, where scientists are developing several experimental cancer vaccines that could lead to the eradication of cancer in this century.

Types of Cancer Vaccines:

There are two major categories that cancer vaccines fit into:

- Specific cancer vaccine
- Universal cancer vaccine

As the name suggests, specific cancer vaccines are designed to treat specific types of cancers. In other words, a vaccine could be developed for lung cancer,another vaccine could be used to treat colon cancer and yet another vaccine could treatskin cancer and so on. A more appealing cancer vaccine would be one that could fight cancer cells regardless of cancer type. This type of vaccine is called a universal cancer vaccine.

In these two categories, there are more specific types of cancer vaccines. Each type of cancer vaccine works on the same basic idea that the vaccine, which contains tumor cells or antigens, stimulates the patient's immune system, which produces special cells that kill cancer cells and prevent relapses of the cancer. Unlike vaccines for other disease that prevent the occurrence of the disease, there is no vaccine in development that can prevent the onset of cancer. Cancer vaccines are used only as a treatment after the cancer has been found in a patient.

Here is a list of five kinds of cancer vaccines being developed:

Antigen Vaccines: These use tumor-specific antigens - proteins displayed on a tumor cell - to stimulate the immune system. By injecting these antigens into the cancerous area of the patient, the immune system will produce an increased amount of antibodies or cytotoxic T lymphocytes, also known as killer T cells, to attack cancer cells that carry that specific antigen. Multiple antigens can be used in this type of vaccine to vary the immune system response.

Anti-idiotype Vaccines: In some instances, some antibodies, called idiotype antibodies, act as antigens, triggering an immune response similar to that described above. In this case,the immune system will produceanti-idiotype antibodies to attack the idiotvpes. Anti- idiotype antibodies can be mass-produced to produce a vaccine that can be injected to treat cancer.

Dendritic Cell Vaccines: Dendritic cells break the antigens on the cancer cell surfaces into smaller pieces. The dendritic cells then act as most-wanted posters for the immune system, displaying those antigen pieces to the killer T cells. ln order to make dendritic cell vaccines some of the patient's dendritic cells are extracted and immune cell stimulants are used to reproduce large amounts of dendritic cells in the lab. These dendritic cells are then exposed to antigens from the patient's cancer cells. This combination of dendritic cells and antigen is then 'injected into the patient and the Midst& cells work to program the T cell.

DNA Vaccines: With recent DNA (deoxyribonucleic acid) research, scientists are finding ways to use the genetic code of proteins produced in cells to aid the immune systems fight against cancer. Bits of DNA from the patient's cells are injected into the patient, which instructs the other cells to continuously produce certain antigens. This DNA vaccine increases production of antigens, which forces the immune system to respond by producing more T cells.

Tumor Cell Vaccines (Autotogous / Allogeneic bow Cells): Autologous and allogeneic tumor cells were one of the frist types of tumor vaccines to be used. Theoretically, the main advantage of tumor cell vaccines is that they have all the relevant tumor antigens needed by the immune system to mount an effective antitumor response. This is particularly true if autologous tumor cells are used instead of allogeneic tumor cells. Asecond advantage is that tumor cell-based immunization allows the development of cancer vaccines without knowing the specific antigens.

The advantages of tumor cell-based cancer-vaccines must be balanced against two major disadvantages. The potential for autoimmunity and the potential for increasing the anergic status of the T cells due to the lack of functional co stimulatory molecules on tumor cells. Initial attempts to immunize cancer patients with tumor cells were disappointing and temporarily decreased interest in the field.

Conclusion:

The vaccine development for Cancer is an exemplary approach of researchers to fight the most dread full disease around the globe. The various types of cancer vaccines and their clinical trials are most satisfactory and giving energy to the scientific community to concentrate more in this area. Future progress and development in this area surely provide the human kind beautiful weapons to fight with all kinds of cancer. This article may be useful for researchers and student community to refresh their technical knowledge.

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MEDICATED WAFERS

Wafers are paper-thin polymer films used as carriers for therapeutic drugs. This dosage form is taken without water. The wafer quickly dissolves in the oral cavity, and the active ingredient can be absorbed into the blood - stream via the oral mucosa. This bypasses the liver's first-pass effect and improves bioavailability. Depending on the selected wafer type, the active ingredient's release may also be delayed.

Positive aspects:

- ❖ Attractive dosage form with new active ingredients.
- ❖ Extremely useful for renal failure patients.
- ❖ Increase patient compliance.
- ❖ Increase of product appeal through innovative format.

Special features:

- ❖ Thin elegant wafer
- ❖ Available in various sizes and shapes
- ❖ Fast disintegration and rapid release
- ❖ The drug to be incorporated should have low dose i.e., below 40 mg.
- ❖ The drugs with smaller and moderate molecular weight are preferable.
- ❖ The drug should have good stability and solubility in water as well as in saliva.
- ❖ It should be partially unionized at the pH of oral cavity.
- ❖ It should have the ability to permeate oral mucosal tissue.

Advantages of wafers:

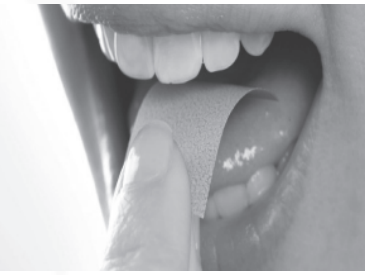
- ❖ No first – pass effect
- ❖ Improved bio-availability, translates to lower doses
- ❖ Reduction of side-effects
- ❖ Reduced impact on the gastro intestinal tract
- ❖ Discrete and easy application (no additional intake of liquids required)
- ❖ Excellent compliance, especially in children and seniors
- ❖ High dissolution due to a large surface area
- ❖ No risk of choking

Formulation consideration:

Active pharmaceutical ingredient, Wafer forming polymers, Plasticizer, Sweetening agent, Saliva stimulating agent, Flavoring agent, Coloring agent etc.

List of marketed wafers:

- ❋ Doneprezil and Ondansatron rapid dissolving films by Labtec Pharma
- ❋ Altoid cinnamon strips, Boots vitamin c strips, Benzocaine films, Caffeine films by Dow chemical company
- ❋ Listerine Pocket Paks, Breath Freshening Strips by Pfizer
- ❋ Gas-X (Simethicon), Triaminic by Novartis
- ❋ Orajel (menthol) by Del
- ❋ Sudafed (Phenylephrine) by Wolterskluwer health Inc.



Applications:

Taste masking: Wafer drug delivery is the masking of the often bitter and poor taste of drug Formulations.

Vaccination: Rotavirus vaccine is a Room temperature stable quick-dissolving oral thin Film delivery system for vaccines that will make Vaccinations almost as simple as freshening your Breath.

Sustained release film: Sustained release Strip is applicable in hospital preparations and drug carriers. Polymer like Chitin and Chitosan derivatives are used as excipient and drug carriers.

Nano wafer drug delivery for corneal cystinosis: Nanofabricated drug delivery system that can deliver the drug in a controlled release fashion for prolonged periods, thereby enhancing the drug efficacy and patient compliance.

In Chemotherapy: Chemotherapy wafers as well as surgery and radiotherapy can help some people with glioma.

In wound healing: Lyophilized wafers can be considered as ideal carriers of therapeutic agents, including antimicrobials and therefore are thought to be efficient systems to deliver antimicrobial treatment on a wide range of suppurating chronicwounds.

Wafers formulations are appropriate in allergenic conditions, cough and cold remedies, sore throat, nausea, pain and CNS disorders.

Conclusions:

Medicated Wafers as novel drug delivery systems have better patient compliance and may offer improved Biopharmaceutical properties, improved efficacy and better safety compared with conventional oral dosage forms. Flash release oral Wafer is most acceptable and accurate oral dosage form which bypass the hepatic system and show more therapeutic response. Oral Wafers can replace the over-the-counter (OTC) drugs, generic and name brand from market due to lower cost and consumer‘s compliance.

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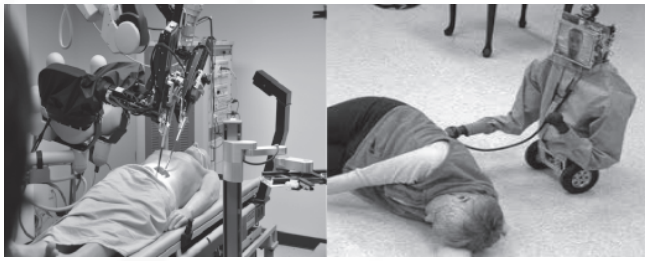
ROBOTS IN HEALTH SCIENCES

Robots have proved to be useful in many fields of medicine. Mobile robots in hospitals fetch or distribute medicine, while rehabilitation robots facilitate and support the lives of infirm, elderly people and handicapped. Robot-assisted surgery integrates advanced computer technology with the experience of skilled surgeons. This technology provides the surgeon with magnified, high definition, 3D image of the body’s intricate anatomy. The surgeon can use surgical instruments that are smaller, as well as more flexible than the human hand. The robot replicates the surgeons hand movements, while minimizing the hand tremors.The surgeon thus can operate with high precision, dexterity and control even during the most complex procedures.

Neurosurgery is especially suitable for the application of robots. The robotic surgeon has visual “similarity” with man, and the second one relates to the possible “independence” of robots in decision making. Due to the development of intelligent management software and sensor systems, the robot can replace the surgeon in his functions and such a replacement may be significantly “more effective”.

New robotic applications require new solutions, both in terms of structure and management methods, and in



the application of new materials and sensors. Combinations of organic and inorganic materials to create bionic robots with the trend of “using” the robot made entirely “of living matter,” or genetically modified organisms that perform programmed functions are used in experiments. Surgeons and physicians need to learn to operate the state of the art robotic platforms and integrate computer enhanced, finely-tuned surgical skills in their expertise. Therefore, the concept of robotics is gradually changing in relation to the established and existing definitions derived from the earlier use of robots exclusively for industrial purposes. Use of robots is still in very initial stages in india though some hospitals have started giving training.

Esther Rani,

IV B. Pharm

ZIKA VIRUS

INTRODUCTION:

Zika virus is a virus found in Zika forest of Uganda located in Africa. It appeared first time in the year 1947. This virus causes a mild fever known as "**Zika fever**" which is quite similar to Dengue fever. This virus is a Arbovirus; Arbo means Arthropods e.g. Mosquitoes. It consists of a "single strand RNA {ss RNA}" as its genitic material.

VIRUS CLASSIFICATION:

GROUP:	Group IV
FAMILY:	Flaviviridae
GENUS:	Flavivirus
SPECIES:	Zika virus

TRANSMISSION:

1. This Zika virus is transmitted from mondey to monkey through mosquito.
2. This cycle is called "Monkey- Mosquito – Monkey" cycle
3. Mosquito which acts as a vector belongs to a genus "Aedes".
4. Regarding recent studies the name of the mosquito which transmits this disease is "Aedes albopictus".
5. This mosquito also transmits a familiar disease Chikungunia and Dengue.
6. The incubation period in mosquito in nearly 1 week.
7. This virus mostly transmitted during day time.

Symptoms of Zika fever:

- Headache
- Rashes on the skin
- Conjunctivitis
- Joint pains
- Malaise

Test to identify Zika virus:

The preferable test to identify is **"RT-PCR"** (Reverse Transmission – Polymeric Chain Reaction). It is the only preferable technique to identify the virus presence in the blood or body.

Affects:

This virus affects the brain of the fetus i.e., *Microcephaly* which means abnormally small head and brain which results in.

- Neurological and intellectual effects.
- Seizures.
- Vision and hearing problems.

Mode of Transmission:

- Mosquitoes.
- Infected mother to child.
- Infected blood transfusion.
- Sexual contact with the affected.

Prevention:

Prevent the mosquito bite during day time.

Apply mosquito repellents all the time.

Till now no correct vaccine is found for this disease.

The research is going on to find a correct vaccine for this virus.

Recently a temporary vaccine is found in Hyderabad in the form of an Injection which is approved by W.H.O (World Health Organization).

-U.N.S. Lakshmi Narasa,
I B.Pharm

ELECTRONIC ASPIRIN

Cluster Headaches :

Cluster headache is a very disabling condition. Sufferers can have cluster attacks many times per day, each lasting 15 minutes to 3 hours. Living with cluster headache can be very difficult and it is one of the most severe pains known to humans. Cluster headache is often called 'suicide headache', because it tempts the person towards thinking of suicide.

Current Treatments & Need of New Treatments:

Current treatments to relieve symptoms include preventive and acute abortive drugs such as injectable medications and inhaled oxygen. Some patients may experience significant side effects or have risk factors with these medications. Hence, there is a considerable need for a new treatment option.

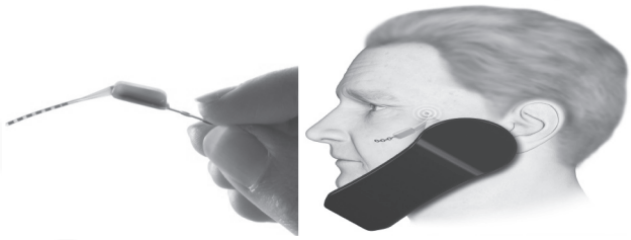
Electronic Aspirin:

The sphenopalatine ganglion (SPG) is a nerve bundle located behind the nose and it is a part of the autonomic nervous system. The SPG is directly involved in the cluster attack pain pathway. Stimulation of the SPG offers a reversible and adjustable option to control the debilitating pain of cluster headache. Based on this doctors have targeted the SPG for a long time with various procedures intended to relieve cluster attack pain.

There is a technology under clinical investigation at Autonomic Technologies, Inc., They designed a patient-powered tool for blocking SPG signals at the first sign of a headache and this is called as 'ELECTRONIC ASPIRIN'.

Working of Electronic Aspirin:

This system involves the permanent implant of a small nerve stimulating device in the upper gum on the side of the head normally affected by headache.



The neurostimulating electronic aspirin delivers low-level energy directly to the area of the SPG. The System includes:

1. The Neurostimulator: A miniaturized neurostimulator (smaller than an almond) with an integral lead designed to fit ranging facial anatomy.
2. The Remote Controller: A hand-held device with simple therapy controls provides on-demand patient-controlled SPG stimulation therapy. Therapy settings are individualized and can be adjusted quickly by physicians using a customized laptop computer.

The electronic neurostimulator is inserted through a small incision in the upper gum above the second molar and positioned at the SPG nerve bundle. The SPG is located deep in the face on either side of the nose. The neurostimulator is placed on the same side of the patient's headache pain. The procedure leaves no external scars.

The lead tip of the implant connects with the SPG bundle, and when a patient senses the onset of a headache, he or she places a handheld remote controller on the cheek nearest the implant. The resulting signals stimulate the SPG nerves and block the pain-causing neurotransmitters. To stop treatment, the Remote Controller is simply removed from the cheek, turning off stimulation therapy. The Pathway CH-2 study is evaluating the Electronic Aspirin neurostimulation System in patients suffering from chronic cluster headache

D.Shanti Krupa,
Asst. Prof., Dept. of Pharmacology

GENERIC PRESCRIBING

The term 'generic prescribing' describes the use in prescribing of a non-proprietary title for a pharmaceutical preparation. Generic prescribing allows for any suitable drug, rather than a particular brand of drug, to be dispensed. Generic prescribing rates are much higher in the UK than in many other countries.

Maintaining a high rate of generic prescribing can be achieved by:-

- Education of doctors and pharmacists.
- Education and information for patients.
- Good quality control and regulation to maintain therapeutic equivalence.
- Incentives to encourage generic prescribing.
- Careful selection of brand names.

Benefits of generic prescribing-

- The cost of generics is less than branded ones. Once the patent expires, the drug price falls substantially if there are generic producers. When more generic producers invade the market, more is the competition; leading to fall in prices. This can lead to cost savings because cheaper alternatives can be prescribed.
- It may avoid delay because the chemist can dispense a wider range of alternative preparations, rather than being limited to one which may not be stocked.
- Generic drugs reduce the monopoly and oligopoly power of patent holders.
- Generic drugs do not have unfavorable effects on an individual.
- The potency and safety are comparable to that of branded drugs.
- The use of generic drugs can add up to marked savings for the elderly who generally take more medication than the young and may have less available income.

Threats of generic prescribing-

- Generic prescribing need careful interpretation when passing judgment on the quality of prescribing.
- Some studies suggested that a high rate of low-cost statin prescribing did indeed result in poor.
- Lead to confusion for the dispensing chemist or the patient to understand that either the selected generic is having equal bioavailability with brand or not.
- One German study found that generic substitution may be associated with a nocebo effect (nonspecific side-effects which cannot be substantiated by pharmacological factors).
- Confusion over brand names is also an issue and education by prescribing doctors, dispensing pharmacists and manufacturers is important.
- Generic prescription is not always possible. Some examples are:
- Where there is a particularly narrow therapeutic index; for example:
    - ❖ Lithium carbonate
    - ❖ Ciclosporin
    - With modified-release preparations such as:
    - ❖ Theophylline
    - ❖ Diltiazem
    - With compound preparations; for example:
    - ❖ Oilatumemollient.

Conclusions:-

Generic drugs are effective, safe and bioequivalent as branded drugs. As the branded drugs are costly, generics become the preferred alternatives. India is emerging as a preferred hub where various multinational pharmaceutical companies intend to invest and generate revenue due to its huge human resource at affordable cost along with a very potential domestic market as well. Thus the Indian pharmaceutical sector has tremendous opportunities for generic drugs in the times ahead.

K. Malleswari & T. Haripriya,
I B. Pharm

PREFILLED SYRINGES

Introduction

The prefilled syringes are relative newcomer to the syringe market. The prefilled syringe contains medicine in a plastic cartridge and has a plastic cap to cover the needle and prevent accidental needle sticks. They are for single use and are immediately discarded after injecting the medication. Some common types of prefilled syringe for home use include medicines like insulin, epinephrine (Epi-pen®). There are over 20 pharmaceutical companies manufacturing prefilled syringes.

Manufacturing process

Traditional filling method includes filling of syringe with solution and then closing and then final sterilization of that prefilled syringes. But this method has disadvantages that there are chances of bubble in the prefilled syringes. Newer technique developed by HCM's (Hyaluron Contract manufacturing) patented method of syringe filling involves online vacuum filling coupled with online vacuum stoppering, Known as bubble-free filling. It eliminates the air bubble inside the syringe, (known as "head space"), that results from traditionally filling methods. Furthermore, totally removing the gas bubble improves the stability of oxygen sensitive compounds. Another advantage is that bubble-free filling is compatible with coated stoppers. This benefit arises from the nature of the filling process rather than anything to do with the gas bubble itself. Conventional filling process use a rod to push the stopper into place, but this can damage stopper coatings. In bubble-free filling, a vacuum (or, more accurately, differential pressure) is used to place the stopper.

Sterilization process

Sterilization of prefilled syringe is mainly done by autoclaving or by ionizing radiation. Autoclave is not suitable of glass prefilled syringes and normal plastics, as there occurs a pH shift in glass syringes during autoclave sterilization process. Mainly used method of sterilization is ionizing radiations. Gamma sterilization has proved to be an efficient means of sterilizing prefilled syringes. Ionizing radiation has the advantage of sterilization the syringe plungers while they remain in their packaging. Possible risks of contamination are therefore limited to handling when transferring the components to the sterilizing zone where the products are packed. Radio sterilization takes place without moisture. Therefore, the stoppers do not have to be dried before use. Gamma rays are highly penetrating and can be used for treating whole syringe. The exposure dose is well controlled and can be easily recorded.

Steps to use

Step 1: Verify the label on prefilled syringe as it may be serious if wrongly injected.

Step 2: Take out the syringe cap and needle cap without touching the needle tip to prevent the contamination of the syringe.

Step 3: Insert the needle. Manually inserting a needle into skin can be the most challenging element of self injection. This is to be expected because our survival has depended on avoiding injury, so our natural instinct is to avoid actions that would result in a self-inflicted wound. Again, the current generation of auto injector typically features auto insertion of the syringe needle to overcome this challenging step.

Step 4: Once injection is completed, the patient must dispose the used syringe.

Why they were not in use

Prefilled syringes are not used widely because there are no prefilled syringes with integrated safety feature. Pharmaceutical companies marketing drugs in prefilled format have main option to comply with laws specking to protect healthcare workers from needle stick injuries.

Conclusion

It can be concluded that there is vast scope for development of prefilled syringe market. As there are many advantages of prefilled syringes like convenience, affordability, accuracy, sterility, safety, marketing advantages, manufacturing advantages, and marketing advantages. Thus, prefilled syringes will eventually replace the conventional type.

Dr. A.V. Badari Nath,
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MALNUTRITION AMONG WOMEN

For normal growth and development, human beings require energy, proteins and other nutrients in adequate amounts. Under nutrition, defined as failure to consume adequate energy, protein, and micronutrients to meet basic requirements for body maintenance, growth, and development. While under-nutrition is still prevalent in developing countries like India. The scale of under nutrition has also been studied among other populations and age groups, such as pregnant and lactating women.

Malnutrition worldwide includes a spectrum of nutrient–related disorders, deficiencies, and conditions such as intrauterine growth retardation, protein-energy malnutrition, iodine deficiency disorders, vitamin A deficiency, iron-deficiency anaemia, and overweight/ obesity and other diet-related non-communicable diseases. Malnutrition is India's silent emergency and among India's greatest human development challenges. Around half of all pregnant women in developing countries are anemic, because they lack access to iron-rich foods. Women of child bearing age are vulnerable to food shortage in arid areas and this ultimately affects their nutritional status. Anemia is responsible for causing deaths during childbirth every year. Protein-energy malnutrition (PEM) may be present at any time during the life cycle, but it is more common in the extreme ages, that is, during infancy/childhood and in the elderly. Malnutrition is one of the most devastating problems worldwide and is inextricably linked with poverty. It is estimated half of anaemia cases are due to iron deficiency. Iron is a key component of micronutrient blends which are used in large-scale and targeted fortification programs. Malnutrition and its associated disease conditions can be caused by eating too little, eating too much, or eating an unbalanced diet that lacks necessary nutrients. Iodine deficiency is the greatest single cause of mental retardation and brain damage of children. It can easily be prevented by adding iodine to salt. Vitamin A deficiency causes early childhood blindness and increases the severity of infections and anaemia.

Recommendation

- Enhancing diversified diets should be encouraged.
- Awareness on proper nutrition should be done through education to the community. While the focus of attention in the field of nutrition continues to be on the substantial proportion of women with a chronic energy deficiency, the problem of protein-energy malnutrition in the women of child bearing age cannot be ignored.
- An association really reflects between nutrition status and age, marital status, education level and income level. Overcoming the barriers in order to achieve improved nutrition, in this group requires multidisciplinary collaborations of health care providers, academics, professional organisations, policy makers, and industry and service users.
- Nutrition should be a societal responsibility and requires a multi-sectoral, collaborative approach. There is need to encourage and train the community on the importance of girl education. More needs to be done at a policy level, both with regards to enabling these women access to optimal nutrition and in modifying the nutrition message that they receive.
- Special Nutrition Programmes initiationfor women.

Dr. B. Parimala Devi
Prof. Dept. of Pharmacognosy

GENERIC DRUGS AND BRANDED DRUGS – A REVIEW

INTRODUCTION:

Medicines used to treat various ailments today have more than one name: a generic name and a brand name. The generic name is the official medical name of the active ingredient of the medicine whereas, the brand name is chosen by manufacturer. Brand name medications can only be produced and sold by a pharmaceutical company under a trademark protected name that holds the patent for the drug. Brand name drugs may be available by prescription. A generic drug is a pharmaceutical product that is comparable to brand drug product in dosage form, strength, route of administration, quality and intended use usually intended to be interchangeable with an innovator product that is manufactured without a license from the innovator company and marketed after the expiry date of the patent or other exclusive rights. The generic pharmaceutical industry is growing and these medicines are most likely to become more common in a couple of years as a number of popular drugs come off patent through 2015. Although the use of generic medication is becoming more widely accepted, many consumers have mistrust on generic medicines and their use is a controversial issue amongst doctors. Therefore, information on similarities and differences between generic and branded drugs is needed to educate physicians and consumers about the medicines which they prescribe or use. There is also a need to ensure the safety and risks of generic drugs that can be associated with switching from branded to generics. Hence the present review is focused on such information including the approval processes for branded and generic drugs through NDA and ANDA respectively.

When a pharmaceutical company develops a drug, it applies for a patent on the drug's specific molecular formula. These patents last for 15-20 years (depending on when the drug was patented). During this "patent protected" period, the company that developed the drug essentially owns all rights to that drug. Only that one company is allowed to manufacture, market, and sell the drug. This patent protection is important for pharmaceutical companies to get profits because they spend billions of dollars to develop, test, and begin production of a new drug. The patent period allows a "protected" stretch of time during which the company can earn this money back and, ultimately, turn a profit. Drugs sold during the patent protected period are only available as "name brand" versions. For as long as a drug patent lasts, a brand name company enjoys a period of "PATENT PROTECTION" or monopoly, in which the company is able to set the price of the drug at a level which it gets maximum profitability. The profit often greatly exceeds the development and production costs of the drug.

Generic drugs become available only after the patent protection ends on a brand name drug. Many other companies are allowed to begin manufacturing the same drug and the company that makes the brand name drug may also produce the generic version. Generics are typically much cheaper, because the companies making them don't have to recoup any research and development costs, just the investment required to set up a production line to actually make the substance. Generic drugs can be produced without patent infringement (no patent right), for drugs where the patent has expired. For drugs which have never held patents differs from country to country; typically an expired patent cannot be renewed in countries where the drug does not have current patent protection.

There are two types of drug manufacturers: Pioneer firms and generic firms. The first category does the research and development of new drugs and bring them to market. To legally manufacture and market new products in the United States, the pioneer company must send a New Drug Application (NDA) to the FDA for approval. The second type of firm is the generic or imitator firm. To manufacture the generic drug, it needs to submit an Abbreviated New Drug Application (ANDA) to the FDA.

Branded Drug :

A branded name drug also called 'innovator drug' is the original medicine that is discovered, developed, patented and marketed by a pharmaceutical company. Brand name is the trade name given by the manufacturer usually on the basis that it can be recognized,

pronounced and remembered by health care professionals. Brand name medications can only be produced and sold by the company that holds the patent for the drug for a period of 15-20 years. Once the patent expires, other drug companies have the right to manufacture and market it as generic drug including the innovator/ pioneer firm whose patent is expired.

Generic Drug:
A generic drug is a pharmaceutical product, usually intended to be interchangeable with an innovator product. It is the copy of original brand name drug manufactured and marketed after the expiry date of the patent or other exclusive rights or without a license from the innovator company. The type and quantity of the active ingredient in the generic product is the same as the branded medicine, but the inactive ingredients are slightly different and may look different in color, shape etc., to the original. It is comparable [or] bioequivalent to a brand drug product in dosage form strength, route of administration, quality, performance, characteristics and intended use. It is a term referring to any drug marketed under its chemical name without advertisement. There are three main types of generic medicines. A pseudo-generic or "clone" medication, a licensed generic and the true generic.

Pseudo-generic Drug:
A pseudo-generic/ ultra-generic drug is identical in all aspects to a "brand leader", apart from its name and identifying details on the product label. In most cases, the pseudo-generic comes from the same factory as the brand leader. It is not a remake of original; it is an exact replica of the original. It is manufactured by the pioneer company with exactly same ingredients in the same way but the only difference is the name and packing. These medicines are usually marketed by the same manufacturer at the same price as original to combat true generics and to discourage competitor pharmaceutical companies from entering the market for the particular medicine.

Licensed Generic Drug:
The second type of generic is a licensed generic. These products are made with the same formulation as the brand leader but they're made somewhere else by another company. In essence, this company has purchased the recipe to remake the drug.

True Generic Drug:
The final type is the "true" generic. This means that the manufacturing company has formulated their own recipe containing the active ingredient. Where clone and licensed generics are essentially identical to the original product and contain the active ingredient along with all other ingredients such as fillers, colouring agents and lubricants, a true generic may only contain the chemically active ingredient but everything else may be different.

Interchangeability between Brand and Generic Drugs:

When a doctor writes a prescription or a consumer buy an OTC medicine, they may have a choice between a branded medicine and generic medicine. Consumer point of view it is advisable to get the generic medicines as they are 30% - 80% cheaper than branded drug, contain same active ingredient similar to its brand comparable though inactive ingredients are different from its brand comparable. Different manufacturers use different excipients which create small differences between them, such as color, appearance, the time taken for its dissolution in the gut and its systemic absorption. However, such differences are rarely significant which is why generic and branded drugs are interchangeable. As per thefood and drug administration (FDA) guidelines, generic drugs should have same quality, strength, purity, stability and bio equivalency as their brand name versions which also favor interchangeability between branded and generic drugs. A study by Kesselheim et al., on the published results of 38 clinical trials that compared cardiovascular generic drugs to their brand name drugs revealed that there is no evidence for brand name heart drugs worked better than generic drugs. Physician/ consumer point of view, one has to understand that the brand drugs and generic drugs though look different cannot be given/ taken together; always one must be replaced or is substituted while considering for the interchangeability. Similarly, while treating certain critical conditions like epilepsy the substitutes should not be used and the pharmacist must not offer a substitute.

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Vijaya Sri P[2] & Padmalatha K[3]
Dept. of Pharmaceutics[1,2]
& Dept. of Pharmacology[3]

THE POWER OF POSITIVE ATTITUDE

A positive attitude leads to success and happiness. It helps you cope more easily with the daily affairs of life. It brings optimism in to your life and makes it easier to avoid worries and negative thinking. It would bring constructive changes in to your life and makes you more successful. Your whole life becomes filled with light this life affects not only you and the way you look at the world but it also affects your environment and people around you positive attitude increases your birth in your abilities and hope for a brighter future.

POSITIVE ATTITUDE MANIFESTS IN THE FOLLOWING WAYS

1. Positive thinking
2. Constructive thinking
3. Creative thinking
4. Optimism
5. Motivation and energy to do things
6. An attitude of happiness and accomplish goals
7. It makes you look at failure and problems as blessings in disguise
8. You look for solutions instead of dwelling on problems
9. You see and recognize opportunities

SIMPLE TIPS FOR DEVELOPING A POSITIVE ATTITUDE

1. Look at the bright side of life it's a matter of choice and repeated attempts
2. Choose to be optimistic
3. Find reasons to smile more than often
4. Have faith in yourself and believe that the universe can help you
5. Associate yourself with happy people
6. Read inspiring stories, read inspiring quotes, read affirmations that inspire and motivate you
7. Visualize only what you want happen not what you don't want
8. Learn to master your thoughts

S. Jyothsna
II B.Pharm

❁ ❁ ❁

Long long ago.. There is meaning for Green..

Winter breeze and a moonlight night, Old granny with all hair white,
Holding me tightly in her lap, Covering the face with a woollen cap,
And deeply peering in the moonlight.

Little me, Hear the howling of jackals, Far in the dense woods,
Hooting of owls made me scare, The ghostly jungle was not so good.

Now, No more the dear granny. Myself, A demure woman.
Once again,I stand at the same window, Travelling down the memory lane.

Gone are the woods and So are the jackals, Owls vanished,
Vanished wild animals.

Poor me, Scared again, Scared by a weird thought, Whether my grand daughter
Would ever know the meaning of green.

M. Vikhila,
III B.Pharm

CHILDREN LEARN WHAT THEY LIVE

If children live with critism, they learn to condemn,

If children live with hostility, they learn to fight,

If children live with fear, they learn to apprehensive,

If children live with pity, they learn to feel sorry for themselves,

If children live with ridicule, they learn to shy,

If children live with jealousy, they learn to envy,

If children live with shame, they learn to feel guilty,

If children live with encouragement, they learn to feel confidence,

If children live with tolerance, they learn to feel patience,

If children live with praise, they learn to feel appreciation,

If children live with acceptance, they learn to love,

If children live with approval, they learn to like themselves,

If children live with recognition, they learn it is good to have a goal,

If children live with sharing, they learn to generosity,

If children live with honesty, they learn to truthfulness,

If children live with fairness, they learn to justice,

If children live with kindness and consideration, they learn to respect,

If children live with security, they learn to have faith in themselves.

-Sk. Rehana & P.Vinitha Sree
II B Pharm

SRK FOUNDATION
ENIKEPADU, VIJAYAWADA

VIJAYA INSTITUTE OF PHARMACEUTICAL SCIENCES FOR WOMEN

SALIENCES

'విజయ మహిళా' ఫార్మసీ విద్యార్థినికి గోల్డ్‌మెడల్

రామవరప్పాడు: ఫార్మసీ విభాగంలో అత్యధిక మార్కులు సాధించిన విజయ మహిళ ఫార్మసీ కళాశాలవిద్యార్థిని మహమ్మద్ నౌరీ సుల్తానాకు జెఎన్‌టీయూ గోల్డ్ మెడ్ అందజేసినట్లు ప్రిన్సిపాల్ పద్మలత తెలిపారు. బంగారు పతకం సాధించిన సుల్తానాను కళాశాల ఛైర్మన్ బోయపాటి అప్పారావు, సెక్రటరి శ్రీకృష్ణ, అధ్యాపక బృందం ఈ సందర్భంగా అభినందించారు.

టేబుల్ టెన్నిస్‌లో తొలి స్థానం: విజయ ఫార్మసీ మహిళా కళాశాల విద్యార్థినులు గుంటూరులోని చెబ్రోలు హనుమయ్య ఇన్స్టిట్యూట్ ఆఫ్ ఫార్మాస్యూటికల్ సైన్సెస్ వారు నిర్వహించిన ఆటల పోటీల్లో ఉత్తమ ప్రతిభ కనబర్చి టేబుల్ టెన్నిస్‌లో తొలి స్థానంలో నిలిచినట్లు కళాశాల ప్రిన్సిపాల్ పద్మలత తెలిపారు.

• కంకిపాడు • పెనమలూరు • విజయవాడ రూరల్ • ఇబ్రహీంపట్నం

సదస్సులో పాల్గొన్న విద్యార్థులు, ఔషధ పరిశోధనలకు సంబంధించి సీడీ ఆవిష్కరిస్తున్న జాతీయ పోషక ఆహార శిక్షణ సంస్థ సైంటిస్ట్ డాక్టర్ ఎన్.హరిశంకర్ తదితరులు

పరిశోధనలపై దృష్టిపెడితేనే...
ఉజ్వల భవిష్యత్

● జాతీయ పోషక ఆహార శిక్షణ సంస్థ సైంటిస్ట్ డాక్టర్ ఎన్.హరిశంకర్

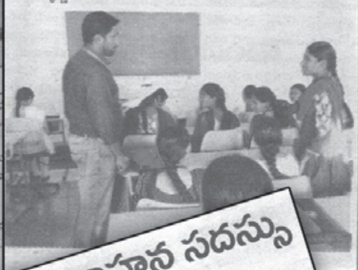
గుణదల: ఆధునిక పరిజ్ఞానాన్ని అందిపుచ్చుకుని పరిశోధనలపై దృష్టిపెట్టే వారికి మంచి భవిష్యత్ ఉంటుందని జాతీయ పోషక ఆహార శిక్షణ సంస్థ సైంటిస్ట్ డాక్టర్ ఎన్.హరిశంకర్ అన్నారు. విజయవాడ రూరల్‌మండలం ఎనికేపాడులో విజయ మహిళా ఫార్మసీ కళాశాల వారు ఔషధశాస్త్రంలో నూతన పద్ధతులపై రెండు రోజుల అవగాహన సదస్సును శుక్రవారం ప్రారంభించారు. కార్యక్రమానికి ముఖ్య అతిథి గా విచ్చేసిన ఆయన మాట్లాడుతూ, ...

టేబుల్ టెన్నిస్‌లో విజయ ఫార్మసీ విద్యార్థుల ప్రతిభ

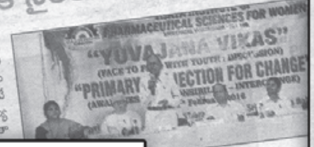
విజయవాడ రూరల్, నవంబర్ 29 (ఇవిఎన్): స్థానిక ఎనికేపాడులోని ఎస్ఆర్‌కె ఫౌండేషన్ వారి విజయ ఫార్మసీ మహిళా కళాశాల విద్యార్థినిలు, గుంటూరులోని చెబ్రోలు హనుమయ్య ఇన్స్టిట్యూట్ ఆఫ్ ఫార్మాస్యూటికల్ సైన్సెస్ వారు ఆధ్వర్యంలో ... టేబుల్ టెన్నిస్ పోటీల్లో విజయ ఫార్మసీ కళాశాల విద్యార్థినిలు ... ప్రిన్సిపాల్ డాక్టర్ కె. పద్మలత, ... కళాశాల ఛైర్మన్ బి.ఎస్. అప్పారావు, సెక్రటరీ బి.ఎస్.శ్రీకృష్ణ ...

విజయ మహిళా ఫార్మసీ కళాశాలలో
ప్రాంగణ ఎంపికలు

విజయవాడ రూరల్, ఫిబ్రవరి 16 (ఇవిఎన్): స్థానిక ఎనికేపాడులోని ఎస్ఆర్‌కె ఫౌండేషన్ వారి విజయ మహిళా ఫార్మసీ కళాశాలలో ఎజిస్ హెల్త్ సంస్థ ప్రాంగణ ఎంపికలు నిర్వహించారు. ఈ ప్రాంగణ ఎంపికలకు పలు కళాశాలల నుంచి సుమారు 250 మంది విద్యార్థులు విజయ ఫార్మసీ మహిళా కళాశాలలో బి.ఫార్మ్, ఎం.ఫార్మ్ అర్హత కలిగిన విద్యార్థులు పాల్గొన్నారు. ... ఎంపికైన విద్యార్థులను కళాశాల ప్రిన్సిపాల్ కె.పద్మలత, కళాశాల ఛైర్మన్ బి.ఎస్.అప్పారావు, సెక్రటరి బి.ఎస్.కృష్ణ అభినందించారు.



ప్రతి ఒక్కరికీ నైతిక విలువలు ముఖ్యం



మాట్లాడుతున్న వక్తలు

ఫార్మారంగంలో ఉజ్వల భవిష్యత్

రామవరప్పాడు: ప్రస్తుతం ఫార్మారంగంలో విద్యార్థులకు ఉజ్వల భవిష్యత్ ఉందని విజయా ఫార్మసీ మహిళ కళాశాల ప్రిన్సిపాల్ పద్మలత అన్నారు. ఎనికేపాడులోని విజయా ఫార్మసీ మహిళ కళాశాలలో మంగళవారం 'ఓరియంటేషన్ ప్రోగామ్'ను నిర్వహించారు. ఈ సందర్భంగా పద్మలత మాట్లాడుతూ ఫార్మా రంగంలో విశిష్ట ప్రాముఖ్యత పెరిగిందన్నారు. బీఫార్మ్, ఫార్మాడీ కోర్సులను పూర్తి చేసుకున్న విద్యార్థులకు ఉన్నత ఉపాధి అవకాశాలు లభిస్తున్నాయన్నారు. ఈ సంవత్సరం నుంచి ఫార్మాడీ కోర్సును కూడా కళాశాలలో ప్రవేశ పెట్టామన్నారు. దీని కోసం ప్రభుత్వ జనరల్ హాస్పటల్‌లో ఎమ్ఓయు కూడా తీసుకోవడం జరిగిందని, దీని వల్ల ఫార్మసీ విద్యార్థులకు 750 పడకల హాస్పటల్‌లో శిక్షణ పొందే అవకాశం ఉంటుందని తెలిపారు. కమ్యూనికేషన్ స్కిల్స్ శిక్షకుడు గంగాధరరావు మాట్లాడుతూ అంతర్గత నైపుణ్యాలు పెంపొందించుకోవడం వల్ల ఉపాధి అవకాశాలు మెరుగవుతాయన్నారు. ...

అంతర్గత నైపుణ్యాలపై అవగాహన కల్పిస్తున్న గంగాధరరావు

నూతన పరిశోధన పద్ధతులపై అవగాహన సదస్సు

విజయవాడ రూరల్, జనవరి 29 (ఇవిఎన్): ...

సదస్సులో ప్రసంగిస్తున్న వక్త

ఉత్సాహంగా విజయ మహిళా కళాశాలల వార్షికోత్సవం

- ఆకట్టుకున్న విద్యార్థినుల నృత్యాలు
- విద్యార్థినులు ఉన్నత లక్ష్యాలకు చేరుకోవాలి..
- నైపుణ్యతతో చదివితేనే ఉపాధి అవకాశాలు

...లకు సర్టిఫికెట్లు ప్రదానం చేస్తున్న దృశ్యం

జ్యోతిప్రజ్వలన చేసి వార్షికోత్సవాన్ని ప్రారంభిస్తున్న టివి నారాయణ

ప్రాంగణ ఎంపికలో 65 మంది

గుణదల: విజయ మహిళా ఫార్మసీ కళాశాలలో ఎజిస్ హెల్త్ సంస్థ వారు నిర్వహించిన ప్రాంగణ ఎంపికల్లో 65 మంది విద్యార్థులు ఎంపిక అయినట్లు కళాశాల ఛైర్మన్ బి.ఎస్.అప్పారావు తెలిపారు. ... 250 మంది హాజరయ్యారు. ... ప్రతిభ చూపిన 65 మంది ఎంపికైనట్లు కళాశాల ఛైర్మన్ అప్పారావు చెప్పారు. కార్యక్రమంలో కళాశాల ప్రిన్సిపాల్ డాక్టర్ కె.పద్మలత తదితరులు పాల్గొన్నారు.

జనశిక్షణ సంస్థాన్‌లో వ్యాసరచన పోటీలు 19న

ఆంధ్రజ్యోతి, విజయవాడ: జనశిక్షణ సంస్థాన్ ఆధ్వర్యంలో ... వివరాలకు 0866-2470420 ...

విజయ మహిళా ఫార్మసీలో 'ఎమర్జింగ్ ట్రెండ్స్ అండ్ ఇన్నోవేషన్ ఇన్ డ్రగ్ డెలివరీ'పై సదస్సు

విజయవాడ రూరల్, మార్చి 18 (ఇవిఎన్): స్థానిక ఎనికేపాడులోని ఎస్ఆర్‌కె ఫౌండేషన్ విజయ మహిళా ఫార్మసీ కళాశాలలో భారత ఔషధ సంఘం ఎనికేపాడుశాఖ ఆధ్వర్యంలో 'ఎమర్జింగ్ ట్రెండ్స్ అండ్ ఇన్నోవేషన్ ఇన్ డ్రగ్ డెలివరీ' అనే అంశంపై రెండు రోజుల జాతీయస్థాయి సదస్సును శుక్రవారం ప్రారంభించారు.

ఈ సదస్సుకు ముఖ్యఅతిథిగా పాల్గొన్న డిప్యూటీ ఫార్మసీ టెక్నాలజీ డాక్టర్ సెల్వమణి, డాక్టర్ ఎస్.లత మాట్లాడుతూ ఔషధాలు మానవ శరీరానికి ఎంతో ముఖ్యమైనవని, కాని అవి పెద్ద పరిమాణాల్లో ఉండటం వలన అవి శరీరంలో తక్కువ మోతాదులో పని చేయలేక పోతున్నాయని అన్నారు. వాటిని అతి సూక్ష్మమైన పరిమాణవులలోకి మార్చటం వలన అతి తక్కువ మోతుదులోనే మంచి ఫలితాలను పొందవచ్చుని, ఈ పరిజ్ఞానం ఎప్పటి నుంచో జీవ శాస్త్రంలో ఉందని, కాని దానిని ఔషధ రంగంలో ఒక దశాబ్దం నుంచి మాత్రమే ప్రారంభించారని, దీని వలన ఔషధ దుర్వినియోగాన్ని తగ్గించవచ్చని తెలిపారు. ఔషధాలు మానవ శరీరంలోకి ప్రవేశించిన తరువాత అవి ఎంతకాలం వ్యాధిని ...

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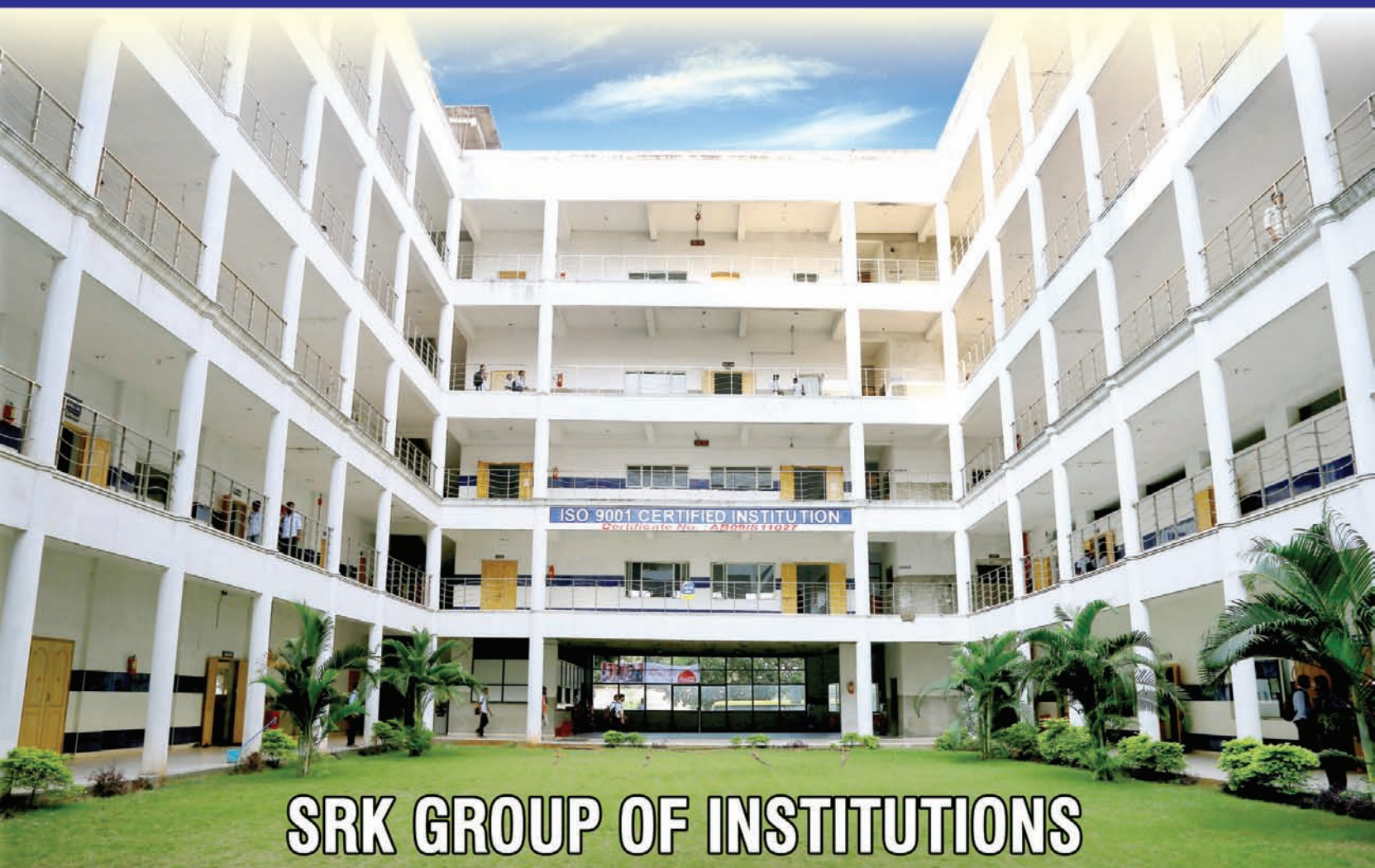

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