ABSTRACT BOOK

NFPS INTERNATIONAL PHARMACEUTICAL SUMMIT

“Eminence of Pharmacy practice and advancement in Pharmaceutical and life sciences”

18th August 2018

Souvenir Series - NFPS18/08/2018

Venue
Hari Hara Kala Bhavan, Secunderabad, Telangana, India

INTERNATIONAL PHARMACEUTICAL SUMMIT
Theme: "Eminence of Pharmacy Practice and Advancement In Pharmaceutical And Life Sciences"
On 18th August 2018, Secunderabad, India.

Organised By:
National Forum of Pharmacy Students (PSCWS)

Venue: Hari Hara Kala Bhavan, Secunderabad, Telangana State. 500 003 (India)
NFPS INTERNATIONAL PHARMACEUTICAL SUMMIT

“Eminence of Pharmacy practice and advancement in Pharmaceutical and life sciences”

DATE:- 18TH AUGUST 2018
Time – 10:00 am – 5:00 pm

VENUE
HARI HARA KALA BHAVAN SECUNDERABAD, INDIA

Organized by
National Forum of Pharmacy students NFPS
(PHARMACY STUDENTS CULTURAL WELFARE SOCIETY )

Souvenir series - NFPS18/08/2018

For more details visit our website – www.nfps.in
Md. Gayoor Khan

Date - 4th July 2018

Founder & President of NFPS [Co-Chairperson]

Message

First of all I thank NFPS Central Executive Council Member’s for choosing me Co-Chair of the event. I’m very happy to announce you that NFPS Society conducting International Pharmaceutical Summit on 18th August 2018. In Association Pharmasapience, SAS Society, MRM College, USM Malaysia, Rx Academy, Summit theme “Eminence of Pharmacy Practice & Advancement in Pharmaceutical & Life science’s” at Hari Haralal Bhavan, Secunderabad, Telangana State, India.

This event specially for youth Pharmacists and young future Pharmacists for their carrier growth or to know Pharmacy real scenario elaborated by keynotes/resource Person. Pharmacy professionals coming from different - different country and event hosted by CEC NFPS, 8 state branch & NFPS Afghanistan Chapter. For encourage youth Mr. Mayur Parmar is also coming in youth debate Mr. Parmar is deputy collector govt of Gujarat as same I also welcome all Pharmaceutical Professional govt body like IPA, IPGA, IHMA, APTT, AIIDC, PCI as a CEC Member IHMA-SE a part of Indian Pharmacy Congress Association IPCA. This summit is a mixture of Student’s, Principal’s, Industry Person from every part India. My best wishes for the event success and student get’s also output its my heartly wish I request to all Pharmacy student’s and academia, Industry People’s join us in this event and support Indian Youth Pharmacist/Future Pharmacist it’s a main agenda of NFPS (PSCWS) Society.

Warm Regards

Mohammad Gayoor Khan

President of NFPS, Liaison Officer USM Malaysia, Buss. Associate KP lab’s, Indian coordinator FPSN, President GOMHA SW, CEC Member IHMA-SE {Indian Hospital Pharmacist Association}

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I am happy to know that National Forum of Pharmacy Students is organizing 1st International Pharmaceutical Summit for one day on Theme: Eminence of Pharmacy Practice and Advancement in Pharmaceutical and Life Sciences on 18th August 2018 at Hari Hara Kala Bhawan, Secunderabad, Telangana. I congratulate the association members and the organizing team for creating a platform for the faculty and students to share their views and ideas for the upliftment of Pharmacy profession.

Professional development is an important part of pharmacy, and attending conferences by the students gives a great exposure and huge part of professional development. In addition to gaining confidence and experience while making great professional contacts, one can develop deep, endearing relationships with experts by participating in a conference.

At present, the challenges are more in the area of Pharmacy Practice. Advanced methods, procedures for the benefit of patients are to be known to Pharmacist. I am happy to know that, the conference will cover expert lectures which will enrich the knowledge of students on the advancements in Pharmaceutical arena. I wish the organizers best wishes for the success of the Conference and the delegates/participants a fruitful experience.

Once again with all the best wishes and appreciation.

Dr. S. A. Sreenivas
NFPS (National Forum for Pharmacy Students) is organizing International Pharmaceutical Summit with theme of Eminence of Pharmacy practice and advancement in pharmaceutical and life sciences on 18th day of August, 2018 at Secunderabad, Telangana. Students and faculties across globe are participating in this Summit. This summit is going to be a very good platform for knowledge sharing.

The efforts of organizing committee are highly appreciated. Pharma profession is at the edge of transformation in India and “knowledge” will be the main weapon for progress in this process of transformation. Such International forums will provide opportunity to all participants to inculcate knowledge. It will provide opportunity for networking too. I am sure that NFPS team and Mr. Gayoor Khan will organize it best way. I feel delighted to be part of this conference as Chief patron.

I appeal the most energetic NFPS teams to organize more and more such events in India and across the globe. Your efforts will bring shiny tomorrow for our Pharma Profession.

With best wishes and appreciation.

MAYUR PARMAR (GAS)
Gujarat Administrative services, Deputy collector
Gujarat
MESSAGE

I am delighted to know that National Forum of Pharmacy Students is conducting, 1st International Pharmaceutical Summit on 18th August 2018. Theme: Eminence of Pharmacy Practice and Advancement in Pharmaceutical and Life Sciences at Hari Hara Kala Bhawan, Secunderabad, Telangana.

I am sure that the NFPS members and organizing committee will give an ample opportunity to the students and Faculty to bring their talents and contribute significantly to the profession and the society.

I take this opportunity to great all of you and wish you success in all your endeavors.

Dr. Tribhuvan Singh
Vice- President of NFPS
Dr. Nalini Kanta Sahoo, Patron
Advisor, NFPS

Thanks to the Almighty, the Lord of heavens and earth for the gift of life. It gives me great pleasure and privilege to express my deep-seated appreciation of God's blessings to be part of the 1st International summit going to be organized by National forum of Pharmacy students (NFPS). Having joined the group in 2017 as an advisor, I have witnessed a prolific growth of the group both in number and spirituality of members towards research and arranging various developmental works in the field of Pharmacy worldwide. As a member of NFPS and as one of the patrons of the 1st International summit, I would like to say that making a decision to conduct conference like this is an immense positive impact on the society for the upliftment of pharmacy profession. I want to take this opportunity to welcome all (both students and staff) from all walks of world to interact with the group to share their views on the auspicious occasion. I want to believe that the NFPS Management will continue to provide the necessary support towards this noble calling, hence contributing towards producing holistic out comes, which is one of key objectives…

Thanks & Regards...

Dr. NALINI KANTA SAHOO,
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It is with great pleasure that I write this message for the “National Forum for Pharmacy Students International Summit” to be held Hyderabad, India on 18, August 2018. Pharmacy Industry in India has revolutionized the world’s accessibility to generic drugs in terms of both availability and pricing. It is at this critical juncture, that NFPS is organizing the international summit to bring together students, faculty, entrepreneurs and industrialists to discuss the challenging issues that are being encountered by today's youth in India. Pharmacy education in India is suffering from serious backdrops and flaws. Hence, there is an urgent need to initiate an academic exercise aimed at revamping the way the curriculum is presented to the students, taking into consideration the social issues that are prevalent in the growing Indian economy. For many years, the components of Community Pharmacy, Hospital Pharmacy, Clinical pharmacy, and General Practices in Drug Production has been seriously neglected while designing curriculum in pharmacy courses. The curriculum followed by almost all teaching institutes in India are not up to the world standards and students. Providing proper education that is focused with morals and ethics is the only way that Indian pharmacists can be viewed on par with pharmacists of industrialized nations. I am extremely happy to note that NFPS has taken on the gauntlet to discuss many of these burning issues that are being faced by the young generation. Educational sessions in the summit with eminent academicians, industrialists and bureaucrats will give an outstanding experience to the delegates. The organizing committee members have performed a fantastic job by inviting leaders in the field of pharmacy and I believe that the outcome of this summit will have a profound impact on the delegates in the way they understand and practice pharmacy. I would like to take this opportunity to thank the NFPS executive council members who worked hard to organize the summit. I am excited to be part of the summit and wish NFPS the very best in bringing about the needed transformation to the field of pharmacy in India.


Srinivas Pentyala
General secretary of NFPS

Also international exchange officer central branch of India

I am fazal khan general secretary of nfps also international exchange officer central branch of India. first of all I thanks to NFPS Central executive members for choosing me in co-ordination committee for the event. At 18th August we are conducting a international summit 2k18.

Summit theme “Eminence of pharmacy practice & advancement in pharmaceutical & life sciences” at Hari hara kala bhavan secunderabad Telangana state in India.

This event organise for increase the pharma scope and development of pharma profession.

In the event 10th states nominated like Delhi, odisha, telangana, madhya parades, tamilnadu etc.,

I hope NFPS team will progress day by day to new milestones.

My best wishes for the event.

Warm regards

Fazal Khan

Signature
MUHAMMED RASHID PP
President, Kerala State NFPS

6th July 2018

I am very much glad to hear that, NFPS is going to conduct an International Summit on 18th August 2018, in Hari Haara Kala Bhavan, Secunderabad, Telangana, India. It gives me an immense pleasure to be part of this organization and I am thankful to the Central Executive Committee for choosing me as an Executive Member of CEC of this Summit. The theme was also so exciting which is “Eminence of Pharmacy Practice and Advancement in Pharmaceutical and Life Science”

This event will give a great insight to the students and delegates regarding the growth, career, advancements and the current scenarios of the Pharmacy as well as the Life sciences. It will be a great opportunity for the delegate to meet the great speakers and resource person coming from various parts of the country as well as the globe. I encourage each one of you to attend this event and use the resources available. I wish all the very success for the event and welcome the delegate with heart and soul.

With Regards

Muhammed Rashid PP
CEC Member, NFPS International Pharmaceutical Summit 2k18
President, Kerala State NFPS
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MESSAGE FROM EVENT CO-MANAGER

It is a singular pleasure & privilege to forward a message of support and Best wishes to all of us (organizers) & participants of INTERNATIONAL PHARMACEUTICAL SUMMIT on "EMINENCE OF PHARMACY PRACTICE & ADVANCEMENT IN PHARMACEUTICAL & LIFE SCIENCES" being organized by NATIONAL FORUM OF PHARMACY STUDENTS - NFPS (PSCWS) on 18th August 2018.

We extend a warm Welcome and Greetings to the galaxy of Eminent Scientists, Research Scholars, Industrialists, and Academicians from various disciplines across the world on 18th August 2018 at HARI HARA KALA BHAVAN.

A good Summit is always more than just an exchange of papers and ideas. The Theme of Intergenerational dialogue is a creative way to explore the future. But I appreciate if you don’t follow the conventional path of youngsters formulating questions to elder people knowing the answer. I believe the other way around is the more Productive one. It is the task of elder people to formulate deep challenging questions that have no answers in order to give the younger generation the time to find out their answers. Everyone should implement this intergenerational dialogue which Socrates has practiced.

I Congratulate Convener, Chair Person’s, Manager’s, Committee Members and Volunteers deserve to be richly applauded for their sustained efforts.

I am sure that this summit will be a great success and achieve its avowed objective.

RAQSHAN JABEEN (PHARM-D)
EVENT CO-MANAGER, INTERNATIONAL PHARMACEUTICAL SUMMIT 2018
CENTRAL EXECUTIVE COUNCIL (CEC) MEMBER NFPS
Rohit Verma  
date: 8-07-18

National joint secretary

I am Rohit Verma, first of all, I thank all my central executive members for choosing me to be the head of the co-ordination committee. I am very happy to announce that the NFPS society was conducted an international summit on 16th August 2018 at Hari Har Kahan Bawan, and in these summit, many coaching institutes and many colleges are associated with Rx academy, pharmacapience etc. And many labs are associated with kp labs etc.

The summit is mainly for the pharmacy student and the young pharmacist in these summit, we are working for uplifting the pharmacy standard and awareness from the pharmacy profession. We have done many activities for these like the Pharma Youth Debate, and one another activity are also attached in these summit for grow the standard of students, the Pharma Fashion show. These are the main events of the summit and many things are doing in these summit like poster presentation, oral presentation, prize distribution etc.

So I invite all the pharmacy students and all the teacher's and all the principle's. All the person who have attached the pharmacy profession.

Warm regards

[Signature]

National joint secretary

NFPS
UMAMA YEZDANI

11th July 2018

Chairman, Telengana state NFPS (financial manager).

Hello everyone this is umama yezdani financial manager /organizing committee member in upcoming international summit on “Eminence of pharmacy practice and advancement in pharmaceutical and life sciences.” 18th August 2k18, in Hari Hara Kala Bhavan, Secundrabad, telengana India.

First of all I want to thank my entire CEC member for choosing me as a financial manager of this event. This event is going to be one of the biggest events in telengana state as it is going to involve delegates, faculty, researches and patrons of pharmacy profession and even delegates from life sciences from all over India as well as 4 different countries. This conference is going to involve poster presentations, oral presentations, a platform to share your views on uplifting pharmacy profession and think out of the box. All the presenters are going to get a souvenir and free publications of their presentations in journals with good impact factor through SAS society. All the delegate and presenters are going to get certificates with 25 credits in it. The major objective of this summit is to uplift and change the way people thing about the pharmacy profession in a positive way.

So, being chairman of telengana state I welcome all of you in our upcoming summit to share a platform with us & gain benefits of it in whatever way you can.

Best regards,


Umama yezdani

(Chairman of NFPS, Vice president SPER-SF, Joint secretary GOMHA, Training associate Clinitech solutions pvt.ltd, campus ambassador Inclination India).
MESSAGE :-

I am very happy and thankful to all the central executive council (CEC) members for choosing me (CO-ORDINATION) of the event. I'm very happy to announce you, That NFPS society conducting International pharmaceutical summit on 18th August 2018. In association with Rx academy, pharmasapience, USM Malaysia, MRM college, etc.

Summit theme :- " Eminence of pharmacy practice & Advancement in pharmaceutical science and life science ". At hari hara kala bhavan, secunderabad, telangana state India.

This event specially for youth pharmacist and young future pharmacist for their carrier growth or to know pharmacy real scenario elaborate by keynotes/resource person/pharma professional’s coming from Different – Different country & state. Event hosting by CEC members of NFPS (national forum of pharmacy student). 8 state & 4 international chapter like. Nigeria, Phillipines, Afghanistan, chapter etc. For encourage youth Mr. Mayur Parmar is also coming in youth Debate. Mr. Parmar is deputy collector Govt. Of Gujarat. And many other things which make you thoughtful person. About our pharmacy professionals.

Thanks all

Best Regard’s

Mr. Nilesh Kushwah

NATIONAL TREASURER OF NFPS www.nfps.in
Date 5 July 2018

Arvind Verma
Public health relation officer

Message

Very thankful to all the central executive council members for choosing me a public relation officer in event and in NFPS and thankful to Mr. Md. Gayur Khan to make me a part of.

NFPS I’m very happy to announce you that NFPS society conduct an international pharmaceutical summit on 18 August 2018 in Secunderabad in Hari Har Ka Ka Bawal in Talonga State India association with pharma science, sas society, MRM college, USM Malaysia, Rx academy on theme “eminence of Pharmacy in Practice & advancement in pharmaceutical & life science”.

This event specially for our youth upcoming pharmacist for better acknowledge & for there bright future and growth to know the pharmacy scenario elaborated by keynote resource person Pharma professional coming from different country & state.

In our event there is a pharma fashion show youth debate and many other things which make you a thoughtful person about our pharmacy profession.

• We welcome to our patron chief guest international delegates and all participate.

Thank you
Arvind Verma

Sign

[Signature]

[Signature]
NFPS (Pharmacy students cultural welfare society India) is organizing International Pharmaceutical Summit with Theme of “Eminence of Pharmacy practice and advancement in pharmaceutical and life Sciences” on 18th of August, 2018 at Hari Harala Bhavan, Secunderabad, Telangana.

A group of Pharmacy students Md. Gayoor Khan, Mr. Fazal Khan, Mr. Rohit Verma, Ms. Raqsaan Jabeen and Faculties across the world brought the new opportunities in India. There are various countries and students participating in this Summit. This summit is going to be a very good platform for exchange the scenario of Pharmacy in the world.

The efforts of organizing committee are highly appreciated. Youth Pharma professionals is at the main key of the transformation in India and “knowledge” will be the main weapon for progress in this Pharmacy profession.

I feel delighted to be part of this conference as active Organizing team member, I hope to most energetic NFPS teams to organize more and more historical events in India and across the globe in the guidance of Md. Gayoor Khan and use your own best efforts. Your efforts will make NFPS great and our Pharma Profession will always proud of you.

With best wishes and appreciation.

AJAY KUAMR

M.D. NFPS
3D PRINTING: A PROMISING FUTURE IN MEDICINE
Poludasari Shravan Kumar, Lohitha Reddy
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Abstract: 3D printing technology promises a future of drugs and medicine printed on demand, personalized with computerized dose. Children could be the one to benefit most and taking medicine would be full of fun. This technology will definitely help doctors and pharmacists to provide “tailor made” medicine for each patient. 3d printing relies on computer aided designs to achieve flexibility and exceptional manufacturing capability of pharmaceutical medicines. This process involves 3d proto typing of layer by layer fabrication of drug excipients to formulate into desired dosage form. At present, there is no concept of personalised medicine. But in the era of technological advancement, it is the need of the hour to have medication as per individual patient needs. 3d printing has been widely used from many years in medical fields such as printing jaw bones, heart valves. Recently many pharmaceutical researchers have been working towards the use of 3d printing to manufacture customised pharmaceutical drug product. The FDA recently approved an anti-epileptic drug made with 3d printing technology. It raises some possibilities on how medicines can be developed in upcoming years. Although 3d printing technology seems to be promising in drug delivery, there are some barriers in place before this can become a common health care practice.

Key words: FDA(Food and Drug Administration), Anti-epileptic drug

IMPACT OF CLINICAL PHARMACIST INTERVENTIONS ON PREVENTION AND MANAGEMENT OF CORONARY ARTERY DISEASE RISK AMONG DIABETIC PATIENTS IN CLINICAL SETTINGS
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Abstract: Diabetes is an imperative chronic metabolic disorder incidence globally increasing and considered to be an epidemic. Individual with chronically poor glycemic control can experience microvascular and macrovascular complications leading to create significant health care burden to the society which result from morbidity and premature mortality. Diabetic patients have a two to fourfold increase in risk of coronary artery disease complications which led to increased mortality situation in hospital settings. The foremost risk factors for increased incidence of coronary artery disease in diabetic patients include hyperlipidemia, hypertension, smoking, microalbuminuria, hyperglycemia, obesity, alcohol, smoking, family history of heart disease and physical inactivity. The American College of Cardiology and American Diabetes Association guidelines recommends that cardiac testing to be done with two or more atherogenic risk factors to be assessed at least annually to identify the incidence of coronary heart disease in diabetic patients. The coronary artery disease among diabetic patients risk screening depends on newer technologies and clinical convenience examinations include blood sugar levels, HbA1c, electrocardiogram, echocardiography, treadmill testing, coronary computed tomography (CT) and angiography tests which are vital for determining the severity of coronary artery disease can conclude with better therapeutic options. Early amalgamation of clinical pharmacist interventions with health care team on risk factors detection and screening of lifestyle modifications, medication adherence, drug safety management and patient follow-up care services including maintaining controlled levels of hypertension, dyslipidaemia and glycemic levels, smoking cessation practices, stress management and individualized pharmacological treatment options can decrease the hospital readmission as well as distressing incidences of coronary artery disease amongst the diabetic patients.

Keywords: Coronary heart disease, Dyslipidaemia, Microalbuminuria and Hyperglycemia.

CURRENT TRENDS IN INSULIN THERAPY: SCOPE AND FUTURE
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Abstract: Many patients with advanced type 2 diabetes mellitus (T2DM) and all patients with T1DM require insulin to keep blood glucose levels in the target range. The most common route of insulin administration is subcutaneous insulin injections. There are many ways to deliver insulin subcutaneously such as vials and syringes, insulin pens, and insulin pumps. Though subcutaneous insulin delivery is the standard route of insulin administration, it is associated with injection pain, needle phobia, lipodystrophy, noncompliance and peripheral hyperinsulinemia. Therefore, the need exists for delivering insulin in a minimally invasive or noninvasive and in most physiologically way. Inhaled insulin was the first approved noninvasive and alternative way to deliver insulin, but it has been withdrawn from the market. Technologies are being explored to make the noninvasive delivery of insulin possible. Some of the routes of insulin administration that are under investigation are oral, buccal, nasal, peritoneal and transdermal. This review article focuses on the various insulin delivery techniques. This article has focused on different possible routes of insulin administration with its advantages and limitation and possible scope for the new drug development.

Keywords: Diabetes mellitus, inhaled insulin, insulin delivery, oral insulin, technology, closed-loop system, artificial pancreas.
A REVIEW ON ROLE OF VITAMIN E SUPPLEMENTATION IN TYPE 2 DIABETES MELLITUS
Pavithra.D1, Praveen.D2, Ranadheer Chowdary, P3, M.Vijey Aanandhi3

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Abstract: Diabetes is a group of metabolic diseases characterized by hyperglycemia that is linked to excess sugar blood level, resulting from defects in insulin secretion, insulin action, or both. The chronic hyperglycemia of diabetes is associated with long-term damage, dysfunction, and failure of different organs, including eyes, kidneys, nerves, heart, and blood vessels. Vitamin E has antioxidant activity. It may also have antiatherogenic, antithrombotic, anticoagulant, neuroprotective, antiviral, immunomodulatory, cell membrane stabilizing, and anti-proliferative actions. Vitamin E is a collective term used to describe eight separate forms, the best-known form being alpha-tocopherol. Vitamin E is a fat-soluble vitamin and is an important antioxidant. It acts to protect cells against the effects of free radicals, which are potentially damaging by-products of the body’s metabolism. Antioxidants such as Vitamin E help protect against the damaging effects of free radicals, which may contribute to the development of chronic diseases such as cancer, complications in DM. It also protects other fat-soluble Vitamins (A and B group vitamins) from destruction by oxygen. Low levels of Vitamin E have been linked to increased incidence of long-term complications in DM.

Key Words: Antioxidant, Complications, Diabetes mellitus, Pharmacokinetic activity, Vitamin E

EFFECT OF SULBUTIAMINE ON COGNITIVE FUNCTION IN GERIATRIC PATIENTS
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1bDepartment of pharmacy practice
2Research Scholar
Department of pharmaceutical chemistry
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Abstract: Objective: The objective of the study Is to assess the effect of sulbutiamine on cognitive function in geriatric patients. Methodology: A prospective interventional study was conducted and the data was collected from the various sources such as patient’s case sheets, treatment chart and also patient direct interview. The MMSE Scale was used to assess the cognitive function at the baseline and endpoint. Conclusion: The mean MMSE score of both baseline and endpoint shows the effect of sulbutiamine on cognitive function of geriatric patient is slightly improved within subjects in the study.

MEDICATION RECONCILIATION IN GENERAL MEDICAL WARDS OF GOVERNMENT HEAD QUARTERS HOSPITAL, OOTY
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1Pharm.D Intern, Department of pharmacy practice, JSS College of pharmacy Ooty.
2Lecturer, Department of pharmacy practice, JSS College of pharmacy Ooty.
3, 4Co-authors, Ph.D. Interns, Department of pharmacy practice, JSS College of pharmacy Ooty.

Objectives: To implement the medication reconciliation process with respect to medications used for the management of disease in general medicine ward, to identify medication discrepancies, finding the resolution respective concerns, and develop a strategies to minimize the reconciliation errors. Methodology: A prospective interventional study was designed and purposive sampling was enrolled from general medicine wards and intensive care unit. The patients who had incomplete medications history and non-cooperatives were excluded as per the criteria. In total 443 patients were included and followed on three phases of transit process (Admission, Transfer and Discharge Phases). The Best Possible Medication History was collected using the Medication Reconciliation Toolkit (MRT) and it’s compared with ongoing medications to rule out the discrepancies. Reported discrepancies was critically analyzed and suitable resolutions were made with the consent of respective treating physician. Result: In this study, sample size was calculated as 500 however, BPMH (Best Possible Medication History) of 443 patients were obtained and 127 ‘Not Resolved’ discrepancies were reported from 98 patients. The patients were classified based on discrepancies related to disease and more number of patients were diagnosed with cardiovascular system (38%) followed by digestive (27%), and respiratory system (22%). In our study, we also found out that more number of discrepancies occurred due to patient error (79%) mainly because of duplication (63%) and omission (36%).
Conclusion: Patient safety is a big concern in health scale practice which emerge medication reconciliation surface. Our study concludes with the following suggestions to minimize reconciliation error in general medical wards by obtaining BPMH (Best Possible Medication History) during transit care process. Conduct Continuous Medical Education (CME) and Continuous Pharmacy Education (CPE) programs for health care professionals. Create awareness among patients about the importance of collecting the medication histories.

**Key words:** Medication Reconciliation, Discrepancies, BPMH

**ASSOCIATION OF SERUM HOMOCYSTEINE WITH DIABETIC NEUROPATHY**

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**Abstract:**

Aim and Objectives: The aim of the study was to determine the association of serum homocysteine in Diabetic Neuropathy patients.

Methodology: All the patients who were diagnosed with type II diabetes mellitus will be included. Their serum levels of fasting blood sugar (FBS), post prandial blood sugar (PPBS), glycated hemoglobin (HbA1C) and associated blood parameters will be assessed. Diabetic neuropathy will be confirmed using Nerve conduction testing (NCT), Electromyography (EMG) and Quantitative sensory testing with clinically correlated. The serum homocysteine levels will be measured and correlated with other blood parameters.

Results: Out of 1000 patients 46 were Type I Diabetic and 954 were Type II. Prevalence of Neuropathy in diabetic patients was 156. Mean Serum Homocysteine with out diabetic neuropathy was 6.8 ± 2.9 and serum homocysteine with Diabetic neuropathy was 21.6 ± 0.29 and the p value was found to be 0.0017. Correlation between Serum homocysteine and Diabetic Neuropathy was found to be 14.5 with the p value 0.001. Conclusion: There is a definite relationship between elevated serum homocysteine and diabetic neuropathy. There has been a significant increase of homocysteine in diabetic patients and its positive significant correlations with BMI, HbA1c and duration of disease. It can be clearly seen that elevated serum homocysteine level has leads to the some of the complications of diabetic neuropathy. There should be a regularized screening of serum homocysteine levels in all diabetes, in order to prevent complications of diabetic neuropathy.

**Key words:** Diabetes, Diabetic neuropathy, Methionine, Homocysteine, hyperhomocysteinemia.

**MITRAL REGURGITATION**

Zarafshan Majid

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**Abstract:**

Mitrval insufficiency (MI), mitral regurgitation or mitral incompetence is a disorder of the heart in which the mitral valve does not close properly when the heart pumps out blood. It is the abnormal leaking of blood from the left ventricle, through the mitral valve, and into the left atrium, when the left ventricle contracts, i.e. there is regurgitation of blood back into the left atrium. MI is the most common form of valvular heart disease. Mitrval valve prolapse has been one of the commonest heart diseases around the world. It is commoner in women than men, in thinner than heavier subjects, and in the younger than the older persons. A unifying concept of valvular-ventricular disproportion serves to explain the various conditions in which mitral valve prolapse occurs. The etiology of chest pain which is the most frequent symptom that brings the patient with the mitral valve prolapse to a physician is multifactorial. Diagnosis of mitral valve prolapse is based on clinical grounds chiefly by careful auscultation. Prognosis in the majority is excellent accept when complications occur, such as progressive mitral regurgitation infective endocarditis, cerebral ischemic episodes, and sudden death.

**COMPARATIVE QUALITY CONTROL EVALUATION OF DIFFERENT BRANDS OF ATENOLOL TABLETS**

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**Abstract:**

While the use of cheaper bioequivalent generic drugs over brand-name drugs, their market pricing and subsequent use is largely shaped by government policy-making as well as consumer and corporate decision-making. For the purposes of drug approval, the interchangeability of a generic drug and the corresponding brand-name drug is based on the criterion of “essential similarity”; in drug content, type of active principle and therapeutic effectiveness as the original drug. Simple, accurate, precise, sensitive UV spectrophotometric method was used to compare drug content in generic drugs with their branded equivalents. Atenolol were...
estimated for their drug content in generic and branded dosage forms. The amount of difference was expected and acceptable and the difference between generic to branded comparison was about the same as the brand to brand comparisons.

Key words: Generic, brand, UV spectrophotometric method, drug content

EXTENSION OF LIFE-SPAN BY INTRODUCTION OF TELOMERASE INTO NORMAL HUMAN CELLS

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Abstract: Telomeres, the terminal guanine-rich sequences of chromosomes, are reduced in length during each cell division that triggers senescence. Normally human cell undergoes a finite number of cell divisions and ultimately enter a non-dividing state called replicative senescence. Human telomeres are elongated by the ribonucleoprotein enzyme, telomerase. Recently it has been demonstrated that the introduction of telomerase, using human telomerase reverse transcriptase (hTERT) into the cells expands the life-span of normal human fibroblasts. To this hypothesis, two telomerase-negative normal human cell types, retinal pigment epithelial cells and foreskin fibroblasts, were transferred with vectors encoding the human telomerase catalytic subunit. In contrast to telomerase-negative control clones, which exhibited telomere shortening and senescence, telomerase-expressing clones had elongated telomeres, divided vigorously, and showed reduced staining for beta-galactosidase, a biomaker for senescence. Notably, the telomerase-negative control clones, which exhibited telomere shortening and senescence, telomerase-expressing clones had elongated telomeres, divided vigorously, and showed reduced staining for beta-galactosidase, a biomaker for senescence. Notably, the telomerase-negative control clones, which exhibited telomere shortening and senescence, telomerase-expressing clones had elongated telomeres, divided vigorously, and showed reduced staining for beta-galactosidase, a biomaker for senescence. 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Key words: telomeres, senescence, telomerase, beta-galactosidase

CORTISTATIN A - LIMIT BLOOD VESSEL GROWTH

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Abstract: Cortistatin A is a marine steroid with highly selective and perhaps mechanistically unique antiangiogenic activity. There are Four novel steroidal alkaloids named cortistatins A (1), B (2), C (3), and D (4) consisting of a 9(10)-abeno-androstane and isoquinoline skeleton have been isolated from the marine sponge Corticium simplex. Cortistatins A-D inhibited proliferation of human umbilical vein endothelial cells (HUVECs) with high selectivity. Among the four substances, cortistatin A (1) showed the strongest anti-proliferative activity (IC50 = 0.0018 μM) against HUVECs, in which the selective index was more than 3000-fold in comparison with that of normal fibroblast or several tumor cell lines. Here we study the production of this natural product by way of “cortistatines”, an intermediate ideally suited for investigating the key pharmacophore of the cortistatin family. The synthesis begins with a terrestrial steroid and traverses a route to cortistatin A through the discovery of unique chemical reactivity. Specifically, we demonstrate the first example of a directed, geminal C−H bisoxidation, a new fragmentation cascade to access expanded B-ring steroid systems, a chemoselective cyclization to install the hallmark oxabicycle of the cortistatin family, and a remarkably selective hydrogenation reaction, which should find extensive use in future syntheses of the cortistatins and designed analogues. The synthesis displays a level of brevity, efficiency, and practicality that will be crucial in evaluating the medicinal potential of this fascinating class of marine steroids.

Key words: Cortistatin A, A (1), B (2), C (3), D (4), Pharmacophore, Proliferation.

NOVEL APPROACH OF SUSTAINED RELEASE DRUG DELIVERY TECHNOLOGY –A REVIEW

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Abstract: Sustained Release Drug Delivery System (SRDDS) is designed to release a drug at a predetermined rate by maintaining a constant drug level for a specific period of time with minimum side effects. Now a days as very few drugs are coming out of research and development and already existing drugs are suffering the problem of resistance due to their irrational use specifically in case of drugs like antibiotics. Hence, change in the operation is a suitable and optimized way to make the some drug more effective by slight alteration in the drug delivery. Sustained Release is also providing promising way to decrease the side effect of drug by preventing the fluctuation of the therapeutic concentration of the drug in the body. The major goal of designing SR formulations was intended to modify and improve the drug performance by increasing the duration of drug action, decrease the dosing frequency, reduced side effects, decreasing the required dose employed and providing the shortest possible time by using smallest quantity of drug administered by the most suitable route. There are two type of methods used for development of sustained release dosage forms based on drug modification, based on dosage form modification. Sustained release drug delivery system works on many different mechanisms to control the release rate of drugs. The advances in the formulation technology of modified release dosage form with
sustained release oral dosage form has been widely accepted approach as compared to conventional immediate release formulations of the same drug, over which it provides a prolong release of the drug over extended period of time there by giving the better patient compliance and enhanced bioavailability and resulting blood concentration-time profiles of drugs that otherwise suffer from few limitations.

**Key words:** Sustained release, Drug Delivery, Dosing frequency.

**REGENERATIVE POTENTIALS OF NEUROSTEROID SIN MODULATION OF NEURONAL DISORDERS**

**Review Focus:** Advancements in Pharmacy for the therapeutics of neuronal diseases
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**Abstract:** Impact of neurosteroids on brain and their therapeutic potentials is summarized. Neurosteroids are endogenous or exogenous steroids that are synthesized within the brain or reach the brain through blood stream. They are responsible for rapidly altering neuronal excitability through interaction with ligand-gated ion channels and other cell surface receptors. They are classified as pregnane neurosteroids (allopregnanolone and allotetrahydrodeoxycorticosterone), androstane neurosteroids (androstanediol and etiocholanolone) and sulfated neurosteroids (pregnenolone sulphate). Pregnaneneurosteroids are positive allosteric modulators of GABA-A receptors with powerful antiseizure activity. They are endogenous regulators of seizure, anxiety, and stress. Sulfated neurosteroids are negative GABA-A receptor modulators acting as memory-enhancing agents. Neurosteroidogenic agents that lack benzodiazepine-like side effects show promising outcomes in the treatment of anxiety and depression. Steroids in the nervous system requires coordinated expression and regulation of genes encoding the steroidogenic enzymes in several different cell types (neurons and glia). It produces a spectrum of effects in CNS disorders via positive allosteric modulation of the GABA-A receptor and exhibit quantitative and qualitative differences.

**Keywords:** Neurosteroids, GABA-A receptors, epilepsy, alzheimers disease, depression, insomnia, anxiety.

**A PROSPECTIVE SINGLE BLINDED STUDY IN SAFETY AND EFFICACY OF ZINC SUPPLEMENTATION IN PULMONARY TUBERCULOSIS**

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**Abstract:** Aim and Objectives: The aim of the study was to study the serum zinc levels, safety and efficacy of zinc supplementation in Pulmonary Tuberculosis patients.Methodology: A randomized single blinded study of two groups. Group A received conventional tuberculosis therapy while the Group B received conventional tuberculosis therapy along with 15 mg of zinc tablet. 40 patients were assigned in each group by randomised permuted blocks.Results: After 8 weeks of treatment in Group A 27 patients and in Group B 36 patients were found to be sputum negative with the p value of 0.0421and 0.0629. After 24 weeks of treatment in Group A 37 patients and in Group B 40 patients were found to be sputum negative with the p value of 0.00976 and 0.00971. By this the given treatment was effective in the patients with Pulmonary Tuberculosis.Conclusion: Zinc supplementation improves the effect of tuberculosis medication treatment and results in earlier sputum smear conversion.

**Keywords:** Micronutrient, Pulmonary Tuberculosis,Zinc.

**ANALGESIC ACTIVITY IN ISOLATED COMPOUNDS OF ETHYL ACETATE LEAVES EXTRACT OF TECOMARIA CAPENSIS.**

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**Abstract:** The leaves of the plant Tecomaria capensis were extracted with different solvents and screened for their analgesic activity. The ethyl acetate leaves extract of the plant Tecomaria capensis has showed the presence of flavanoid, glycosides, steroids, terpinoinds. The analgesic activity of ethyl acetate extract of Tecomaria capensis leaves is evaluated by Eddy’s hot plate and tail flick method. This study demonstrates that ethyl acetate leaves extract of Tecomaria capensis has significant analgesic activities. Further, with column chromatography technique different compounds are isolated from the extract. Among the different compounds 3,7-dimethyloct-6-en-1-ol showed a comparable activity to standard.

**Keywords:** Tecomaria capensis, Analgesic activity, 3,7-dimethyloct-6-en-1-ol.
Abstract: Tetrodotoxin (TTX) is a certainly occurring toxin that has been accountable for human intoxications and fatalities. Tetrodotoxin (TTX) is a potent neurotoxin that blocks voltage-gated sodium channels (VGSCs). VGSCs play a critical role in neuronal function under both physiological and pathological conditions. Its usual route of toxicity is via the ingestion of contaminated puffer fish which are a culinary delicacy, especially in Japan. TTX was believed to be confined to regions of South East Asia, but recent studies have demonstrated that the toxin has spread to regions in the Pacific and the Mediterranean. TTX has been extensively used to functionally characterize VGSCs, which can be classified as TTX-sensitive or TTX-resistant channels according to their sensitivity to this toxin. Alterations in the expression and/or function of some specific TTX-sensitive VGSCs have been implicated in a number of chronic pain conditions. The administration of TTX at doses below those that interfere with the generation and conduction of action potentials in normal (non-injured) nerves has been used in humans and experimental animals under different pain conditions. These data indicate a role for TTX as a potential therapeutic agent for pain but there is no known antidote to TTX which is a powerful sodium channel inhibitor. So it is our responsibility to provide available information up to date on TTX and its analogues with a special emphasis on the structure, aetiology, distribution, effects, and the analytical methods employed for its detection.

Keywords: Tetrodotoxin (TTX), voltage-gated sodium channels (VGSCs), neuropathic pain conditions.

ADVANCEMENT OF CANCER IN PHARMAaceuticals AND LIFE SCIENCES
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Abstract: To prevent the Cancer and rise the quality of life for Cancer Patient. The Aids of Pharmaceutical development of Cancer. The Cancer know from 1600 B.C. But humans have no awareness about Cancer. But it became more vital when research began (18th& 19th Century). In 2002, 10 million people are affected by Cancer and by 2017 it increased to 15 million. It is mostly seen in people of age above 15 years, among them 7.4 million cases are of men and 8.7 cases are of women. The scientists expect that this range may increase to 24 million in the future. Lung Cancer was most common Cancer with Worldwide contribution of 13% of the total population. Breast Cancer, which is mostly seen among women is the second most common Cancer with 1.7 million cases. The drugs that are developed to treat different types of cancers are Cytotoxic Drug, TargetedDrug, Bave in 2014 Bavenico, Kymriah, Kisqali, Nerlyx, Rydap, Bospensa, Tafinlar, Mekinist Opdivo. 12% cancers are caused due to virus Chemotherapy is one of the most widely used therapy to treat cancer. The therapy include Targeted therapy & Immune therapy or Gene therapy that changes the “T” cells of the patient in the lab to make them more effective on cancer. From 18th&19th century the cancer patients increased widely throughout the world from 10-15 million, with this the pharmaceutical aids of life sciences also increased. Among all types of cancers only 4 types of cancers are dangerous. Some of the cancers are treatable were as some are under research. Herpes Virus is used to treat Brain Cancer

RESEALED ERYTHROCYTES
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Abstract: Carrier erythrocytes have been evaluated in thousands of drug administration in humans proving safety and efficacy of the treatments. Carrier erythrocytes, resealed erythrocytes loaded by a drug or other therapeutic agents, have been exploited extensively in recent years for both temporally and spatially controlled delivery of a wide variety of drugs and other bioactive agents owing to their remarkable degree of biocompatibility, biodegradability and a series of other potential advantages. Biopharmaceuticals, therapeutically significant peptides and proteins, nucleic acid-based biological, antigens and vaccines, are among the recently focused pharmaceuticals for being delivered using carrier erythrocytes. In this review article, the potential applications of erythrocytes in drug delivery have been reviewed with a particular stress on the studies. At present, there are 30 main drug delivery products on the market. The reasons for this increasing interest in drug delivery are due to the increasing need of safe drugs, capable of reaching the target and with minimal side effects. In fact the main problems associated with systemic drug administration are essentially related to the bio-distribution of pharmaceuticals throughout the body. Ideally, a “perfect” drug should exert its pharmacological activity only at the target site, using the lowest concentration possible and without negative effects.

Key words: Carrier Erythrocytes, Biocompatibility, Bioactive, spatially, Perfect drug, Target site, Safety.
EVALUATION OF INVITRO ANTI INFLAMMATORY AND ANTI ARTHRITIC ACTIVITY FOR DIFFERENT EXTRACTS OF AERIAL PARTS OF CASSIA GRANDIS LINN.

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Abstract: This work has done for the investigation of anti-inflammatory activity and anti arthritic activity of the different extracts (methanolic, ethylacetate and hexane) of dried aerial parts of Cassia grandis linn by oral administration at dose of 100,200 mg/kg/day of body weight to healthy animals. These three extracts were studied for their anti-inflammatory activity by using egg albumin induced paw edema and anti-arthritic activity by using formaldehyde induced arthritis in rats and the mean increase in paw volume and % inhibition in paw volume were measured by using vernier calipers at different time intervals after egg albumin (1%w/v) and formaldehyde (1%w/v) induced injection. In egg albumin induced paw edema model although all the drug treated groups showed a decrease in paw thickness as compared to the control, the difference was significant in hexane extract at a dose of 200mg/kg followed by ethyl acetate 200mg/kg and methanol extract 200mg/kg. In formaldehyde induced arthritis an increase in joint diameter was seen in all animals through out the observation period. The difference was significant in hexane extract at a dose of 200mg/kg followed by ethylacetate 200mg/kg and methanolic extract 200mg/kg.

Key words: Anti-inflammatory activity, Anti-arthritic activity, egg albumin, diclofenac, formaldehyde, Cassia grandis.

BIOMATERIALS FOR TISSUE ENGINEERING

Disease, injury and trauma can lead to damage and degeneration of tissues in the human body, which necessitates treatments to facilitate their repair, replacement or regeneration. Treatment typically focuses on transplanting tissue from one site to another in the same patient or from one individual to another. While these treatments have been revolutionary and lifesaving, major problems exist with both techniques. The developing field of tissue engineering (TE) aims to regenerate damaged tissues by combining cells from the body with highly porous scaffold biomaterials, which act as templates for tissue regeneration, to guide the growth of new tissue. This article describes the functional Requirements, and types, of materials used in developing state of the art of scaffolds for tissue engineering applications. Furthermore, it describes the challenges and where future research and direction is required in this rapidly advancing field.

RISK OF DEVELOPING DEPRESSION AND ITS IMPACT ON QUALITY OF LIFE IN PATIENTS WITH POLYCYSTIC OVARY SYNDROME (PCOS).

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Abstract: Polycystic ovary syndrome (PCOS) is one of the most common reproductive endocrine disorders, Affecting patient’s psychological functioning and satisfaction with life. The present study was carried out owing of the fact that no such study was being orchestrated on this populations. Aims: study was conducted to evaluate the prevalence of depressive disorders and its impact on quality of life in patients with pcos and also to evaluate the determinants of depression in pcos patients. Settings and Design: Tertiary care hospital based case-control study was conducted. Methods and Material: study was effectuated in 124 patients in total, including equal number of cases and controls.PHQ-9 was used to determine the depression based directly on DSM-IV diagnostic criteria for depression and PCOSQ was used to assess quality of life. Statistical analysis used: Data was examined using descriptive statistics, spearman co-relation, and Chi-square test, F-test, and odds ratios (OR) with 95% confidence intervals (95% CI). Results: The study shows an increased risk of depression in PCOS (76.96% of cases compared to 20.03% of controls), Odd’s ratio 5.95 (95% confidence interval [2.67-1265]) and the depression was found to be having an impact on patient’s quality of life. Conclusions: The care of individuals with pcos should include the screening and possible treatment for depression in order to achieve and sustain treatment goals considering the fact that Identifying depression early will further improve the quality of life of pcos patients and also reduce the overall treatment cost, which are generally unaffordable by most individuals with this disease in India.

ALCOHOL RESISTANT DRUG DELIVERY SYSTEMS OF QUETIAPINE FUMARATE

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Quetiapine fumarate is an atypical antipsychotic agent. Antipsychotic drugs are used for the treatment of several mood and mental disorders including bipolar disorders, episodes of mania and depression associated with bipolar and schizophrenia. It rebalances the
concentration of certain neurotransmitters in the brain. Antipsychotics are not curative and do not eliminate the chronic thought disorder, but they often decrease the intensity of hallucinations and delusions and permit the person with schizophrenia to function in a supportive environment. When the body and brain are regularly subjected to alcohol over a long period of time certain changes occur which help them adapt to the presence of alcohol. Alcohol acts on the central nervous system as a depressant, so taking it makes the original symptoms of a mental health disorder. As quetiapine fumarate is sedative in nature, and can be misused for its action. Both quetiapine fumarate and alcohol affect the body in a sedative way. As the alcohol consumption also has the same effect of sedation, quetiapine fumarate can be used as alcohol resistant drug. It is also known that the major disadvantage of the formulation is dose dumping in presence of alcohol. Ethyl cellulose, HPMC and Xanthan gum can be used to sustain the release of drug in presence of alcohol and to overcome the problem of dose dumping in alcohol by using different polymers with different concentrations.

NIS/2K18/POSTER/023

EVALUATION OF IN VITRO THROMBOLYTIC ACTIVITY OF ETHANOLIC EXTRACT OF CURCUMA CAESIA RHIZOMES

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Abstract: Thrombolytic agents dissolve blood clots and limit the damage caused by the blockage or occlusion of a blood vessel. These are widely used for the management of myocardial infarction, thromboembolic strokes, deep vein thrombosis and pulmonary embolism. Currently used synthetic drugs causes adverse effects such as major bleeding, cardiac arrhythmias, cerebrovascular hemorrhage and anaphylactic reaction, so there is a need to investigate some more safe natural thrombolytic agents. Present study is a preliminary work towards such endeavors. It was designed to investigate in vitro thrombolytic activity of ethanolic extract of Curcuma caesia rhizomes. An in vitro thrombolytic model was used to evaluate the clot lysis effect of ethanolic extract of Curcuma caesia rhizomes along with Streptokinase as a positive control and distilled water as a negative control. The ethanolic extract was found to have significant thrombolytic activity (49.18±3.41%) compared to the effect of Streptokinase (71.54±3.26%) used as a positive control and water (2.96±0.28%) used as a negative control. The current study refers the Curcuma caesia rhizomes as impressive thrombolytic agent for further use in the treatment of cardiovascular diseases. Therefore, steps should be taken to observe in vivo clot dissolving potential and to isolate active component(s) of these extracts which have Thrombolytic activity.

NIS/2K18/POSTER/024

INDUCED PLURIPOTENT STEMCELLS (IPSC’s) NEURODEGENERATION OF HUNTINGTON’S DISEASE

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Abstract: Induced pluripotent stem cells (IPSC’s) derived from controls and patients can act as a starting point for invitro differentiation into human brain cells for discovery of novel target and treatment for human disease without the same ethical limitations posed by embryonic stem cells. Numerous groups have successfully produced and characterized Huntington’s disease (HD) iPSCs with different CAG repeat lengths including cells from patients with one or two HD alleles. HD iPSCs and the neural cell types derived from them recapitulate some disease phenotypes found in both human patients and animal models. Although these discoveries are encouraging the use of iPSCs for cutting edge and reproducible research has been limited due to some of the inherent problem with cell lines and the technological differences in the way laboratories use them.

Keywords: Huntington, Huntington’s disease, HTT, induced neuron, induced pluripotent stem cells, neural stem cells, neurodegenerative disorder.

NIS/2K18/POSTER/025

DRUG ADDICTION AND ABUSE

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Drug Addiction is a major problem that has been increasing immensely and rapidly in people of all ages group . It is more popular among youth. Drug Addiction can only hinder and restrain us from accomplishing our goals and dreams in life .Addiction can trap anyone. We are greatly influenced by the peers and celebrities .Addiction is a chronic disease characterized by seeking and use that is compulsive or difficult to control, despite harmful consequences. Initially people start using drugs under peer pressure or curiosity. And slowly they get addicted to it, repeated drug use can lead to brain changes, that challenge addicted person’s self control. It interferes with the ability to resist intense urge to take drugs. Most drugs effect the brains “reward circuit”, causing euphoria ( state of intense happiness and excitement) as well as flooding it with the chemical messenger dopamine. Drug Addiction leads to various health and other socio-financial problems. It weakens the immune system and increase susceptibility to other health disorders. It also causes cardiovascular disorders, liver damage , mental confusion and even permanent brain damage . It also increase the persons aggressiveness, hallucinations, impaired judgement and impulsiveness. The most commonly used drugs are cocaine, marijuana , heroin and amphetamine. They are consumed by various methods like through injections, ingestion, inhalation. These drugs are obtained through various sources like plant source, some are synthesized artificially. They mainly effect the central nervous system of...
A RETROSPECTIVE STUDY ON DRUG UTILIZATION EVALUATION OF ANALGESICS FOR PALLIATIVE PAIN MANAGEMENT
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Abstract: Aim: The aim of this present study is to evaluate the use of analgesics for the management of pain in the palliative care patients. The secondary objective was to evaluate the choice of analgesic selection for the management of various kinds of pain in these patients. Objective: The perception of pain is always a point to concern. Chronic malignant pain occurs in a potentially life threatening illness. The aim of this present study is to evaluate the use of analgesics for the management of pain in palliative care patients. Study Design: A retrospective study has been carried out with the help of patient’s case sheets. Case sheets of 200 patients had been obtained for the study. Data were collected from the case sheets between the years 2012-2015. Results: It can be seen that 56.09% patients had lung carcinoma. The most common drug being given for palliative pain management is Morphine. The other drug that was given predominantly was Tramadol. Non-steroidal Anti Inflammatory Drugs such as Diclofenac and Ibuprofen were also been given to the patients. Corticosteroids such as Dexamethasone was also given. Sodium Valproate is also given for the management of neuropathic pain. Opioids were found to be much efficient than non-opioid analgesics (p<0.001). Conclusion: This study concludes that the goal of physicians is “to cure sometimes, to relieve often, and to comfort always.” Careful attention to the science and art of pain management and comfort is every bit as important as cure. Death is inevitable; suffering is not.

Keywords: Palliative care, Pain Management, Opioid analgesics, Corticosteroids.

MARINE PHARMACOLOGY: A NEW SCOPE FOR DRUG RESEARCH
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Abstract: Disease ailments are changing the patterns and the new disases are emerging due to changing environment. The enormous growth of world population has overburdened the existing resources for the drugs and hence the drug manufactures are looking for new sources for drug development. Marine organism have provided a large proportion of bioactive natural products, but none of the compounds have reached the pharmaceutical market place . These marine organisms are screened for anti bacterial, anti fungal ,anti cancer ,anti microbial ,analgesic and anti malarial properties. Tremendous work is carried in this field for the new, safe drug development across the world.

Keywords: Marine pharmacology, Drug Research, New Scope.

PHARMACEUTICAL ADVANCEMENTS OF RHEUMATIC HEART & LIFE SCIENCES
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Abstract: To prevent and rise the quality of life for Rheumatic Heart Disease (RHD). It is the most commonly acquired heart disease in young people under the age of 25. It most often begins in childhood as strep throat and can progress to serious heart damage. The condition is caused rheumatic fever that can be prevented and controlled. Rheumatic fever is caused by streptococcal (strep) infection. Treating strep throat with antibiotics can prevent rheumatic fever. Regular antibiotics (usually monthly injections) can prevent patients with rheumatic fever from contracting further strep infection and causing progressive of valve damage. The global burden of disease caused by rheumatic fever and RHD currently falls disproportionately on children young adults living in low income countries and is responsible for about 2,33,000 deaths annually. Peak incidence ages 5-15 years. Rare before age 4 years an after age 40 years. The incidence of RF and prevalence of rheumatic heart disease (RHD) are markedly variable in different countries. In developed country such as The United States, the incidence of RF < 2/100,000. In many developing countries the incidence of acute RF approaches or exceeds 100/100,000.
Oral route of drug administration is the ideal, convenient and preferred route. In controlled release drug delivery systems (CRDDSs), an active therapeutic is incorporated in the network structure of the polymer in such a way that the drug is released in a predefined controlled manner. Prolonging gastric residence time (GRT) is the most important objective of CRDDSs, as short GRT is the major hindrance in the development of CRDDSs. Mucoadhesive drug delivery systems interact with the mucosal epithelial surface, and mucin molecules and increase the residence time of the dosage form at the site of absorption. The drugs which have local action or those which have maximum absorption in gastrointestinal tract (GIT) require increased duration of stay in GIT. Thus, mucoadhesive dosage forms are advantageous in increasing the drug plasma concentrations and also therapeutic activity. Carvedilol is an anti-hypertensive drug with a half life of 7-10 hours. Due to its selective absorption from upper part of GIT the development of mucoadhesive sustained release drug delivery system is recommended in order to enhance the bioavailability. Mucoadhesive tablets were developed using the natural polymer, almond gum and guar gum. Mucoadhesions is a complex phenomenon which involves wetting, adsorption and interpenetration of polymer chains. Thus, it may be useful for prolonged drug release in stomach to improve the bioavailability and reduced dosing frequency.

Abstract: Leukemia is cancer of the white blood cells. White blood cells help your body fight infection. Your blood cells form in your bone marrow. In leukemia, however, the bone marrow produces abnormal white blood cells. These cells crowd out the healthy blood cells, making it hard for blood to do its work. In acute myeloid leukemia (AML), there are too many of a specific type of white blood cell called a myeloblast. There are different types of leukemia, including

- Acute lymphocytic leukemia
- Acute myeloid leukemia
- Chronic lymphocytic leukemia
- Chronic myeloid leukemia

Acute myeloid leukemia is the most common type of acute leukemia in adults. This type of cancer usually gets worse quickly if it is not treated. Possible risk factors include smoking, previous chemotherapy treatment, and exposure to radiation. Tests that examine the blood and bone marrow diagnose AML. Treatments include chemotherapy, other drugs, radiation therapy, stem cell transplants, and targeted therapy. Stem Cell Transplant For Acute Myeloid Leukaemia: The doses of chemotherapy drugs that doctors can give are limited by the serious side effects they can cause. Even though higher doses of these drugs might kill more cancer cells, they can’t be given because they could severely damage the bone marrow, which is where new blood cells are formed. This could lead to life-threatening infections, bleeding, and other problems due to low blood cell counts. Doctors can sometimes use a stem cell transplant (SCT) to give higher doses of chemotherapy (sometimes combined with radiation therapy) than could normally be given. After the treatment is finished, the patient gets an infusion of blood-forming stem cells to restore their bone marrow. The blood-forming stem cells used for a transplant can come either from the blood or from the bone marrow. Sometimes stem cells from a baby’s umbilical cord blood are used.

Key Words: leukemia, acute myeloid leukemia, stem cells, stem cell transplant, bone marrow.

Abstract: As per the recent reports of American cancer society, the dietary recommendations for cancer patients undergoing chemotherapy is to increase calorie and protein intake. But in contrast, fasting creates a unique tumor micro-environment that cannot be adapted by cancer cells unlike normal cells which cannot be produced by any means(drugs). Reduction in levels of Insulin like growth factors-1(IGF-1) and 50% of the glucose, induced by fasting aids in the protective effects against cancer cells in mammals. Proto-oncogenes, cells expressing cancer, act as negative regulators of the protective changes induced by fasting which leads to differential stress resistance of normal cells and cancer cells. As per preliminary studies, fasting up to 5 days followed by normal diet can bypass the phase of adverse effects associated with cancer chemotherapy. But when followed dietary restriction (20-40% of restriction in calorie intake), it resulted in assisting chemotherapy long run but shown chronic weight loss (adverse effect). In this discussion, a comparison of fasting induced cellular protective mechanisms and the changes in tumor micro-environment in normal cells and cancer cells respectively has been reviewed. Although additional preclinical and clinical studies are necessary, fasting has the potential to be translated into effective clinical interventions for the protection of patients and improvement of therapeutic outcome.

Keywords: fasting, dietary restriction, chemotherapy, differential stress resistance.
DRUG TARGET ENGAGEMENT-OVARIAN CANCER
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Abstract: To prevent the Ovarian Cancer and rise the quality of women life. Ovarian Cancer occurs after puberty. It is a heterogeneous disease and is 5th leading cause of cancer related deaths among women in the United States. In 2014 approximately 22000 women were diagnosed with ovarian cancer and approximately 14000 died of the disease, making it the most lethal of the gynecologic malignancies. Patients with non-specific symptoms, most often abdominal pain. Platinum based chemotherapy is indicated for women with ovarian cancer in FIGO stage-I to IIA (except stage- IA,GI). For women with advanced Ovarian cancer involves resection of the primary tumors. The possibility of ovarian cancer must be considered for any women who presence with new, persistent, non-specific abdominal pain. Ovarian Cancer should always be treated in accordance with published guide lines. Ovarian Cancer accounts for an estimated 239,000 new cases and 152,000 deaths world wide annually. The highest rates (11.4 per 100,000 and 6.0 per 100,000 respectively) are seen in Eastern and Central Europe. In comparison 21,290 cases and 14,180 related deaths are estimated to occur in the USA during the same year.

AUTISM SPECTRUM DISORDER
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Abstract: Autism is a behavioral syndrome presenting behavior abnormalities before the child in 30 months of age. These abnormalities include marked social deficits, specific language abnormalities and stereotyped, repetitive behaviors, lack of spontaneous acts. The exact etiology of autism is not known it is now believed that it is a dysfunction of one or more unidentified brain system and not the result of parental and environmental influences. Variation in symptomology and in prognosis among autistic persons depend the severity and the extent of the underlying brain dysfunction. The individual will display interests often focused and repetitive.

Key Words: Autism, Behavioral syndrome, Stereotyped, Language abnormalities.

STUDY ON ANTIMICROBIAL USE AT A TERTIARY CARE HOSPITAL IN ANDHRA PRADESH, INDIA USING WHO METHODOLOGY
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A common threat jeopardizing the globe is antimicrobial resistance (AMR). Being largest consumer of antimicrobials, the problem of irrational use of antimicrobials and antimicrobial resistance (AMR) is deep and multifactorial in India. The present study aimed at investigating antimicrobial use in a tertiary care hospital at Vijayawada Andhra Pradesh. This is a descriptive cross sectional study, designed using WHO standard indicators. Based on the possibilities 2 hospital indicators and 6 prescribing indicators are chosen for the study. Standard data collection forms were used to collect the data for the study from ten departments of the hospital. Total 1000 prescriptions were selected for the study by using systemic random sampling technique for a period of 6 months between November - 2017 to April 2018. Among 1000 cases collected for the study 57.3% were males and 42.3% were females. On an average, 51-60 years age group predominantly prescribed with antimicrobials. When compared among ten wards during the study, general medicine (20.7%), gastroenterology (19.6%) followed by pediatrics (15.4%) were found with high antimicrobial prescription rate. For the hospital indicators, a formulary list or essential medicines list (FL/EML) and standard treatment guidelines (STGs) for infectious diseases was available. From the prescribing indicators, average number of antimicrobials prescribed is 2-3. Average number of days that aset of key antimicrobial is out of stock 3.5 days, average days of antimicrobial treatment were 5.6 days, and percentage of antimicrobial prescriptions consistent with the hospital formulary 72%. Among patient care indicators, antibiotic sensitivity test was performed in 3.3% cases.

HYPOLIPIDEMIC ACTIVITY OF CAYENNE PEPPER AGAINST DEXAMETHASONE INDUCED HYPERLIPIDEMIA IN RATS
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Abstract: The objective of present study is to evaluate the hypolipidemic activity of Cayenne pepper against dexamethasone induced hyperlipidemia in rats. Administration of dexamethasone was given at 10 mg/kg, sc to adult rats for 28 days induced hyperlipidemia characterized by marked increase in serum cholesterol and triglyceride levels alongwith increase in atherogenic index. Cayenne pepper (50 and 100 mg/kg, po.) treatment has showed significant inhibition against dexamethasone induced hyperlipidemia by maintaining serum levels of cholesterol, triglyceride and atherogenic index near to normal levels and the effect of Cayenne pepper was comparable with atorvastatin (10 mg/kg/day, p.o). the possible mechanism may be associated with its high antioxidant values and HDL cholesterol-raising effect. These results suggested that Cayenne pepper possess significant hypolipidemic activity.

NIS/2K18/POSTER/036

FORMULATION AND EVALUATION OF SOLID LIPID NANOPARTICLES OF ETORICOXIB BY EMPLOYING GLYCERYL MONOSTEARATE

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Abstract: The aim of this study was to prepare Solid lipid nanoparticles of Etoricoxib by hot homogenization method. Seven formulations of Solid lipid nanoparticles of Etoricoxib prepared by Glyceryl Monostearate as a solid lipid nanoparticles, Soya lecithin as lipophilic surfactant and Gelucire (48/16 & 50/13) as hydrophilic surfactants. The formulations were prepared by varying the concentration of the surfactants. The evaluation studies like drug content, entrapment efficiency and drug release were performed among all the seven formulations (F1,F2,F3,F4,F5,F6,F7) F2 & F3 have shown better results.

Keywords: Etoricoxib, Glyceryl Monostearate, Soya lecithin, Gelucire and Hot homogenization method.

NIS/2K18/POSTER/037

CLINICAL PHARMACIST ROLE IN THE MANAGEMENT OF ASTHMA IN A TERTIARY CARE HOSPITAL

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Abstract: Asthma is a chronic inflammatory disorder of the airways, in which many cells play a role, in particular mast cells, eosinophils and t-lymphocytes. This inflammation causes recurrent episodes of wheezing, breathing, chest tightness and cough particularly at night or in morning. Asthma has been growing in prevalence and has imposed an increasingly large burden on health services. This study was targeted on educating the patient about the disease and medications in order to improve the health status and quality of life. The study aims at educating the patients in overcoming the common misconception prevalent among patients suffering from the diseases, to help maintain the social relationship with family and friends and in turn provide better psychological support treatment.

Key words: Chronic obstructive pulmonary disorder, Patient compliance, Patient counseling, Prospective interventional study.

NIS/2K18/POSTER/038

A PROSPECTIVE STUDY ON DETERMINING THE RISK OF RENAL FAILURE DUE TO NON STEROIDAL ANTINFAMMATORY DRUG ABUSE

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Abstract: Introduction: Renal failure or renal insufficiency is a medical condition of impaired kidney function in which kidneys fail to filter adequate metabolic wastes from the blood. NSAIDs has a fairly high incidence of adverse effects on kidney, and overuse leads to kidney failure, so avoidance of non steroidal anti-inflammatory drugs (NSAIDs) is recommended for most individuals with kidney disease. Objective: Study was conducted to determine the risk of renal failure due to NSAIDs by monitoring the renal parameters. Methods: Out of 96 patients 48 patients were taking NSAIDs as case and 48 patients were not taking NSAIDs. sr.creatinine, gfr and bun levels were measured. Risk is determined by using unpaired t test. Results: There is a significant difference between case and control groups. Conclusion: The use of NSAIDs shows significant association with increase in renal failure in patients taken as case subjects. The risk of increased sr. creatinine and Blood urea levels was increased with the use of NSAIDs. Our study reports suggests that using NSAIDs in patients with renal failure should be stopped immediately after increasing the renal parameters

Key words: Renal failure, NSAIDs, Sr. creatinine, Blood urea nitrogen, Gfr.
A REVIEW: IRON DEFICIENCY - AN EMERGING POTENTIAL THERAPEUTIC TARGET IN HEART FAILURE
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Abstract: Iron deficiency is an emerging problem in patients with chronic heart failure with a prevalence of 30%-50% and can be a potential therapeutic target. It was recently shown that patients with chronic heart failure are more susceptible to become iron deficient. This could be explained by gradual depletion of iron stores due to low iron intake, gastrointestinal blood loss, or iron malabsorption apart from this chronic inflammation causes reduced iron absorption and availability of iron recycled in the reticuloendothelial system. Iron deficiency contributes to cardiac and peripheral muscle dysfunction; apart from this it is associated with poorer clinical outcomes and a greater risk of death. Therefore, iron deficiency emerges as a new comorbidity and a therapeutic target of chronic heart failure. Clinical trials have demonstrated that intravenous iron supplementation therapy is associated with improved quality of life parameters, exercise capacity and reduction in hospitalizations. Treatment with i.v. iron is safe, with no increased rate of adverse events. Ongoing clinical trials are exploring the benefits of iron deficiency correction on various heart failure parameters.

A REVIEW ON CARDIAC RESYNCHRONIZATION THERAPY - AS A CONTRIVANCE IN TREATMENT OF DILATED CARDIOMYOPATHY
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Abstract: Cardiac resynchronization refers to pacing techniques that change the degree of atrial and ventricular electromechanical asynchrony in patients with major atrial and ventricular conduction disorders. It involves simultaneous pacing of the right ventricle and the left ventricle. To this end, a coronary sinus lead is placed for left ventricle pacing in addition to a conventional ventricular endocardial lead (with or without a right atrial lead). The basic goal of resynchronization therapy is to restore left ventricle synchrony in patients with dilated cardiomyopathy and a widened QRS. Dilated cardiomyopathy refers to congestive cardiac failure secondary to dilatation and systolic dysfunction of the ventricles (asynchronous beating of two ventricles) in the absence of congenital, valvular, or coronary artery disease or any systemic disease known to cause myocardial dysfunction. Resynchronization therapy helps to re-coordinate ventricular contraction simultaneously and restore the efficiency of the weakened heart. Studies with Cardiac resynchronization therapy have demonstrated its ability to improve the symptoms, the exercise capacity, and the feeling of well-being of many patients with moderate to severe heart failure. Studies have also shown that Cardiac resynchronization therapy can improve both the anatomy and function of the heart tending to reduce the size of the dilated left ventricle, and therefore improving the left ventricular ejection fraction. Cardiac resynchronization therapy remains technically challenging, and implantable devices expose patients to clinical risks, including device-related symptoms, device failure and surgical complications. Rapid technologic advances in device and lead design and implantation techniques are simplifying the implantation procedure and minimizing the risks.

ULTRA PERFOMANCE LIQUID CHROMATOGRAPHIC ASSAY FOR THE DETERMINATION OF VINCRISTINE IN RAT PLASMA
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Abstract: Introduction: The Ultra Performance Liquid Chromatography is based on the principal of use of stationary phase consisting of particles less than 2μm. Vincristine is cancer medication that interferes with the growth of cancer cells and slows their spread in the body. Rats given a higher dose of vincristine (1.0 mg/kg) excreted a larger percentage of the dose in the bile than rats given a lower dose (0.1 mg/kg). Objective: Determination of vincristine in rat plasma by Ultra Performance Liquid Chromatography (UPLC). To interfere with the growth of cancer cells and slows their spread in the body. Methodology: The study was designed to detect vincristine in rat plasma. A comprehensive medicine technology to reduce the growth of cancer cells and to treat leukemia, Hodgkin's disease, non-Hodgkin's lymphoma, rhabdomyosarcoma, neuroblastoma (cancer that forms in nerve tissue). The research underwent for intervention for 3 months. The QU-IBC approval was achieved. Four suggested protocols were designed. Conclusion: This protocol has achieved promising results with good separation in a short run time (<1 min), while faced with sensitivity issues, that could be overcome with better tuning of conditions regarding the UPLC machine and the volume of solutions used.

DOCKING STUDIES OF SOMENOLEVIM-4PIPERZINYLDERIVATIVES OF CIPROFLOXACIN
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**Abstract:** Ciprofloxacin, afluroquinolones analogue has activity against a wide range of gram-negative and gram positive microorganisms by inhibiting the enzymes topoisomerase-II(DNA gyrase) and topoisomerase-IV which are required for bacterial DNA replication, transcription ,repair and recombination. A series of ciprofloxacin derivatives were synthesized (M1M10) Via N Piperziny1 linkage. In present investigation, we screened docking stimulation for synthesized compounds(M1 M10) to find out binding modes of derivatives with 3FV5 and 3IMW studies was performed by using Auto Dockvina1.12version and chimera1.12version. The compound M3&M4showedgoodantibacterialactivityagainstrgrampositive(S.Aureus)andcompoundM1 & M4showed good antibacterial activity against gram negative (E.Coli) in comparison with standard drug(Ciprofloxacin).

Keywords: N Piperziny, Ciprofloxacin, DNAGyrase, topoisomerase-IV, Dockingstudies.

**Effect on Swelling and Floating behavior of Venlafaxine HCl floating matrix tablets – a comparative evaluation**

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**Abstract:** The present study was focused in formulating floating tablets of Venlafaxine HCl targeted to treat panic disorders and attacks which includes sudden feeling of terrors without warning. Floating delivery serves to be a promising Gastro-retentive approach to treat such disorders. The purpose of the present work was to exemplify effect of different excipients on floating and swelling characteristics. The initial phase consists of developing a calibration curve of the selected drug at various simulated in-vitro conditions. The characterization of the drug was carried out using FTIR and DSC. Compatible excipients were selected on the basis of drug-excipient compatibility studies. These tablets so prepared were then optimized at various hardness levels. In-vitro floating studies revealed the buoyant nature of the tablets which were further signified using statistical analysis. Swelling study was done by varying the concentration of polymers initially followed by varying the composition of the excipients- the effervescence mixture which were
AN EYE ON DIALYSIS COMPLICATIONS OF CHRONIC RENAL FAILURE
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Abstract: This review aims to bring to the fore, issues regarding the interface of Dialysis Complications and renal failure. Prevention and early detection of symptoms can enhance the provision of effective care and may decrease both morbidity and mortality in patients on dialysis. The most common clinically significant complication is Electrolyte abnormalities which include Hyperkalemia (due to lower estimated glomerular filtration rate and use of ACE inhibitors or angiotensin-receptor blockers); and Hyponatremia, hypocalcemia, and hypermagnesemia (due to fluid overload). Dialysis Dysequilibrium Syndrome characterized by weakness, dizziness, headache, and in severe cases, mental status changes have been noted as the biggest deniers of psychiatric illness in patients with renal failure. Vascular access problems include infections, which are typically manifest with symptoms such as redness, warmth, local pain or fluctuance and fever. Continuous ambulatory peritoneal dialysis is associated peritonitis. Hemorrhage, Aneurysms or pseudoaneurysms may form and progressively enlarge to compromise the skin overlaying the site of venous access. Other problems that may arise in the dialysis patient include Changes in calcium and phosphorus metabolism, acidosis, Lipid disorders, Pericarditis, Serositis, Gout, pseudogout, Hypothyroidism, seizures, fractures, Accelerated hypertension, Infertility, impotence, spontaneous abortion, Bleeding, gastrointestinal mucosal ulcerations and arteriovenous malformations. Identification of the major causes of morbidity in dialysis patients can lead to improving strategies for reduction of complication rates, improvement of quality of life and sparing of resources.

AN EYE ON DIALYSIS COMPLICATIONS OF CHRONIC RENAL FAILURE

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Abstract: Attention-deficit/hyperactivity disorder (ADHD) is a brain disorder of the neurodevelopmental type marked by an ongoing pattern of inattention and/or hyperactivity-impulsivity that hampers with functioning or development. The cause of most cases of ADHD is believed to involve interactions between genetic (change in genes affecting dopamine neurotransmission and neurotransmitters) and environmental factors (intake of alcohol during pregnancy, exposure to lead or polychlorinated biphenyls, Extreme premature birth, very low birth weight, and extreme neglect, abuse, or social deprivation). Current models of ADHD suggest that it is associated with functional impairments in some of the brain's neurotransmitter systems, predominantly those involving dopamine and norepinephrine. The underlying brain regions mostly thought to be involved are frontal and prefrontal; the parietal lobe and cerebellum; deformations in the basal ganglia nuclei (caudate, putamen, globus pallidus) may also be involved. The more prominent the deformations, the greater will be the severity of symptoms. ADHD is diagnosed by an assessment of a person's childhood behavioral and mental development, including ruling out the effects of drugs, medications and other medical or psychiatric problems as explanations for the symptoms. The therapeutic approach to ADHD has been ever-changing. In some cases, environmental restructuring and behavioral therapy alone has been effective. Developments in behavioral parent training and behavioral classroom management have also proven beneficial. Additionally, behavioral psychotherapy often is successful when used in conjunction with an effective medication regimen. The medications of choice are stimulants (methylphenidate, dextroamphetamine), Atomoxetine, Tricyclic antidepressants (imipramine, desipramine, nortriptyline) and Centrally acting antihypertensives (clonidine and guanfacine) have been used to treat children with ADHD.

AN INSIGHT ON PATHOPHYSIOLOGICAL INSIGHT ON MANAGEMENT AND TREATMENT OF PRURITUS
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Abstract: Itching, or pruritus, is defined as an unpleasant sensation which provokes the desire to scratch. Itching can be elicited by chemical, electrical, mechanical and thermal stimulation. The sensation of pruritus is transmitted through slow-conducting unmyelinated C-polymodal and possibly type A delta nociceptive neurons with free nerve endings located near the dermoeipidermal junction or in the epidermis. These neurons appear to be located more superficially and are more sensitive to pruritogenic substances than pain receptors. Activators of these nerves include histamine, neuropeptide substance P, serotonin, bradykinin, proteases (eg, mast cell tryptase), and endothelin (which stimulates the release of nitric oxide). Impulses are transmitted from the dorsal root ganglion to the spinohalamic tract. Stimulation of opioid mu receptors accentuates pruritus, both peripherally and centrally. The patient with a generalised itch should be advised to keep the body cool since the intensity of itching is usually enhanced if the skin is warm. A stepwise approach to management of generalised itch is recommended, including broadband or narrow band ultraviolet, tricyclics such as doxepin, opioid antagonists including naloxone and selective serotonin reuptake inhibitors such as paroxetine. For troublesome localised itches such as insect bite reactions, physical urticaria, lichen simplex chronicus or, less commonly, notalgia paraesthesia, brachioradial pruritus, local cooling devices which rely on the cooling action of dimethyl ethers on thermosensitive Transient receptor potential vanilloid receptor-

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potential voltage-sensitive ion channels are now commercially available for short-term relief. For troublesome localised itches, topical capsaicin, and in recalcitrant cases, transepidermal electrical nerve stimulation or cutaneous field stimulation is often very effective.

**BOTULINUM TOXIN IN THE MANAGEMENT OF CHRONIC MIGRAINE**

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**Abstract:** Botulinum toxin (BoNT) has been used for more than two decades to treat spasticity, autonomic overactivity, and as a cosmetic procedure to reduce wrinkles. More recently, injections with BoNT have been shown to be effective for improving headache symptoms and preventing chronic migraines. The toxin inhibits the release of neurotransmitters located at the presynaptic junction via deactivation of membrane vesicular proteins. BoNTA uses its endopeptidase light chain to deactivate the synaptosomal protein known as SNAP 25. This protein is located on the cell membrane and its deactivation prevents the release of acetylcholine. This causes muscle paralysis for a prolonged period of time. Although the pathophysiology of headache is incompletely understood, muscle tension may trigger or aggravate migraine headaches. Botulinum toxin, which reduces muscle hyperactivity, may reduce headache pain by decreasing muscle tension. It may also provide peripheral and central neurogenic effects and reduce inflammation. Its mechanism of action in treatment of migraine includes antinociceptive activity, synaptic transmission inhibition and calcitonin gene-related peptide regulation. The recent approval by the Food and Drug Administration for the use of onabotulinum toxin type A for the prevention of chronic migraine has increased patients’ access to this novel interventional therapy. This has provided additional treatment to patients that were previously unsuccessful in relieving their refractory pain and/or headache symptoms via other forms of therapy.

**CORRELATION BETWEEN STRESS AND SEVERE OBESITY**

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**Abstract:** Obesity is a global public health challenge that upsurges the risk of various diseases including type 2 diabetes mellitus, hypertension and cancer, and will in the impending cause further increases in the incidence of chronic disease. Sedentary lifestyle and easy accessibility to highly palatable nutrient-dense foods produces an environment that stimulates overweight and obesity. Chronic social stress, often arising from poor interpersonal relationships, job or unemployment stress, poor self-esteem, and low socioeconomic status has been linked with obesity and its associated illnesses. Chronic activation of the Sympathetic Nervous System and hypothalamic pituitary adrenal axis contribute to anabolic state that promotes fat storage within visceral depots. Stress can stimulate production of possible abnormalities in biochemical hormones and peptides such as leptin, ghrelin, and neuropeptide Y. Stress may play a major role in the development and maintenance of obesity in individuals who have an increased glucocorticoid exposure or sensitivity. Stress can also enhance weight gain and fat deposition through changes in feeding behavior. Chronic stress is known to alter the pattern of food intake, dietary preference, and the rewarding properties of foods. These insights may lead to more effective and individualized strategies for the management of obesity.  
**Keywords:** Obesity, Stress, Hormones

**DIAGNOSTIC AND TREATMENT CHALLENGES IN PEDIATRIC SCHIZOPHRENIA**

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**Abstract:** Pediatric schizophrenia is a type of mental disorder that is characterized by degeneration of thinking, motor, and emotional processes, with onset before age 18 (early onset) or before age 13 (very early onset). It occurs in less than 1 in 10,000 children and less than 1% of patients with schizophrenia receive this diagnosis in childhood. The disease presents symptoms such as auditory and visual hallucinations, strange thoughts or feelings, and abnormal behavior, profoundly impacting the child’s ability to function and maintain normal interpersonal relationships. The evaluation of a child with suspected Pediatric schizophrenia, includes collecting extensive collateral information, observing patients/families over several visits, excluding underlying medical illnesses and evaluating, with a high index of suspicion, for speech/language/educational deficits and comorbid mood or anxiety disorders. Treatment strategies focus on alleviating positive and negative symptoms, reducing long-term morbidity, and preventing relapse. Clozapine remains the gold standard treatment for schizophrenia, and has been shown to have a more favorable profile of clinical response compared with haloperidol and olanzapine in treatment-refractory Pediatric schizophrenia. Psychosocial therapies (cognitive behavioral therapy, family intervention, social skills training, and cognitive remediation) are effective adjuncts to pharmacological interventions in Pediatric schizophrenia along with Electroconvulsive therapy.  
**Keywords:** Pediatric schizophrenia; cognitive behavioral therapy; treatment
INSIGHT ON APPROACHES FOR THE NONSURGICAL TREATMENT OF NASAL POLYPOSIS
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Abstract: Nasal polyposis is an inflammatory condition of unknown etiology. Nasal polyps are the most common tumors of the nasal cavity. Approximately 30% of patients with nasal polyps test positive for environmental allergies. Polypt formation in the nasal cavity is due to chronic allergic rhinitis, chronic sinusitis, and, less commonly, underlying disease such as cystic fibrosis. Olfaction and nasal obstruction are the most important considerations in terms of symptoms. Patients usually present with nasal obstruction, rhinorrhea, sinus infection, and anosmia of prolonged duration. These polyps can be removed by two types of surgical procedures i.e. Polypectomy and Endoscopic Sinus Surgery. Oral corticosteroids are the most effective medication for the short-term treatment of nasal polyps, and oral corticosteroids have the best effectiveness in shrinking inflammatory polyps. Intranasal steroid sprays may reduce or retard the growth of small nasal polyps, but they are relatively ineffective in massive nasal polyposis. Intraloplyp steroid injections have been shown to reduce polypl growth and nasal symptom scores compared with intranasal medical therapy. Leukotrienes synthesis inhibitors have shown improvements in nasal airflow and reduction in nasal polyps. Nasal saline irrigation can be especially helpful in people with nasal polyps and chronic sinus infections. Other agents with a possible role in management of nasal polyposis are macrolides antibiotics, topical diuretic therapy, and intranasal lyste-acetylsalicylic acid. Medical therapy for nasal polyposis is usually reserved for patients who are not surgical candidates or who require temporization of symptom relief.

MANAGEMENT STRATEGIES FOR POST-MYOCARDIAL INFARCTION HEART FAILURE
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Abstract: Review: Coronary artery disease which includes myocardial infarction is the foremost cause of Heart failure due to left ventricular systolic dysfunction. The process of development of Heart failure after myocardial infarction includes recurrent myocardial ischemia, infarct size, ventricular remodeling, stunned myocardium, mechanical complications, hibernating myocardium and neuroendocrine activation. Patients with significant left ventricular dysfunction after a myocardial infarction require particularly careful evaluation as they are at high risk of major cardiac events, including cardiac rupture, cardiac arrest, stroke, longer hospitalizations, ventricular arrhythmmias, recurrent myocardial infarction, and sudden death. The understanding of the mechanisms and clinical features are crucial for the diagnosis and treatment of left ventricular dysfunction and heart failure after myocardial infarction. The optimal management of the patient with heart failure post-myocardial infarction varies according to time since the onset of infarction. Pharmacotherapy includes the least possible reperfusion to prevent cardiogenic shock, early (within 24 hours) initiation of angiotensin-converting enzyme inhibitors and early (within 7 days) use of aldosterone antagonists. Close monitoring of arterial blood pressure, potassium, and creatinine levels are significant in the management of angiotensin-converting enzyme inhibitors and aldosterone antagonists. Long-term beta-blocker use after myocardial infarction is associated with a reduced risk of re-infarction and death. Finally, the paradigm of hematopoietic stem cell mobilization in myocardial infarction leading to monocyte expansion and acceleration of atherosclerosis may be an emerging approach to identify patients at high risk of heart failure post-myocardial infarction and death after myocardial infarction.

Keywords: myocardial infarction; heart failure; treatment.

RECENT STRATEGIES FOR THE MANAGEMENT OF ANEMIA IN CHRONIC KIDNEY DISEASE
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Abstract: Anemia is a severe complication of chronic kidney disease (CKD) that is seen in more than 80% of patients with impaired renal function. Normocytic normochromic anemia is one of the hallmarks of progressive chronic kidney disease. It is a multifactorial process due to relative erythropoietin deficiency, uremic-induced inhibitors of erythropoiesis, shortened erythrocyte survival, blood loss and disordered iron homeostasis (deficiency of iron, folate, or vitamin B12). Hepcidin excess also causes impairment in dietary iron absorption and iron mobilization from body stores. The preferred initial form of therapy for anemia of chronic kidney disease is the use of erythropoiesis-stimulating agents (epoetin alfa and darbepoetin alfa). The routine application of erythropoiesis-stimulating agents has also led to the need for concomitant iron supplementation. Erythropoiesis-stimulating agents (ESA) and iron therapy now form the cornerstone of anaemia management in CKD. Intravenous iron administration is effective with acceptable safety, and may improve ESA responsiveness. ESA causes some serious side effects may include heart attacks, stroke, increased cancer growth, or pure red cell aplasia. The development of new strategies to treat anemia is still an evolving area of clinical research. At present, the most promising class of agents seems to be Hypoxia-Inducible Factor Stabilizers which increases EPO production in the kidney and liver, improves uptake and use of iron, and changes to the bone marrow microenvironment that encourage erythropoietin progenitor maturation and proliferation. EPO Mimetic Peptides that stimulate EPO receptors are another promising class. Activin Traps (Sotatercept) which contribute to regulation of erythropoiesis either by directly affecting erythropoietin progenitor or precursor cells or by altering the behavior...
of bone marrow accessory cells is another interesting drug given its potential for not only correcting anemia but also checking osteoporosis.

NIS/2K18/POSTER/055

MANAGEMENT OF SEVERE/RESISTANT HYPERCHOLESTEROLEMIA
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Abstract: Hypercholesterolemia, and in particular, an elevated level of serum (or plasma) low density lipoprotein cholesterol (LDL-C), is associated with an increased risk of adverse cardiovascular events. Lipid lowering drug therapy, particularly with statins, is indicated to decrease the risk of cardiovascular events in most individuals with established atherosclerotic cardiovascular disease and in many who are at high risk. Hypercholesterolaemia, an elevation of total cholesterol and/or low-density lipoprotein -cholesterol or non-high-density lipoprotein-cholesterol in the blood, is also often referred to as dyslipidaemia, to encompass the fact that it might be accompanied by a decrease in HDL-cholesterol or an increase in triglycerides. This disorder is associated with an increased risk of adverse cardiovascular events. Several treatment options exist for hypercholesterolemia, which may be instituted individually or in combination. They include lifestyle changes to diet and exercise, medications, and dietary supplements. Rarely, experimental therapies or procedural interventions can be applied. HMG-CoA reductase inhibitors (statins) are frequently prescribed against hypercholesterolemia, and these agents successfully suppress levels of serum LDL-cholesterol in most cases. However, even with optimal statin treatment, 60% to 80% of residual cardiovascular risk still exists. The patients with resistant hypercholesterolemia are intolerant or unresponsive to statins are the other hurdles of statin treatment. The pro-protein convertasesubtilisin/kexin type 9 (PCSK9) inhibitor increases the expression of low density lipoprotein (LDL) receptor in hepatocytes by enhancing LDL receptor recycling. The microsomal triglyceride transport protein (MTP) inhibitor and antisense oligonucleotide against apolipoprotein B (ApoB) reduce the ApoB containing lipoprotein by blocking the hepatic very low density lipoprotein synthesis pathway. The apolipoprotein A1 (ApoA1) mimetics pursuing the beneficial effect of high density lipoprotein cholesterol and can reverse the course of atherosclerosis. These new lipid-lowering drugs can be used for additional benefits beyond statin treatment.

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REVIEW ON NEW STRATEGIES FOR MANAGEMENT OF DIABETIC KIDNEY DISEASE
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Abstract: Purpose of review: Among diabetic complications, kidney disease remains one of the most devastating as it is closely associated with early mortality in both type 1 and type 2 diabetes. The purpose of this review is to provide an outline of recent preclinical and clinical studies, which demonstrate new insights for the treatment of diabetic kidney disease (DKD) and to outline future directions with respect to novel therapies. Recent findings: Positive findings with respect to new glucose-lowering agents such as sodium-dependent glucose transporter 2 inhibitors may lead to a change in the way we treat diabetic individuals with or at risk of DKD. Additional positive phase 2 clinical studies with drugs that have hemodynamic actions such as endothelin antagonists and mineralocorticoid receptor antagonists have led to larger phase 3 trials with atrasentan and finerenone, respectively, in order to address if these drugs indeed delay the development of end-stage renal disease. A number of other pathways such as Targeting the Metabolic Pathways Responsible for Diabetic Kidney Disease, Advanced Glycation End Products/Receptor for Advanced Glycation End Products Pathway, NADPH Oxidase, Xanthine Oxidase, Nuclear 1 Factor (Erythroid-Derived 2)-Related Factor 2, Inflammatory Chemokines, Profibrotic Growth Factors (Transforming Growth Factor-β1) and Micro-RNAs and Phosphodiesterase Inhibitors are currently under active preclinical investigation. Hopefully, the new studies will lead to major improvements over the next decade in the way to manage diabetes and its complications. Summary: As the epidemic of DKD continues unabated, new treatments strategies to reverse, attenuate or prevent DKD are desperately needed to reduce the progression of this disorder.

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UNDERSTANDING ON MANAGEMENT OF VASODILATORY SHOCK
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Abstract: Shock is one of the most common reasons for admission of patients to an intensive care unit. Low blood pressure is a hallmark of shock, and raising blood pressure is one of the foremost therapeutic goals in this situation. In patients with vasodilatory shock, who represent approximately two thirds of all patients with shock, the usual method of raising blood pressure after fluid resuscitation is intravenous infusion of a vasopressor agent. The agents most commonly used to raise blood pressure in patients with vasodilatory shock are the adrenergic agents norepinephrine (recommended first-line therapy). When these measures are inadequate to restore BP, vasopressin or epinephrine can be added. Adjunctive therapies, such as hydrocortisone, thiamine, and ascorbic acid, may increase BP in severe shock and should be considered when combination vasopressor therapy is needed. Novel vasopressor agents, such as synthetic human angiotensin II, can increase BP and reduce the need for high doses of catecholamine vasopressors in severe or
refractory vasodilatory shock. Few effective rescue therapies exist for established refractory shock, which emphasizes the importance of aggressive intervention before refractory shock develops, including the earlier initiation of rational combination vasopressor therapy.

**Abstract:** Pulmonary arterial hypertension is a rare but life-threatening disease characterized by elevated pulmonary artery pressure and severe right heart failure. Frequently occurring symptoms include dyspnea, recurrent syncope, tiredness, swelling of the legs, and a fast heartbeat. Additional symptoms include fatigue, lethargy, anorexia, chest pain, and right upper quadrant pain. The pathogenesis of pulmonary arterial hypertension involves the narrowing of blood vessels connected to and within the lungs may be due to vasoconstriction, thrombosis, and vascular remodeling (excessive cellular proliferation, fibrosis, and reduced apoptosis/programmed cell death in the vessel walls, caused by inflammation, disordered metabolism and dysregulation of certain growth factors). These changes lead to a progressive increase in pulmonary vascular resistance, increased afterload on the right ventricle and, ultimately, right heart failure. PHA occurs due to endothelial dysfunction which results in a decrease in the synthesis of endothelium-derived vasodilators such as nitric oxide and prostacyclin and increase in synthesis of vasoconstrictors such as thromboxane and vascular endothelial growth factor there by causing severe vasoconstriction and vascular smooth muscle and adventitial hypertrophy. Several therapies should be considered in patients with pulmonary arterial hypertension including diuretic, oxygen, anticoagulant, and digoxin therapy, as well as exercise. Advanced therapy is directed at the pulmonary hypertension (PH) itself (PH-targeted therapy), rather than the underlying cause of the PH. It includes treatment with endothelin receptor antagonists (bosantan and Sitaxsentan), phosphodiesterase type 5 inhibitors (sildenafil and tadanafil), prostacyclin derivatives (Epoprostenol), Activators of soluble guanyl dataListigator (cinaciguat and riociguat). For patients with refractory disease, Atrialseptostomy and lung transplantation are reserved. All have important limitations and morbidity and mortality remain high. Several new agents with similar mechanisms of action are in clinical development.

**Keywords:** Pulmonary arterial hypertension; pathogenesis; treatment;

**MEDICINAL PLANTS USED IN THE TREATMENT OF WOUND HEALING ETHNOBOTANICAL AND ETHNOPHARMACOLOGICAL APPROACHES: A REVIEW**

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**Abstract:** Wound is known as the disruption of the cellular and anatomic continuity of a tissue. Wound can be occurred via physical, chemical, thermal, microbial or immunological stress to the tissues. The Wound healing consists of orderly progression of a series of events that establish the integrity of the damaged tissue. It has four phases homeostasis, inflammation, proliferation and remodeling. That can be disrupted by local or systemic risk factors, resulting in delayed healing and progression to a chronic wound. Basically it was observed that essential vitamins and minerals were required for wound repair which also involve in improving healing time. The drug Moringaoleifera have shown significant acute antiinflammatory activity and on the other hand the aloe vera which has been used to enhance wound repair and recover from wound within shortest time period with minimal pain and discomfort.

**Keywords:** Wound Healing; Anti inflammatory; Antioxidant; Proliferation; homeostasis; Remodelling

**Noninvasive Testing for Colorectal Cancer: A Review**

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**Abstract:** Colorectal cancer (CRC) is the second leading cause of cancer-related deaths. Endoscopic screening is now in favor and its use is increasing, but overall participation rates are poor. A substantial percentage of the population will likely continue to resist endoscopic screening. As such, a noninvasive biomarker for the early detection of CRC remains a priority. Herein, we review the currently available noninvasive screening markers for the early detection of CRC and introduce and explain potentially promising markers of the future. Introduction: Noninvasive testing for CRC is most advanced in testing for stool fecal occult blood, globin, or DNA mutations. Study of abnormal mucins has also been explored. Research for serum-based markers is just beginning and includes serum proteomics, nuclear matrix proteins, and serum DNA testing. Noninvasive tests include Serial guaiac-based fecal occult blood testing (FOBT), Immunochemical fecal occult blood tests, Fecal DNA testing and Serum tests. Conclusions: Therefore we conclude that the non-invasive testing for CRC.
invasive methods are currently available noninvasive screening markers for the early detection of CRC and would greatly serve the public health, and radically alter the practice of gastroenterology by reducing screening procedures.

**Keywords:** Non invasive, colorectal, endoscopic screening, biomarker, stool fecal occult blood, globin, mucins, nuclear matrix proteins, serial guaiac, fecal DNA, proteomics.

**NEEDLE FREE INJECTION**

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**Abstract:** Needle free injection technology was developed to reduce the number of needle sick accidents and associated problems. A comprehensive literature review was completed regarding needle free injection technology and its applications, advantages of needle free injection, their components and types such as powder injection, liquid injection, Depot or projectile injection. This review describes needle free injection technology involving the generation of force by using compressed gas upon actuation in order to deliver a drug at very high speed through a nozzle. This review also describes injection methods that use a spring load jet injector, battery powered jet injector and gas powered jet injector. An overview of marketed products, recent trends and other needleless drug delivery system is given. Needle free injection technology is growing and has a potential to make the administration of medicine more efficient, safe and convenient.

**Key Words:** Needle free injection technology, novel, powder injection, liquid injection, Depot, projectile injection and jet injection.

**BIOENHANCING EFFECTS OF NARINGIN ON ATORVASTATIN**

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**Abstract:** Naringin (4',5,7-trihydroxyflavanone 7-rhamnoglucoside) is a flavonone glycoside obtained from Citrus paradisi, a natural bioenhancer and reported to enhance the bioavailability of drugs by inhibiting cytochrome P450 and F-glycoprotein. In the present study, the effect of naringin was investigated on antihyperlipidemic properties of atorvastatin (AST) in tyloxapol induced hyperlipidemic rats and the effects were supported with measurement of plasma concentrations by RP-HPLC method. The animals received AST alone (25 & 50 mg/kg) and along with naringin (15 and 30 mg/kg). These results suggest the naringin inhibits the biotransformation and metabolism of AST leading to higher levels of drug in systemic circulation and these results are concurrent with plasma concentration of AST. The plasma concentrations of naringin are increased with increase in dose of naringin and concentration is not significantly altered when co-administered with AST. The finding of present study confirmed that naringin could be used as bioenhancer when co-administered with AST and the diet with naringin (Grapefruit) to the patients may potentiate the therapeutic efficacy of AST.

**Keywords:** Atorvastatin, Naringin, bioavailability, Bioenhancing.

**STUDY OF PRESCRIPTION PATTERN ON RHEUMATOID ARTHRITIS**

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**Abstract:** Rheumatoid arthritis (RA) is the most common chronic inflammatory condition, affecting the population worldwide. Approximately, 0.5-1% of the adult population worldwide is affected by this disease. It affects multiple joints in the body and results in swelling, stiffness, loss of function and immune system. This study was a prospective cross-sectional study carried out at Nepal Arthritis and Rheumatic Disease Treatment Center, Jawalakhel for three months (September to November 2015). The patients diagnosed with rheumatoid arthritis of age >18 were included in the study whereas, the patients with other musculoskeletal disorders such as osteoarthritis, osteoporosis, gouty arthritis or other types of arthritis were excluded. Data were collected with the help of patient medication record and questionnaire and were analyzed using SPSS 18.0 version. Out of 194 patients, majority of the study population were found to be females (n=167) than males (n=27) with higher prevalence of the disease in the age group between 50-59 years. The mostly prescribed drugs for the treatment of RA were found to be the combination of two Disease Modifying Anti-rheumatic Drugs (DMARDs) i.e., Methotrexate and Hydroxychloroquine. Among Non-steroidal Anti-inflammatory Drugs (NSAIDs), Accelofenac was found to be frequently prescribed.

**SCIMITAR SYNDROME: A RARE CONGENITAL ANOMALY**

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Abstract: Scimitar syndrome is a rare association of congenital cardiopulmonary anomaly consisting of a partial anomalous pulmonary venous connection of the right lung to the inferior vena cava, right lung hypoplasia, dextroposition of the heart, and anomalous systemic arterial supply to the right lung. A 5 months old baby was admitted to the paediatric department of a tertiary care hospital with the complaints of cough, fever, running nose and hurried breathing. Provisional diagnosis was made as bronchopneumonia with Congestive heart disease. On examination the body temperature was 104°C, respiratory rate was 70cpm, heart rate was 148bpm, TLC was 19280 cells/cumm, ESR was 130mm in hour, reticulocyte count was 1.4% and CRP was 122.2 mg/dl. The patient was presented with tachypnea, peripheral cyanosis, subcostal retractions and coarse crepitation. On the second day of admission the ECHO report have shown situs solitus mesocardia, chest X - ray have shown small right hemi thorax with bilateral halleriness and ECG shown the presence of scimitar vein, which confirmed the diagnosis as scimitar syndrome with bronchopneumonia. The standard treatment includes surgery (lobectomy, cardiopulmonary bypass), Oxygen supplementation, IVF, antipyretics and antibiotics. The treatment given includes IVF ½ DNS 28ml/hr, Salbutamol nebulization 0.5ml in 2ml NS every 4hrly, Amikacin 50mg bid IV, Amoxicillin/clavulenate 300mg-150 mg-150 mg tid IV, Ceftriaxone 250mg bid IV, Paracetamol suppository 80mg sos Rectal, Linezolid syrup 3.2ml of 100mg/5ml tid PO and Metronidazole 65mg tid IV. Bronchopneumonia was a complication of scimitar syndrome so the early detection of congenital anomaly can prevent the complications.

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RECENT ADVANCEMENT IN THE PHACMACOTHERAPY OF NIPAH VIRUS
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Abstract: Kerala in India faced a catastrophic outbreak of Nipah virus recently in may,2018 & around 18 people have died. Nipah and Hendra viruses are recently emerged bat-borne paramyxoviruses (genus Henipavirus) causing severe encephalitis and respiratory disease in humans with fatality rates ranging from 40–75%. Despite the severe pathogenicity of these viruses and their pandemic potential, no therapeutics or vaccines are currently approved for use in humans. Favipiravir (T-705) is a purine analogue antiviral approved for use in Japan against emerging influenza strains; and several phase 2 and 3 clinical trials are ongoing in the United States and Europe. Favipiravir has demonstrated efficacy against a broad spectrum of RNA viruses, including members of the Paramyxoviridae, Filoviridae, Arenaviridae families, and the Bunyavirales order. Scientists demonstrated that favipiravir has potent antiviral activity against henipaviruses on Syrian hamster model. In vitro, favipiravir inhibited Nipah and Hendra virus replication and transcription at micromolar concentrations. Conclusion: In the Syrian hamster model, either twice daily oral or once daily subcutaneous administration of favipiravir for 14 days on fully protected animals challenged with a lethal dose of Nipah virus. This first successful treatment of henipavirus infection in vivo with a small molecule drug suggests that favipiravir should be further evaluated as an antiviral treatment option for henipavirus infections.

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RESISTANT AGAINST ANTIBIOTICS AN OVERVIEW
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Abstract: Antimicrobial resistance continuous to increase while the pipeline for new surgical procedure and immune-suppressive treatment depends upon antibiotic prophylaxis and the ability to treat infective complications. Antibiotics possess a big threat to healthcare. Areas of particular concern are carbopenemase producing gram (-ve) organism, gonorrhea and multidrug resistant tuberculosis. No doubt antibiotics have always been considered one of the wonderful discoveries of 20th century. This review represents the salient aspects of antibiotic resistance over past half century. Creative approaches to the discovery of novel antibiotics and their expedited and controlled introduction to therapy are obligatory. Antibiotics has save millions of lives. However, Antimicrobial resistance threatens the progress and presents significant risk to human life and health and human life. The global collection of resistance genes in clinical and environment samples is antibiotic “resistance” and is subjected to selective pressure of human activity. Understanding the history of antibiotic of antibiotic resistance is important in predicting its future collection. The review focused on present scenario and enlists some strategies to combat this global threat. Key words: Antibiotic resistance, Tuberculosis, Ant microbial resistance.

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OVER VIEW OF : NANOTECHNOLOGY
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Abstract: Nanotechnology (“nanotech”) is manipulation of matter on an atomic, molecular, and supramolecular scale. The earliest, widespread description of nanotechnology (1)(2) referred to the particular technological goal of precisely manipulating atoms and molecules for fabrication of macroscale products, also now referred to as molecular nanotechnology, This definition reflects the fact that quantum mechanical effects are important at this quantum-realm scale, and so the definition shifted from a particular technological goal to a research category inclusive of all types of research and technologies that deal with the special properties of matter which occur below the given size threshold. It is therefore common to see the plural form “nanotechnologies” as well as “nanoscale technologies” to refer to the broad range of research and applications whose common trait is size. Because of the variety of potential
applications (including industrial and military), governments have invested billions of dollars in nanotechnology research. Until 2012, through its These concerns have led to a debate among advocacy groups and governments on whether special regulation of nanotechnology is warranted. 

**Keyword:** nanotechnology, History, Application in medicine.

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**ADVANCEMENT IN PHARMACEUTICAL & LIFE SCIENCES SALT SALBUTAMOL AND ITS ADVANCEMENT**

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Salbutamol: Description

Salbutamol is a bronchodilator medicine that relaxes the muscles of the airways leading to the lung and improves the amount of air flow to and from the lungs. It is used to prevent and treat the symptoms of asthma and Chronic obstructive pulmonary disease.

Its advancements

1. Use as in 3 ways, as racemic mixture, as duolin & as levolin. In earlier times, salbutamol is used in racemic form. With the passage of time it is found that salbutamol in its sulphate salt with combination with ipratropium bromide provide good effects. Therefore with passage this advancement is used as duolin. Later on, it is found that dextrose salbutamol can retain in the branches and can obstruct the air pathway due to which its levo form is used in children as levoin.

Uses of advancement:

1. With advancement drugs with more efficacy and less toxicity can be produced
2. Several drugs with low therapeutic effect can be developed by several substitutions

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**Investigation of addicted leaves in mitochondrial neuronal impairment associated with Huntington’s type neurological disorders**

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**Abstract:** Huntington’s Disease (HD) is an autosomal dominantly inherited progressive neurodegenerative disorder, characterized by progressively worsening chorea, psychiatric disturbances, cognitive impairment and weight loss. To date, there is no cure or clinically proven treatment that slows progression of this fatal disease. To investigate the mechanism of neurodegeneration in HD, animal models of HD have been generated using 3-Nitropropionic Acid (3-NP), a mycotoxin, is a suicide inhibitor of succinate dehydrogenase (SDH), impaired energy metabolism, excitotoxicity, microglial activation and production of pro-inflammatory cytokines leading to neuronal death, by neurocystis and apoptosis. These events of neurodegeneration are relevant to the striatal cell loss seen in HD and are gaining prominence for 3-NP lesions. Bioactive phytochemical, Solanesol (obtained from leaves of addicted plant Nicotiana Tabacum, Family-Solanaceae) may be an innovative Drug Research on Natural Products and can also be used to prevent neurodegeneration by following powerfully safeguards mitochondria from age-related decay and death through two principal pathways. It plays an essential role in the electron transport chain, facilitating the efficient transfer of electrons into ATP for use in cellular function as well as primarily on the inner membranes of the mitochondria; 95% of all cellular energy production depends on it. Solanesol also acts as a powerful free radical scavenger, neutralizing their lethal action and dramatically reducing oxidative damage. This is one of the reasons why the highest Solanesol concentrations may be able to regulate synaptic plasticity, learning and memory, restore energy levels, reduce excitotoxic damage, prevent 

**Keyword:** Huntington’s Disease, Nicotiana Tabacum, Solanesol, Mitochondria

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**APPROACHES OF NANOMEDICINE IN CANCER THERAPY**

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**Abstract:** Cancer is the leading cause of mortality worldwide. Treating the cancer is one of the major challenges in the modern science as the drug delivery to solid tumors is seminal challenge to develop more effective cancer therapies. A well-designed drug delivery system can potentially enhance the efficacy of treatment by improving drug accumulation in tumor. Application of nanotechnology to prevent and treat the cancer disease is called nanomedicine. Cancer diagnosis and treatment can be achieved to a greater extent by the application of nanotechnology principles in biomedicine. Over these years targeted treatment for cancer has been greatly improved by the approaches based on nanotechnology. Nanoparticles have potential to increase the specificity in treating cancer cells while leaving the healthy cells. The goal is to discuss the current state of nanomedicine in the field of cancer detection and the subsequent application of nanotechnology to treat cancer by using nanoparticles such as dendrimer, quantum dots, nanocells, nanocrystals and nanoshells for the detection and treatment of cancer.

**Keywords:** Cancer, Nanomedicine, Nanotechnology, Quantum dots, Drug delivery, Drug therapy, Dendrimers
Background: Ochronosis is a dermatological condition characterized by bluish-black pigmentation of certain cartilages and homogentisic aciduria. drugs containing phenol (salicylic acid) on prolonged use reduces homogentisic acid levels leading to improper tyrosin metabolism. However, there is limited information on the association of endogenous ochronosis caused by phenols containing drugs. AIM: To study the association between the ochronosis and phenol ring containing drugs. INTRODUCTION: In 1912, Beddard described the ochronosis when a patient used phenol for leg ulcers. Although, endogenous ochronosis is an autosomal recessive disease, while, exogenous ochronosis can manifest due to use of phenol ring containing drugs. However, exogenous ochronosis may aggravate endogenous pathology. Further, ochronosis is often associated with other autoimmune diseases (such as arthropathies) and there is limited information on exogenous ochronosis caused by phenols ring containing drugs. METHOD: A search of the terms ochronosis and phenol ring containing drugs, inclusively was done in pubmed from the year 1980 to 2018. This search string has yielded two hundred English articles of which 10 articles were eligible for the proposed hypothesis. RESULT: Only 5% of ochronosis patient are associated with phenol containing drug use. The long time gap between development of ochronosis and phenols used may attract to weak causal relation. There are no defined incidences and no further studies have been conducted to conclude if exogenous ochronosis can be caused by usage of phenol ring containing drugs. CONCLUSION: With the limited studies eligible for the current study, there is a positive relation between ochronosis and phenol containing drugs. However, the overlap of exogenous and endogenous ochronosis may be related to prolonged phenols usage, thus extensive clinical research should be conducted to understand the causal relationships.

ANTI-OBEITY DRUG DERIVED FROM CHILI PEPPERS SHOWS PROMISE IN ANIMAL TRIALS.
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Abstract: A novel drug based on capsaicin, the compound that gives chili peppers their spicy burn, caused long term weight loss and improved metabolic health in mice eating a high fat diet. The drug, Metabocin, was designed to slowly release capsaicin throughout the day so it can exert its anti-obesity effect without producing inflammation or adverse side effects. It proved safe and well tolerated by the mice," Thiyagarajan concluded. "Developing Metabocin as a potent anti-obesity treatment shows promise as part of a robust strategy for helping people struggling with obesity."

ARTIFICIAL PANCREAS
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Abstract: Aim and objectives: Type 1 diabetes is a chronic condition where pancreas produces no (or) little insulin. So, the patient needs multiple administration of insulin externally to maintain insulin levels. This is painful. The FDA has approved artificial pancreas which works automatically monitoring person’s blood sugar levels and no administration of insulin is needed. Methodology: Minimed 670G is a device manufactured by Medtronic, used in type 1 diabetes of age above 14. This automatically monitors sugar levels in blood for every five minutes, then response by sending insulin into the body (or) holding steady, this is the first hybrid closed loop that combines both glucose monitor and insulin pump in one device. It is intended for continuous delivery of basal insulin. The Minimed 670G system, Smart Guard HCL- technology where system delivers variable rate of insulin 24 hours a day based on personal leads of individual. Discussion and results: The pivotal trials on Minimed 670G have been published in diabetic technology and therapeutics 4 months after FDA approved the device. The trial involved 300 adolescence and 94 adults (22-75 yrs) with type 1 diabetes, it reduced the long term complications like vision problems, cognitive tissues and limb loss. Conclusion: Hence, this device is safe to use at home which reduces hyper-glycemia and maintains normal range by preventing long term complications by traditional injectab

ANOREXIA NERVOSA
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Abstract: Anorexia nervosa is a psychiatric disorder characterized by an unrealistic fear of weight gain, self-starvation and conspicuous distortion of body image. Key features for anorexia nervosa are refusal to maintain a healthy body diet, an intense fear of gaining weight. Anorexia nervosa is a type of eating disorder, it affects body and mind, it is a serious psychological disorder. The disorder mainly affects primarily young women mainly ages between 13-20 and younger women in united states between 0.5-1%. Recent studies indicate that sub-clinical eating disorders occur in at least 5% of women and atleast 1/3 females in special populations.
such as athletes and insulin-dependent diabetics. The etiology of eating disorders is not known, but they are psychosocial and biological influences. Malnutrition associated with anorexia nervosa can affect nearly every organ system in the body with cardiac complications responsible for 50% of deaths in anorexia nervosa. Two types of anorexia nervosa are: In restricting type, individuals lose weight purely by dieting without binge eating (or) purging. In binge eating (or) purging, individuals want to restrict food intake but periodic dis-inhibition of restraint and engage in binge eating. There is some evidence that family therapy is more effective than individual therapy in younger anorectics who have been ill less than 3 years. The most promising finding in medication treatment suggests that fluoxetine may help to prevent relapse in weight restored young anorectics.

Tuberculosis, Pregnancy, Women, Abortion

Abstract: Alport Syndrome is a type of collagen hereditary diseases characterized by the association of the progressive hematuric nephritis, hearing loss and frequently ocular changes. Mutation in the COL4A5 gene are more responsible for the more common X-Linked dominant form of the diseases that is often associated with neural hearing loss and ocular abnormalities. The histological changes in Airpport Kidneys are characterized but not pathognomonic the presence of crescentic formations in rare. In 80% of case, Alport Syndrome is inherited in an X-Linked mode and caused by COL4A5 gene mutations, although other inheritance patterns exist. It may be inherited in either an autosomal recessive or less commonly, an autosomal dominant manner caused by COL4A5 or COL4A4 gene mutations. By the time patients are in their teens, Approximately 80% of men with X-Linked inherited form develop some degree of hearing loss. Patients typically present with intermittent gross hematuria during infancy. In adolescence patients classically start to develop more serious signs of chronic kidney diseases Alport Syndrome, diagnostic evaluation show persistent microhematuria on urinalysis and splitting of glomerular basement membrane on kidney biopsy. It is usually X-Linked dominant inheritance. It is often asymptomatic and initially intermittent gross hematuria. Diagnostic test include urinalysis skin biopsy, kidney biopsy and molecular genetic testing can confirm and distinguish subtypes that includes.Audiometry, ophthalmic evaluation etc. Alport Syndrome is otherwise called as single gene syndrome. It is Approximately reported 1 of 5000 Births. Symptoms include Hematuria, Nephropathy, Hypertension in female patients, slow progressive hearing loss. Studies at the life expectancy of patients with Alport Syndrome are rare, but one 2012 study of 456 male patients from across Europe who received a kidney transplant found that they had somewhat increased life expectancy compared to matched controls.

Incidence Of Serious Side Effect From Anti- Tuberculosis Drugs In Pregnant Women

Abstract: According to WHO, tuberculosis is third leading cause of death worldwide among women at child bearing age. India accounts for 30% of the burden of all TB cases in the world. More than 80% of the patients are in the economically productive age group of 15 – 54 years. An adverse pregnancy outcome was also observed in 20% cases (abortion in 6, premature delivery in 2 and intra-uterine death in 2 cases). The exact incidence of tuberculosis in pregnancy, though not readily available, is expected to be as high as in the general population. Advanced pregnancy may lead to TB in the fetus, TB infection of the new born transmitted from the mother who may also infect other mothers and their infants in the maternity ward. Diagnosis of tuberculosis in pregnancy may be challenging as the symptoms may initially be ascribed to the pregnancy, and the normal weight gain in pregnancy may temporarily mask the associated weight loss. Obstetric complications of TB include spontaneous abortion, small for date uterus, preterm labour, low birth weight, and increased neonatal mortality. Congenital TB though rare, is associated with high perinatal mortality. The pregnancy and postpartum period affect the course of tuberculosis drugs.

Keywords: Tuberculosis, Pregnancy, Women, Abortion

HYPERLIPIDEMIA - START TO END: NEW CHALLENGES IN SOCIETY

Abstract: Hyperlipidemia is a condition when abnormally high levels of lipids i.e. the fatty substances are found in the blood. This condition is also called hypercholesterolemia or hyperlipoproteinemia. Hyperlipidemia is a major cause of atherosclerosis and atherosclerosis related conditions like coronary heart disease (CHD), ischemic cerebrovascular disease, peripheral vascular disease and pancreatitis. The increase in lipids like low density lipoproteins (LDL), cholesterol (esters derivatives) and triglycerides are mainly responsible for this condition. These lipids are associated with blood plasma proteins and remain in the dissolved state in the blood. The primary reason for hyperlipidemia is defect in lipid metabolism which is caused by the defect in lipoprotein lipase activity or the absence of the surface Apoprotein C-II. Other causes of hyperlipidemia include various genetic abnormalities and environmental factors. It has been seen that adverse effect of protease inhibitors (PIs) like Norvir, Reyataz (anti-HIV medicine), oral contraceptives can also raise blood lipid (fat) levels and cause hyperlipidemia. Though, there are many treatment guidelines and easy availability of...
pharmacological agents which have been proven to be efficacious in lowering cholesterol levels and mortality in randomized clinical trials (RCTs), but still many patients suffer with this disease.

Keywords: Chylomicrons, Ischemia, Atherosclerosis, Pancreatitis

GENOTYPE SPECIFIC PRESCRIBING

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Abstract: Genotype specific prescribing provides a deep understanding of mechanisms and pathways of disease together with the unique characteristics of the individual to accelerate the prevention, detection and cure of disease. It is also termed as Personalized Medicine (PM). This subject is completely based on detecting a disease at the genetic level and prescribing the correct medication for the patient. PM has many benefits like better and safer drugs, advanced screening in diseases, containment of overall cost of health care. Personalized medicine has great potential to improve the effectiveness and safety of medications in patients.

DEVELOPMENT OF E-PRESCRIBING TO IMPROVE SAFETY OF MEDICATIONS

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Abstract: E-Prescribing is a prescribers ability to send electronically an accurate, error free and understandable prescription directly to a pharmacy from the point-of-care and stands as an important element in improving the quality of the patient care. E-prescribing gives providers an important tool to safety and efficiently manage patients medications. Compared to paper or fax prescriptions, e-prescribing improves medication safety, better management of medications costs, improved prescribing accuracy and efficiency, increase practice efficiency while improving health care quality and reducing health care costs through the reduction of adverse drug events and increased prescribing of generic medications.

CLINICAL PHARMACIST GOVERNED ANTICOAGULATION SERVICE IN STROKE UNIT OF A TERTIARY CARE TEACHING HOSPITAL

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Abstract: Many reports have documented the ability of anticoagulation management services by clinical pharmacist to help patients receiving anticoagulants especially warfarin therapy achieves better outcomes. The present prospective and interventional study was carried out in stroke inpatient department of a tertiary care teaching hospital for a period of one year. The clinical pharmacist in the anticoagulation service had taken over the responsibilities like therapeutic drug monitoring of all patients of stroke ward, warfarin dosage adjustment in direct and via telephonic calls, management of warfarin related and unrelated problems including ADR monitoring and interaction checking and sorting out it, patient knowledge assessment using a set of validated questionnaires, patient counseling, providing information leaflets etc. Clinical outcomes were measured at the end of study. The establishment of anticoagulation clinic in the hospital helped the Stroke unit in bringing their patients under targeted anticoagulation. It helped in improving patient’s knowledge compliance, reducing incidence of interactions and adverse effects. A value p <0.05 indicated the significant improvement in the patient’s knowledge on oral anticoagulation by clinical pharmacist interventions. Thus clinic laid a foundation in building good and healthy relation between physician, pharmacist and patients.

Keywords: Clinical pharmacist, anticoagulation services, patient knowledge, oral anticoagulants

Approach to Publishing Adverse Event Case Reports in Biomedical Journals

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Abstract: Case reports describing suspected adverse events of drugs and medical products are important for post-marketing safety monitoring. Such reports could help identify potential product-associated risks and serve as signals of possible events that may require further studies. They also serve as legal documents and have been used as evidence in “toxic tort” litigation. Lack of relevant details in the reports would render them of limited value and misleading. Deficiencies in the previously published adverse event case reports in some biomedical journals from developing countries clearly illustrate a need for guidelines. A properly documented report should provide details to enable readers make differential diagnoses, ascertain the causality of the reaction to the suspected drug, and provide pharmacological and biological explanations for the reaction. Authors should also report the suspected events to the National
Pharmacovigilance Centre to ensure their inclusion in adverse drug reaction databases. Reviewers and journal editors should be well familiar with adverse drug event reporting guidelines to enable them weed out junk manuscripts. It would seem reasonable to include such guidelines in the instructions for authors, should a journal continue to publish case reports of adverse drug events.

Keywords: Adverse drug events, Reporting and publishing, Biomedical journals, Developing countries.

**EFFICACY OF RENIN ANGIOTENSIN SYSTEM INHIBITORS IN HYPERTENSION WITH CHRONIC KIDNEY DISEASE PATIENTS**

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Abstract: Introduction: Hypertension is a frequent finding in both acute and chronic kidney disease, particularly with glomerular or vascular disorders. Progression of chronic kidney disease (CKD), as defined by a reduction in the glomerular filtration rate (GFR), occurs at a variable rate, ranging from less than 1 to more than 12 mL/min per 1.73 m2 per year, depending upon the level of blood pressure control, the degree of proteinuria, the previous rate of GFR decline, and the underlying kidney disease. According to JNC 8, the patient with CKD and Hypertension can be effectively treated with angiotensin receptor blockers or angiotensin converting enzyme inhibitors. Methodology: There are numerous studies conducted across the globe in the area of hypertension. Thus a meta analysis of these articles can be performed to design the treatment specific to each hypertensive patients. Results and Discussion: A 102 articles related to the topic were collected from standard journal. The quality of evidence is so high favoring the use of an ACE inhibitor or angiotensin II receptor blocker (ARB) as first-line therapy in patients with proteinuric CKD (i.e., protein excretion greater than 500 mg/day) because, in addition to lowering the blood pressure, these drugs slow the rate of progression of CKD. The reduction in proteinuria appears to be greater when ACE inhibitors are used in combination with ARBs than with either drug alone, although no study has compared combination therapy with doubling the dose of a single agent. However, it has not been proven that combination therapy improves renal outcomes and adverse effects may be more common. However, these drugs do pose side effects i.e. an acute reduction in GFR and hyperkalemia. In addition, both ACE inhibitors and ARBs are contraindicated in pregnancy. Conclusion: Both ACE inhibitors and ARBs are prescribed by physician in early stages of renal failure, showed to have a tremendous impact on patient quality. Despite the side effect caused, there are many studies which authenticate the necessity of such drugs.

**DIABETIC EFFECT OF MOMORDICA CHARANTIA (BITTER MELON)**

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Abstract: Diabetes mellitus is among the most common disorder in developed and developing countries, and the disease is increasing rapidly in most parts of the world. It has been estimated that up to one-third of patients with diabetes mellitus use some form of complementary and alternative medicine. One plant that has received the most attention for its anti-diabetic properties is bitter melon, Momordica charantia (M. charantia), commonly referred to as bitter gourd, karela and balsam pear. Its fruit is also used for the treatment of diabetes and related conditions amongst the indigenous populations of Asia, South America, India and East Africa. Abundant pre-clinical studies have documented in the anti-diabetic and hypoglycaemic effects of M. charantia through various postulated mechanisms.

Keywords: Momordica charantia, Hypoglycaemic agents, Diabetes, Bitter melon.

**BACTERIA RESISTANCE TO CEPHALOSPORINS AND ITS IMPLICATION TO PUBLIC HEALTH**

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Abstract: Cephalosporins have proven to be of immense importance in surgery and as first line therapy for a wide variety of infections, hence its continuous relevance and usage. Unfortunately, most bacteria of clinical importance have become resistant to these antibiotics, therefore, a worldwide problem. This phenomenon can be spread by bacteria through mobile genetic element such as integrons, insertion sequences, transposons and plasmids. However, recent discoveries have developed novel cephalosporins which have demonstrated high bactericidal activity in vitro to an extended spectrum of pathogenic bacteria, but have also been inactivated by certain group of bacteria. Therefore, here we review the rate of emergence and spread of bacteria resistance to these antibiotics, the public health implications as well as determine if recent discoveries and modifications in the cephalosporin structure could provide a lasting solution to the problem of bacteria resistance. This review will thereby help clinicians and public health workers to tackle cephalosporin resistance.

Keywords: Antibiotics; Antibiotic resistance; Cephalosporin; Public health
HYPOLIPIDEMIC ACTIVITY OF FERULA ASSAFOETIDA IN HIGH FAT DIET-INDUCED HYPERLIPIDEMIC RATS
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Abstract: The objective of present study is to evaluate the hypolipidemic activity of Ferula asafoetida against high fat diet-induced hyperlipidemia in rats. Adult rats fed with high fat diet for 15 days induced hyperlipidemia characterized by marked increase in serum lipids and lipoproteins. Rats with high cholesterol daily supplementation of 1.5% asafoetida has not shown reduction in cholesterol concentrations in the blood whereas 2% asafoetida has showed less significant reduction in cholesterol concentrations in the blood. The possible mechanism may be due to reducing absorption from the intestines. These results suggested that Ferula asafoetida possess less significant hypolipidemic activity.

PREVALENCE OF POLYPHARMACY IN GERIATRIC PATIENTS IN RURAL TEACHING HOSPITAL
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Abstract: This study was conducted to assess and establishes the prevalence of Polypharmacy in geriatric population in the Medicine ward of jaya bharathi hospital in Nellore s chavaan college of pharmacy, jntua Anantapur, during one year from January 2015 to January 2016. Demographic analyses of this prospective study revealed that out of 420 patients, 302 (65.76%) were males and 118 (34.23%) were females. All the collected prescriptions were scrutinized for Polypharmacy and were categorized as minor Polypharmacy -concurrent use of ≤ 5 drugs; and major Polypharmacy - concurrent use of > 5 drugs. Out of 420 Prescriptions 61(11.73%) prescriptions were minor Polypharmacy and 400(88.26%) prescriptions were major Polypharmacy. The maximum patients were in the age group of 60-64 (38.84%) range lead to a significant increase in the number of medications. The most common diseases associated systems were Cardiovascular system 100 (28.26 %) patients, and followed by Respiratory system 80 (19.80%). Our results show that there is a higher prevalence of Polypharmacy among the males than females. The length of hospital stay of geriatric patients is increase in major Polypharmacy compare with minor Polypharmacy. The prevalence of cardiovascular drugs and respiratory drugs were often involved in Polypharmacy among geriatric patients. Polypharmacy is very common among geriatric patient and health care professional’s interventions to improve the optimal use of medication in geriatric could lead to reduction in the drug related problems associated with Polypharmacy.

INHIBITION OF LISTERIA MONOCYTOGENES INFECTION BY NEUROLOGICAL DRUGS
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Abstract: To gain insights into the cellular processes required for intracellular bacterial pathogenesis, we previously developed a generalisable screening approach to identify small molecule compounds that alter Listeria monocytogenes infection. In this report, a small molecule library enriched for compounds affecting neurological functions was screened and 68 compounds that disrupted L. monocytogenes infection of macrophages were identified. Many of these compounds were known antimicrobial agents, however 26 able for development as therapeutics against intracellular replication of L. monocytogenes during infection of murine macrophages. These results suggest that clinically approved neurol drugs may provide a novel source of anti-infective agents that are suitable for development as therapeutics against intracellular bacterial infections.

IMPACT OF PHARMACIST LED ANTICOAGULATION MONITORING AND PATIENT EDUCATION ON ORAL ANTICOAGULATION THERAPY WITH ACENOCOUMAROL
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Abstract: Objective:Aacenocoumarol is anoral anticoagulant with narrow therapeutic index, and the ideal dose of anticoagulation lies between International normalized ratio (INR) values of 2.5 and 4.0. Lack of monitoring and knowledge on acenocoumarol therapy may compromise patient’s safety resulting in under- or over-anticoagulation. A study was conducted to monitor for the safety of anticoagulation therapy, achievement of goal INR levels and to assess the impact of pharmacist led anticoagulation monitoring and patient education on the rational use of acenocoumarol in patients admitted in cardiology wards with thromboembolic disorders.

Methods: The study was conducted in 82 patients; data collection was done, prescriptions were analyzed for drug-drug interactions and adverse drug reactions (ADRs). Patients’ knowledge on acenocoumarol therapy was assessed using a self-developed questionnaire at
the baseline, then were subjected to a detailed patient education and on an average each patient received three sessions of education. They were again made to answer the same questionnaire on the day of discharge. The mean score of the responses before and after education was compared statistically using Wilcoxon signed rank test and McNemar test. Results: There were 65% patients under anticoagulated with the INR range of >1.0. 113 drug interactions were observed in 48 patients, on an average of 2 interactions per prescription, but no ADRs were observed. 39 patients (64.3%) showed significant overall improvement in knowledge on anticoagulation therapy following education. Conclusion: This study implies the role of clinical pharmacists in achieving better clinical outcomes in patients receiving oral anticoagulation therapy with acenocoumarol.

Keywords: Acenocoumarol, Anticoagulation, Patient education.

NIS/2K18/POSTER/089

ANTIBIOTICS PRODUCED BY STREPTOMYCES
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Abstract: Streptomyces is a genus of Gram-positive bacteria that grows in various environments, and its shape resembles filamentous fungi. The morphological differentiation of Streptomyces involves the formation of a layer of hyphae that can differentiate into a chain of spores. The most interesting property of Streptomyces is the ability to produce bioactive secondary metabolites, such as antimicrobials, antivirals, antitumorals, anti-hypertensives, immunosuppressants, and especially antibiotics. The production of most antibiotics is species specific, and these secondary metabolites are important for Streptomyces species in order to compete with other microorganisms that come in contact, even within the same genre. Despite the success of the discovery of antibiotics, and advances in the techniques of their production, infectious diseases still remain the second leading cause of death worldwide, and bacterial infections cause approximately 17 million deaths annually, affecting mainly children and the elderly. Self-medication and overuse of antibiotics is another important factor that contributes to resistance, reducing the lifetime of the antibiotic, thus causing the constant need for research and development of new antibiotics.

NIS/2K18/POSTER/090

PHARMACEUTICAL CARE INTERVENTIONS, THEIR OUTCOMES AND PATIENTS' SATISFACTION IN ANTIRETROVIRAL DRUG THERAPY
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Abstract: Pharmacist’s interventions (also known as pharmaceutical care plans) are means of solving the drug therapy problems identified in pharmaceutical care. Outcomes are the results of pharmacists’ intervention activities. Patients’ satisfaction refers to patients’ feeling of fulfillment, pleasure or happiness with the services they have received. This study was designed to determine the types of pharmacist interventions applied in the pharmaceutical care of HIV patients receiving treatment at a tertiary hospital in south Inadia, the types of outcomes of such interventions and level of patients’ satisfaction with their drug therapy. The components of the American society of health-system pharmacists (ASHP) guidelines on ‘standardized method for pharmaceutical care was used as a data collection instrument to evaluate, document and intervene in the antiretoviral therapy of about one thousand four hundred and seventy three (1,273) patients. The results showed significant reductions in the frequency of the various interventions and parameters measured after the interventions. The study concluded that pharmaceutical interventions influences patients’ adherence, optimizes their drug therapy and improves rational prescribing and care resulting in significant improvements in the outcomes of their treatment and levels of satisfaction.

Keywords: Pharmacist Interventions, Outcomes, Pharmaceutical care, HIV/AIDS, Patient satisfaction

NIS/2K18/POSTER/091

CLASSIFICATION FRAMEWORK AND CHEMICAL BIOLOGY OF TETRACYCLINE-STRUCTURE-BASED DRUGS
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Abstract: By studying the literature about tetracyclines (TCs), it becomes clearly evident that TCs are very dynamic molecules. In some cases, their structure-activity-relationship (SAR) are well known, especially against bacteria, while against other targets, they are virtually unknown. In other diverse fields of research—such as neurology, oncology and virology—the utility and activity of the tetracyclines are being discovered and are also emerging as new technological fronts. The first aim of this paper is to classify the compounds already used in therapy and prepare the schematic structure that includes the next generation of TCs. The second aim of this work is to introduce a new framework for the classification of old and new TCs, using a medicinal chemistry approach to the structure of those drugs. A fully documented Structure-Activity-Relationship (SAR) is presented with the analysis data of antibacterial and nonantibacterial (antifungal, antiviral and anticancer) tetracyclines. The lipophilicity and the conformational interchangeability of the functional groups are employed to develop the rules for TC biological activity.

Keywords: tetracycline; anthracycline; aminomethylcycline; CMT; fuorocycline; pentacycliene; antibiotics; non-antibiotics
NIS/2K18/POSTER/092

RECOGNITION OF PATHOGEN-ASSOCIATED MOLECULAR PATTERNS (PAMPS) IN SEPTIC SHOCK
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Abstract: Septic shock is the leading causes of mortality and morbidity globally and annually in most of the ICU patients infection. A complex infection of sepsis leads to severe sepsis, septic shock and multiple organ dysfunctions. Recent advances in the molecular mechanism of sepsis have shown that the host immune system recognizes infection through recognition of pathogen-associated molecular patterns (PAMPS), such as lipopolysaccharide (LPS), lipoteichoic acid, flagellin and DNA in bacteria. These inflammatory mediators bind to pattern-recognition receptors (PRRs), such as toll-like receptors (TLRs) that are expressed on the surface of host cells. These PRRs are important for initiating host immune defenses against invading pathogens and mediating PAMP recognition. They also serve as receptors for endogenous danger signals by identifying various damage-associated molecular patterns (DAMPs) as potent activators of the innate immune system. The pro-inflammatory response induced by infection is normally balanced by anti-inflammatory cytokines. However, the normally effective inflammatory response to infection becomes systemically dysregulated during sepsis due to significantly imbalanced cytokine responses referred to as a cytokine storm.

Keywords: Septic shock, DAMPs, PAMPS, LPS, TLRs.

NIS/2K18/POSTER/093

JOINT BLEEDING/HEMARTHROSIS
Ittedi Rajashekhar

Abstract: A joint is an area where two bones come together. People with hemophilia can bleed into the joint space after an injury. The pressure of blood filling the joint cavity causes significant pain. It begins at the age 2. Knee joints bleeding may occur due to trauma and blood begins to leak from blood vessels into the joint spaces. If untreated, the synovium becomes inflamed and joint begins to swell. The accumulated blood is broken down into iron, waste products which are dangerous to cartilage, bone, synovium. The synovial becomes tiny finger-like projections called microvilli. These microvilli accumulate in between joints and cause repeated bleeding and damage to joint, this condition is called synovitis. The accumulated blood is toxic to cartilage, bone and prevents it from repair as a result of this the joint forms bone cysts with loss of bone mass leading to further pain and immovable joint. The synovial fluid protein levels greater than 2.5 gm/dl are abnormal, and those greater than 4.5 gm/dl indicate significant inflammation. If repeated bleeding occurs the damage becomes permanent and individual shows creepy movements. It resembles to osteoarthritis.

Keywords: Synovitis, Bone cysts, Microvilli, Hemophilia, Hemarthrosis.

NIS/2K18/POSTER/094

USE OF SEROTONIN REUPTAKE INHIBITORS IN PATIENT OF CORONARY ARTERY BYPASS GRAFT SURGERY (CABG): AN EFFECTIVE THERAPY FOR MODERATE TO SEVERE MOOD CHANGES
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Abstract: Information is communicated from one nerve to another nerve & from nerve to effector organ by a chemical messenger called neurotransmitter (NHT). Depressive illness has a high prevalence in patients undergoing coronary artery bypass graft surgery (CABG). The first line treatment for depression are selective serotonin reuptake inhibitors (SSRIs) which inhibit serotonin reuptake in the pre synaptic neuronal membrane and uptake by platelets, inhibiting subsequent serotonin-mediated platelet activation. The main processes that occur in a classical chemically transmitting synapse and provides a useful basis for understanding the action of the many different classes of drugs which act by facilitating or blocking neurochemical transmission. The enzyme involved in synthesis or inactivation of the transmitter can be inhibited by the drugs, as can the transport system responsible for the neuronal and vesicular of the transmitter or its precursor. The action of the great majority of drugs that act on the peripheral nervous system and ANS fit into this scheme. Depressive symptoms have been associated with adverse health outcomes among patients undergoing coronary artery bypass grafting (CABG) [1]. Some authors recommend prophylactic antidepressant treatment among patients undergoing cardiac surgery [2], and the use of antidepressants in patients with acute coronary syndromes is increasing [3]. However, use of selective serotonin reuptake inhibitors (SSRIs), the most commonly prescribed antidepressant medication class in the USA, may increase patients’ propensity to bleed [4, 5]. Serotonin enhances platelet activation induced by adenosine diphosphate and thrombin [6], and SSRIs can deplete serotonin in platelets by up to 95%. This review demonstrates that SSRIs are largely safe in cardiac surgery as no increase in mortality was observed. However, there is a significantly raised chance of red blood cell transfusion. The heterogeneous nature of the current evidence base highlights the need for further research into SSRIs and whether any effect on patient outcomes in cardiac surgery occurs.
ROLE OF OXIDATIVE STRESS IN PARKINSON DISEASE
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Abstract: Parkinson’s condition (PD) is a mode that is progressive is neurodegenerative associated with the loss that is selective the dopamine(DA)ergic neurons in the substantia nigra pars compacta while the degeneration of projecting nerve fibers in the striatum. The process that is a neurodegenerative modification of this illness course by neuroprotective treatment is an important unmet need that is clinical there was currently no therapy that delays. The nigral neurons especially susceptible have been completely an interest of intensive research toward this end, understanding mechanisms that are cellular render. Increasing evidence suggests that oxidative stress plays a working job that is major. The k-calorie burning of DA itself contributes to stress that is oxidative resulting in modification of intracellular macromolecules whose functions are needed for cellular survival. Mitochondrial disorder, therefore, the enhance that is reactive that is species that are consequent trigger a show of activities that contribute to cell demise. In addition, triggered microglia create nitric superoxide and oxide during neuroinflammatory reactions, as well as that is aggravated by the molecules released by damaged DAergic neurons such as for example α-synuclein, neuromelanin, and matrix metalloproteinase-3.

Means to reduce anxiety that is oxidative will give you a method that is healing. NAD(P)H: quinone reductase (NQO1), as well as other enzymes which are an anti-oxidant gene that is whose, can be beneath the legislation with this transcription element Nrf2, can provide as target proteins utilized toward the development of disease-modifying treatment for PD.

Keywords: Parkinson Disease (PD), Dopamine (DA) Metabolism, Mitochondrial Dysfunction, Neuroinflammation.

Look Alike Sound Alike Drugs
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Abstract: The existence of confusing drug is one of the most common cause of medication errors and is matter of concern worldwide. There are large no of drugs which look alike and sound alike. Physicians and even pharmacist get confused which either leads to wrong prescription or wrong practice of drug. Confusion is due to fact that brand names are developed by product sponsor and often differ significantly between countries. Some drugs although marketed under same or similar sounding brand names but they may contain different ingredients. In different countries some drugs are marketed by more than one country may have more than one brand name? Even bad handwriting, improper knowledge of drug name, new available products, similar packaging or labeling similar strength, similar dosage form, frequency of administration also have key role in emergence of errors. Some examples of LASA nonproprietary and proprietary brand name are Avanza and Avandia, Losec and Lasic, Folmax and volmax respectively. To avoid this type of error Good handwriting or electronic prescription is also other alternate to solve this problem. Brand name, nonproprietary name, dosage form directions and indication for use can be helpful in differentiating look alike and sound alike medications also analysis of new drug and physical separation of medication with lasa name are helpful.

COOPERATION TOWARDS SAFE MEDICINES
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Abstract: As medicine is the science of diagnosis, treatment of a particular type of disease. But now-a-days it has become bane for the humans. The same medicine that is used to cure the disease now leads to disease. In actual there are two types of medicines the one is generic and the other is counterfeit(also called as falsified drugs). Generic medicine is one which contains active pharmaceutical ingredient along with excipients. Whereas in case of counterfeit drugs the active ingredient has no role and the identity of the source has been mislabeled. Out of the total drugs 25% of these medicines are counterfeit. The third party association is mainly responsible for this illegal approach. The main objective of this is to let the people aware off their surroundings and feel the people ashamed that the person dying due to intake to these drugs is their own family member. Just to save a bit money people usually buy the drugs that Cost low or are cheap. The falsified medications usually contain toxic contaminants such as mercury, lead etc. that kills the person. These drugs have very low therapeutic efficacy. In order to identify fake drugs the person who takes a medicine should ensure that the pharmacist from whom he takes medicines must be a registered Pharmacist. If there is no NAFDAC number on the medicine then do not buy it. It becomes the duty of the patient as well as the pharmacist to have a check on the medicine he gets and he further sells. The patient must check the bar codes (represents the data) on the medicine. Even different techniques such as E and M Pedigree are adopted for the safety of the individual.

Robotic Pharmacies
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COOPERATION TOWARDS SAFE MEDICINES
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Abstract: As medicine is the science of diagnosis, treatment of a particular type of disease. But now-a-days it has become bane for the humans. The same medicine that is used to cure the disease now leads to disease. In actual there are two types of medicines the one is generic and the other is counterfeit(also called as falsified drugs). Generic medicine is one which contains active pharmaceutical ingredient along with excipients. Whereas in case of counterfeit drugs the active ingredient has no role and the identity of the source has been mislabeled. Out of the total drugs 25% of these medicines are counterfeit. The third party association is mainly responsible for this illegal approach. The main objective of this is to let the people aware off their surroundings and feel the people ashamed that the person dying due to intake to these drugs is their own family member. Just to save a bit money people usually buy the drugs that Cost low or are cheap. The falsified medications usually contain toxic contaminants such as mercury, lead etc. that kills the person. These drugs have very low therapeutic efficacy. In order to identify fake drugs the person who takes a medicine should ensure that the pharmacist from whom he takes medicines must be a registered Pharmacist. If there is no NAFDAC number on the medicine then do not buy it. It becomes the duty of the patient as well as the pharmacist to have a check on the medicine he gets and he further sells. The patient must check the bar codes (represents the data) on the medicine. Even different techniques such as E and M Pedigree are adopted for the safety of the individual.
Abstract: Due to the potential hazards and high volumes, some hospitals and large health care clinics utilize robotics to dispense medication. Robotic pharmacies are expanding rapidly within the hospitals and clinics. Robots are used to avoid the medication errors and prescription errors. Robots are used in pharmacy to enhance the speed, safety, customer service and security. Robot called as pill pick is the University of California, San Franciso. This will fill prescription 3, 50,000 per year and dispense 10,000 doses per day. Flushing New York hospital is the 2nd hospital who used this robot.

NOVEL DPP-4 INHIBITORS FOR DIABETES MELLITUS 2
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Abstract: DPP-4 (Dipeptidyl peptidase-4 inhibitors) are oral hypoglycemic class of drugs clinical studies are shown that they can used for management of diabetes alone or in combination with other drugs. They work by blocking the action of DPP-4, an enzyme which destroys a group of gastrointestinal hormones called incretins. Conventional DPP-4 inhibitors may be associated with side effects such as nausea, vomiting, dizziness, tremors, oedema, poor eye sight, loss of appetite, pain in abdomen, cough, sore throat. Whereas novel DPP4 inhibitors such as Sitagliptin, Vildagliptin, Saxagliptin, Alogliptin, Linagliptin are beneficial than other class of drugs for treatment of diabetes because Glitpins are effective in lowering blood glucose levels and, because they can help reduce appetite, may be beneficial for people needing to lose weight. Dipeptidyl peptidase-4 inhibitors therapy lowers the risk of stroke and hypoglycemia in patients with diabetes type 2. DPP-4 inhibitors also confer lower risks for all-cause death and major adverse cardiovascular events (MACE) when used in combination therapy in patients with type 2 diabetes mellitus but there are several adverse affects of using glitpins alone for the treatment of diabetes mellitus 2 like. Gastrointestinal problems including, nausea, diarrhoea and stomach pain. Under ongoing clinical studies have shown therapeutic promise for treatment of diabetes due to more safe and longer acting interventions some of the drugs under ongoing trials are Ritagliptin, dutagliptin, omarigliptin, berberine.

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TO EVALUATE THE IMPACT OF COMORBIDITIES ON THE CLINICAL OUTCOMES AND CHEMOTHERAPY IN CANCER PATIENTS.
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Abstract: Background: Cancer is one of the leading cause of morbidity and mortality worldwide with approximately 14 million new cases and 8.2 million cancer related death in 2012. The obvious consequence of comorbidity is the concurrent use of multiple medications of all the factors that are most consistently associated with the adverse drug reaction, inappropriate or unnecessary polypharmacy has been considered the most important. Objective: To evaluate the impact of comorbidities on the clinical outcomes and chemotherapy in cancer patients. Methodology: A prospective interventional study was conducted at Bharath Hospital and institute of Oncology for a period of 6 months with the approval of institutional human ethics Committee. All the cancer patients from in patient general ward, in-patient’s private wards, government wards and day care centre with co morbid condition(s) and who were taking the medications were enrolled. All the data were collected in a well-designed data collection form and the problems or the interaction were identified and assessed. Necessary corrections or the interventions were suggested. Results: A total of 104 cancer patients were enrolled in the study. Among them 56 females and 48 were males. Gynecological cancer was most prominent (19.2%) and the least, was kidney (1%). The main type of comorbidity was type-2 diabetes mellitus (29.8%). Most of the patients (68.3%) had only one morbidity. Overall 316 drug interaction were found in our study, out of that majority were minor (n=159, 50.3%) followed by moderate (n=151, 47.8%) and major (n=6, 1.9%). The most observed drug-drug interaction was between co-medication and pre-medication (n=119) followed by between pre-medications (n=89) among 317 drug interactions. A total of 134 intervention has been done among population in which most was regarding the spacing between medication (n = 42) followed by suggesting for laboratory test (n =37). Conclusion: Ours study population includes majority of patients with single co-morbidities and the most observed drug interaction was between co-medication and pre-medication. The study results shows the need of timely interventions to resolve medication related problems which can timely influence the treatment outcome and patient’s health related quality of life.

Diseases caused by Arsenic in human beings; their diagnosis & treatment
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Abstract: In the modern age with the increased population, transportation and industrialization, our atmosphere is being constantly contaminated by huge number of toxic and harmful chemicals, gases and other substances. Human beings are freely exposed to them every day. These harmful chemicals reach inside the human body by the common ways which include air, water and food. Arsenic is one of the most harmful chemicals present in the environment. Arsenic is a chemical element with symbol As and atomic number 33. Arsenic is a metalloid. It has various allotropes. The arsenic toxicity in the body is called as arsenicosis. Continuous exposure to
arsenic and arsenicals causes severe diseases in human beings like cancer. Arsenic induced diseases are difficult to recognizing because the signs and symptoms are not seen in the early stage and they are non-specific. Moreover there are not sufficient medicines available to treat arsenic poisoning. A variety of skin diseases are caused by arsenic exposure. In the presented review authors have summarized various arsenic induced skin diseases, their signs and symptoms, diagnosis and treatment. This will help the public to get aware about the wide variety of harmful effects of arsenic exposure to them.

**Keywords:** Arsenicosis, cancer, skin diseases.

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**A NON-INVASION DIAGNOSTIC MARKER FOR CORONARY ARTERY DISEASE?!?**

**Harish Patel***, B.Sreevani, E.Himbindu, M.Harshittha

**Abstract:** Coronary artery disease is a leading cause of death in both men and women in US. Even though many clinical assessments are used to detect CAD, yet there is need for another diagnostic tool i.e., voice signal characteristics to improve accuracy and to facilitate screening of CAD. In this discussion we review the study regarding non-invasion diagnostic screening test i.e., vocal signal characteristic and its analysis relating with emotion for progression of wellness and good health. Finally this study concludes that voice signal characteristics have potential to be recognized as self-sufficient marker without traditional CAD risk factor. Further investigations are required for discussion about the relationship between CAD and voice signal characteristics.

**Keywords:** coronary artery disease, voice signal, characteristics, non-invasion, emotion.

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**PERSONALISED MEDICINE-GOING FOR SURE CURE**

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**Abstract:** Pharmacogenomics is the study of the role of the genome in drug response. Its name (pharmacog + genomics) reflects its combining of pharmacology and genomics. A discontinuous genetic variation resulting in the occurrence of several different forms or types of individuals among the members of a single species is genetic polymorphism. A single-nucleotide polymorphism, often abbreviated to SNP, is a variation in a single nucleotide that occurs at a specific position in the genome, where each variation is present to some appreciable degree within a population and is known as Single Nucleotide Polymorphism. Frequently used tests looks for variations (also called polymorphisms) in the genes that carry instructions for making the enzymes in the liver that metabolize (break down) drugs. When the enzyme in the liver that breaks down a particular drug does not work properly due to a genetic variation, then the body can’t get rid of the active drug effectively. That can lead to too much drug in the body, which can in turn lead to serious side effects. If tests reveal that the enzyme that breaks down the drug and gets rid of it doesn’t work as well, they are given one-tenth the normal dosage. That tiny fraction of a dose gives them the same benefits as someone whose enzyme functions normally. However, in the future it is expected that an individual’s entire genome will be defined and stored for use throughout their lifetime. We are probably at least a decade or more from this reality.

**Keywords:** Polymorphism, SNP, Enzyme.

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**NOVEL GLP-1 AGONIST AS A THERAPEUTIC STRATEGY FOR THE MANAGEMENT OF DIABETES MELLITUS TYPE 2**

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**Abstract:** Glucagon-like peptide-1 (GLP-1) is a 30 amino acid long peptide hormone deriving from the tissue-specific posttranslational processing of the proglucagon peptide. Glucagon-like peptide-1 receptor agonists (GLP-1RAs) are an important asset in the armamentarium for the treatment of type 2. In healthy individuals, the incretin hormone glucagon-like peptide 1 (GLP1) potentiates insulin release and suppresses glucagon secretion in response to the ingestion of nutrients. GLP-1 also delays gastric emptying and increases satisfaction. In patients with type 2 diabetes mellitus (T2DM), supraphysiological doses of GLP-1 normalize the endogenous insulin response during a hyperglycemic clamp. Owing to the short plasma half-life of native GLP-1, several GLP-1 receptor agonists (GLP-1RAs) with longer half-lives have been developed for the treatment of T2DM. These compounds vary in chemical structure, pharmacokinetics and size, which results in different clinical effects on hyperglycemia and body weight loss; these variations might also explain the difference in cardiovascular effect observed in large-scale cardiovascular outcome trials, in which certain GLP-1RAs were shown to have a positive effect on cardiovascular outcomes. Owing to their metabolic effects, GLP-1RAs are also considered for the treatment of several other lifestyle-induced conditions, such as obesity, pre-diabetes and liver disease. This should include not only glucose management but also targets as many as pathophysiologic mechanisms responsible for type 2 Diabetes Mellitus development and progression. There are total 6 GLP-1 receptor agonist that are approved by USFDA (i.e Exenatide, Liraglutide, Lixisenatide, albiglutide, Dulaglutide, Semaglutide).

**Keywords:** GLP-1 receptor agonist, Type 2 Diabetes mellitus, Armamentarium
OVERVIEW ON NANOHERBAL MEDICINES
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Abstract: The use of herbal medicines has increased because of their ability to treat different diseases with fewer side effects. The development of novel drug delivery system (NDDS) is of considerable importance to overcome various constraints like poor bioavailability, in vivo stability, aqueous insolubility, intestinal absorption and unspecific site of action. Nano-sized drug delivery systems of herbal drugs have a potential future for enhancing the activity and overcoming problems associated with plant medicines. It has been widely proposed to combine herbal medicine with nanotechnology, because nanostructured systems might be able to potentiate the action of plant extracts, reducing the required dose and side effects, and improving activity. Nanoparticles can be achieved by adopting the novel methodologies such as Polymer nanoparticle, Magnetic nanoparticle and Metallic nanoparticle depending on characteristic of the nanoparticles. The applications of nanotechnology for treatment, diagnosis, monitoring, and control of biological systems have recently been referred to as nanomedicine. With the application of nanotechnology of nanomization of herbal drugs, it will make the development of nanoherbal drugs possessing high bioavailability, which consequently will open the new era of herbal drug discovery. Nanosystems can deliver the active constituent at a sufficient concentration during the entire treatment period, directing it to the desired site of action.

Keywords: Nanotechnology, Herbal medicines, NDDS.

CRUCIAL ROLE OF ENDOGENOUS DAMAGE-ASSOCIATED MOLECULAR PATTERNS (DAMPS) IN SEPTIC CARDIOMYOPATHY IN ICU PATIENTS
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Abstract: Sepsis is the leading causes of death among the ICU patient infections. It also a major cause of mortality and morbidity recorded annually and globally. It has been defined a systemic inflammatory response syndrome (SIRS) to systemic infection leading to the death. At early stage of sepsis, it is aggravated by an inappropriate immune response to invading microorganisms into the systemic circulation, which occasionally leads to multiple organ dysfunction syndrome (MODS). Current evidence suggests that the ventricular myocardium is depressed during sepsis infection with features of diastolic dysfunction in cardiovascular system. Potential candidates responsible for septic cardiomyopathy include pathogen-associated molecular patterns (PAMPs), cytokines, and nitric oxide are playing important role in early stages of sepsis. Extracellular histones and high-mobility group box 1 that function as endogenous damage-associated molecular patterns (DAMPs) also contribute to the septic myocardial dysfunction leading to septic cardiomyopathy. Like PAMPs, DAMPs have the major potential to activate inflammation pathways, leading a vicious circle and create a cytokines storm. Early infection control with adequate antibiotic and fluid care is important during septic shock to decrease PAMPs arising from invasive microorganisms. Early aggressive fluid resuscitation as well as the administration of vaspressors and inotropes agent is also important to reduce DAMPs generated by damaged cells. This study delineates some features of septic myocardial dysfunction, its underlying mechanisms, and current therapeutic strategies and potential future approaches.

Keywords: DAMPs, PAMPs, Sepsis, septic myocardial dysfunction.

A REVIEW ARTICLE ON SAFETY, EFFICACY AND MANAGEMENT OF PROPROTEIN CONVERTASE SUBTILISIN/KEXIN TYPE9 (PCSK9) INHIBITORS IN THE TREATMENT OF FAMILIAL HYPERLIPIDEMIA (FH)
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Abstract: Familial Hyperlipidemia (FH) is a well-established risk factor for developing cardiovascular disease (CVD). Familial Hyperlipidemia (FH) is an autosomal dominant disorder that causes sever elevations in total cholesterol (TC) and low density lipoprotein cholesterol (LDLc). The elevation of TC and LDLc is due to SHx, Food habit, hormonal changes and genetic abnormalities. PCSK9 gene has the major role in maintaining the LDLc level in body. Gain-off any missense mutations in PCSK9 reduces LDL receptors level in the liver,thus increases level of LDLc Concentration in plasma. So from the past few years, the proprotein convertase subtilisin kexin 9 (PCSK9) field has become a red hot fueled by realizing that PCSK9 is key player for plasma cholesterol metabolism. Evolocumab and Alirocumab are the two PCSK9 inhibitors approved by FDA (US), in August and July 2015 respectively. Evolocumab and Alirocumab have been undergone 78 week of clinical trials where in that 69% and 81% of peoples have reported the adverse drug reactions respectively, and both the drug shows Neurocognitive and memory impairment issues. Objective: To review the safety, efficacy and management of PCSK9 inhibitors to treat FH. These two agents are targets and inactivate the PCSK9, and prevents the destruction of LDLc receptors on the liver there by increases the LDLc metabolism in the Lysosome. Materials and Methodology: It is a Randomized Selection of the Research articles from the different pri.sources like science direct, Micromedex, med pub, clinical key, scopus etc. Result and Discussion: From the randomized study review on different research articles shows that PCSK9 inhibitors are successfully helps to reduce the LDLc concentration in plasma. PCSK9 inhibitors lowerup to 50-60% of plasma LDLc level successfully. But shows some sever adverse effect like swelling or rash on injection site, limb pain, fatigue etc. after the
administration. Conclusion: Comparison study review of total articles shows that PCSK9 can be given in some extreme conditions like either the patient is intolerant to statins therapy or has severe hyperlipidemia so in these conditions we can achieve a good safety, efficacy and good management of PCSK9 inhibitors in treating FH.

**Key words:** CVD, LDLc, TC, FH, PCSK9 inhibitors, Evolocumab, Alirocumab.

**NIS/2K18/POSTER/108**

**FORMULATION AND CHARACTERIZATION OF TRANSDERMAL PATCH OF AMLODIPINE BESYLATE**

Solapur Rushika*, G.shivani

**Abstract:** Transdermal drug delivery systems are also known as patches, containing dispersed or dissolved drug with plasticizers, polymers etc., are intended to deliver a therapeutically effective amount of drug across the skin. Main objective of the present work is to develop transdermal patches of Valsartan with hydrophilic and hydrophobic polymers containing the drug reservoir by solvent evaporation method. Valsartan is a poorly soluble drug with poor bio availability. In this experiment, the membranes of ethylcellulose and Eudragit RS 100 and Eudragit RL 100 along with HPMC combination were used to achieve controlled release of the drug. The prepared patches showed satisfactory physicochemical characteristics of weight variation, thickness, folding endurance, moisture absorption and drug content. Results for in-vitro permeation studies were done by using Franz diffusion cell with cellophane membrane. The effect of non-ionic surfactant like tween 80 and span 80 on drug permeation were studied. Based on the kinetic studies, the patch containing both HPMC and Eudragit RS100 showed satisfactory drug release patterns.

**Keywords:** Valsartan, Transdermal patches, In-vitro diffusion, Kinetic studies, Drug reservoir, Rate control membranes

**NIS/2K18/POSTER/109**

**HEPATOTOXICITY INDUCED BY ANTI TUBERCULOSIS DRUGS THERAPY: A REVIEW**

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**Abstract:** Anti-TB drugs are one of the commonest group underlying idiosyncratic hepatotoxicity worldwide. World Health Organization declared TB is a global public health emergency. An estimated 7-8 million new cases and 1.3-1.6 million deaths occurred each year. In 2010, there were estimated 8.8million new cases reported and 1.4 million deaths. In India, TB is a major public health issue with an essential prevalence of 256 per 100,000 population and 26 per 100,000 populations dying of TB. Although about 85% of TB cases are successfully treated, treatment-related adverse events including hepatotoxicity. Drugs-induced liver injury is a common, but often unrecognized cause of liver damage that continues to fascinate and challenge for doctors. Anti-TB drugs have been observed to have hepatotoxic potential and drug induced hepatotoxicity is an important adverse effect with anti-tuberculosis treatment. Between April 2010 and May 2014 there were 105 cases of anti-tuberculosis treatment associated with drug induced liver injury amongst 1529 patients diagnosed with active TB. Anti-TB Drug induced hepatic dysfunction usually occurs within the initial few weeks of intensive phase of anti-tuberculosis chemotherapy as Anti-TB drugs when given induces hepatic dysfunction.

**Key words:** Drug-induced liver injury, hepatotoxicity, tuberculosis, genetic, pathogenesis.

**NIS/2K18/POSTER/110**

**CIRCULATING MICRORNAS AS BIOMARKERS FOR SEPSIS**

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**Abstract:** Sepsis represents a major cause of lethality during intensive care unit (ICU) treatment. Pharmacological treatment strategies for sepsis are still based and mainly based on the early initiation of antibiotic and supportive treatment. In this context, numerous clinical and serum based markers have been evaluated for the diagnosis, the severity, and the etiology of sepsis. However until now, few of these factors could be translated into clinical use. MicroRNAs (miRNAs) do not encode for proteins but regulate gene expression by inhibiting the translation or transcription of their target mRNAs. Recently it was demonstrated that miRNAs are released into the circulation and that the spectrum of circulating miRNAs might be altered during various pathologic conditions, such as inflammation, infection, and sepsis. By using array- and single PCR-bused methods, a variety of deregulated miRNAs, including miR-25, miR-133a, miR-146, miR-150, and miR-223, were described in the context of sepsis. Some of the miRNAs correlated with the disease stage, as well as patients’ short and long term prognosis. Here, we summarize the current findings on the role of circulating miRNAs in the diagnosis and staging of sepsis in critically ill patients. We compare data from patients with findings from animal models and, finally, highlight the challenges and drawbacks that currently prevent the use of circulating miRNAs as biomarkers in clinical routine

**Keywords:** biomarker; critical illness; miRNA; sepsis
RECOGNITION OF PATHOGEN-ASSOCIATED MOLECULAR PATTERNS (PAMPs) IN SEPTIC SHOCK
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Abstract: Septic shock is the leading causes of mortality and morbidity globally and annually in most of the ICU patients infection. A complex infection of sepsis leads to severe sepsis, septic shock and multiple organ dysfunctions. Recent advances in the molecular mechanism of sepsis have shown that the host immune system recognizes infection through recognition of pathogen-associated molecular patterns (PAMPs), such as lipopolysaccharide (LPS), lipoteichoic acid, flagellin and DNA in bacteria. These inflammatory mediators bind to pattern-recognition receptors (PRRs), such as toll-like receptors (TLRs) that are expressed on the surface of host cells. These PRRs are important for initiating host immune defenses against invading pathogens and mediating PAMP recognition. They also serve as receptors for endogenous danger signals by identifying various damage-associated molecular patterns (DAMPs) as potent activators of the innate immune system. They also serve as receptors for endogenous danger signals by identifying various damage-associated molecular patterns (DAMPs) as potent activators of the innate immune system. The pro-inflammatory response induced by infection is normally balanced by anti-inflammatory cytokines. However, the normally effective inflammatory response to infection becomes systemically dysregulated during sepsis due to significantly imbalanced cytokine responses referred to as a cytokine storm.

Keywords: Septic shock, DAMPs, PAMPs, LPS, TLRs.

SEXUAL DISORDERS IN HUMAN LIFE
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Abstract: Sexual dysfunction related to particular phase of sexual response cycle. If a person has difficulty with some phases of sexual response cycle or pain with sexual intercourse he/she may have sexual dysfunction. Now a day we talk more and more often about sexual disorders and depression in one of the possible etiologies of them. Depression could lead to sexual disorders or induce them indirectly paradoxically. Depression treatments, such as tricyclic antidepressant or SSRI could induce this kind of disorder. Tianeptine the only molecule representative of this pharmacological class has proved its good acceptability on the libido as shown by the results of a meta-analysis. The respect of the sexual function is essential to obtain a good observance of the antidepressant treatment. Libido is the most often reported difficulties with arousal resulting in vaginal dryness in women and erectile dysfunction in men and absent or delayed organ are also prevalent. Sexual dysfunction is also a frequent adverse effect of treatment with most antidepressants and is one of the predominant reasons for premature drug discontinuation. Selective serotonin reuptake inhibition are the most widely prescribed antidepressants and have significant effects on arousal and orgasm compared with antidepressants that target norepinephrine, dopamine, melatonin systems. The availability of an antidepressant that does not cause or exacerbate sexual dysfunction represents an advance in pharmacotherapy for mood disorders and should reduce treatment noncompliance and decrease the need for switching antidepressants or adding antidepressants. The purpose of this review was to provide on updates on the prevalence, psychobiology and relative adverse effect burden of sexual dysfunction associated with different antidepressants.

POSSIBLE PROTECTIVE STRATEGIES OF NATURAL HERBAL’S/PHYTOCHEMICALS IN THE AMELIORATION OF HIV AIDS
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Abstract: HIV first sample was discovered in 1959, in a blood specimen obtained at Leopoldville (now Kinshasa) in the Congo. This was the first known death chalked up by AIDS. The virus is thought to have originally affected chimpanzees. The crossover from animals to humans may have occurred in the 1950 through an accident or a bite. The first case of AIDS were reported in the US in 1981, amongst male homosexuals in Los Angeles and New York. Within two decades, up to 50m million may have been affected globally, approximately 22 million have succumbed and nearly 15000 new infections are said to occur daily. AIDS stands for Acquired Immune Deficiency Syndrome, caused by a virus called HIV (Human Immunodeficiency Virus). As drug manufacturers learned they could create of the herbs, they began patenting their creation and devising other drugs that could perform the same functions. As more drugs hit the market and their non-beneficial side effect become widely publicized more people are taking a longer look at the future of herbal medicine. Therefore, to check out the capability of the herbal drugs in the prevention of AIDS, a review on various herbal options in treatment of AIDS shall be carried out in the present study.

Keyword: HIV, AIDS, Herbal, Phytochemicals
Abstract: Hypertension is a major risk factor for end organ damage, CVD and death. It is the attributable cause for 57% of stroke and 24% of coronary heart disease deaths in India. Recent studies have shown that it is present in 25-30% of urban and 10-20% of rural subjects. Over 29.2% of men and 24.8% of women above 25 years of age suffer from hypertension. Now a day’s chronopharmacological principle is used in the therapy of cardiovascular diseases like hypertension. Chronology is the arrangement of events according to the time of occurrence, it can lead to the phenomenon of rhythmicity in living organisms called as chronobiology; the study of influence of time of administration of drugs is chronopharmacology. Most of the medications are influenced mainly by the time due to chronopharmacology, chronopathology and chronopharmacology. It is an important environmental time cue for human circadian rhythms. Circadian system is essential for normal cellular homeostasis and maintenance of biological rhythms at cellular and systemic levels. Since circadian regulation has implications in a wide range of physiological functions, disrupted clocks can lead to metabolic diseases. The therapeutic coverage and efficacy of Doxazosin are markedly dependent on circadian time of drug administration. Bed time dosing with Nifedipine is more effective than morning dosing and also minimises the adverse effects. Circadian rhythms thus are a significant input in the regulation of BP. Hence, circadian disorder such as hypertension requires chronotherapy.

Keywords: circadian rhythm, chronopharmacology, chronotherapy, hypertension, time dependency dosing.

THYROID HORMONES, ANALOGS AND MODULATORS

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Abstract: Thyroid hormones (THs) play key roles in modulating the overall metabolism of the body, protein synthesis, fat metabolism, neuronal and bone growth, and cardiovascular as well as renal functions. Disorders of thyroid include hypothyroidism and hyperthyroidism. Epidemiological studies suggest that patients with hypothyroidism experience accelerated atherosclerosis. In contrast, patients with hyperthyroidism are hyper metabolic. Despite a litany of negative effects, thyroid hormone excess has two undeniably positive benefits: reductions in cholesterol and body weight. The action of THs on the transcriptional regulation is mediated by two highly homologous receptors – thyroid hormone receptor α (TRα) and β (TRβ). While TRα1 is mainly associated with the maintenance of the cardiovascular functions, TRβ1 controls the overall metabolism of cholesterol and lipoproteins. At present, there is a large unmet clinical need for effective treatments for hyperlipidemia, diabetes, and obesity. Clinical data suggest that patients may not derive the expected benefit from current therapies. Thyroid hormone agonists or mimetics are an emerging therapeutic class with potential utility in a number of metabolic disorders. The therapeutic index for administration of thyroid hormone to stimulate weight loss and lower cholesterol is much too narrow. Therefore, agents that selectively stimulate TRβ are required to provide desirable effects of thyroid hormone, while avoiding harmful effects on the heart and bone. Selective thyroid hormone receptor modulators also reduce blood glucose levels in mouse models of type 2 diabetes, raising the possibility that there could be unexpected beneficial effects on this disease. The poster would discuss about various thyromimetics, their mechanism of action, problems faced in their development and future possibilities of these entities in the treatment of metabolic syndrome.

LIFESTYLE AND OBESITY

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Abstract: Lifestyle diseases are the outcome of an in inappropriate relationship of people with their environment. In the second half of the 20th century, people’s diet has been changed substantially with the increased consumption of meat, dairy products, vegetable oils and alcoholic beverages and with the decreased consumption of starchy staple foods. These changes along with lifestyle changes such as physical inactiveness, smoking etc. have resulted in high prevalence of these diseases. The rate of increase in weight in children and adults, is striking. Obesity is not only considered as a disease in itself, but it also gives rise to and aggravates many others, and is thus known to be a risk factor for certain chronic diseases like diabetes, cardiovascular diseases, osteoporosis and certain types of cancer, which are having high rates of morbidity and mortality in India and other developed countries. Thus obesity is also a good predictor of an individual’s risk of death. Several studies have shown that obesity exhibited significant associations with less frequent vigorous physical activity, and less frequent consumption of breakfast, vegetables and sugar sweetened beverages. Primary prevention of obesity by promoting a healthy diet and active lifestyles should be a national public health priority. Efforts designed to combat obesity among children and adolescents must include education, research and intervention, through the involvement of policy makers, health care providers, educators and parent.
IMPLEMENTATION AND EVALUATION OF MEDICINE AND THERAPEUTIC INFORMATION SERVICE BY CLINICAL PHARMACISTS IN ONCOLOGY CARE SETTING
Dr. Pragna Malavika.B (Ph.D)*, Dr. R.T.Saravana Kumar, Ph.D

Abstract: Background: This study was conducted to explore the role of clinical pharmacist in providing medicine and therapeutic information service in oncology care setting. Methods: It was a prospective study conducted for a period of three years after implementation of medicine and therapeutic information service as an integral part of oncology pharmacy services. The medicine and therapeutic information requests were received during ward rounds, at ambulatory care and via telephone by clinical pharmacists. All the medicine and therapeutic information requests were reviewed and answered to the concerned requester(s). Answered medicine and therapeutic information requests were electronically documented in the hospital drug information database and analyzed further. Results: A total of 68 medicine and therapeutic information requests were received by clinical pharmacists during period of September 2017 to June 2018. Majority of medicine and therapeutic information queries were requested by radiation oncologists (32.2%) followed by medical oncologists (16.36%), general physicians (14.04%), resident medical officers (16.1%), ambulatory care nurses (8.6%), in-patient nurses (5.1%) and patients and care takers (7.6%). Majority of the medicine and therapeutic information queries were asked for the purpose of improving patient care (48.3%) followed by to update knowledge (30.9%) and training sessions to nurses (6.6%). Conclusion: The provision of medicine and therapeutic information was found to be useful in providing medicine information to improve patient care and to update knowledge of health care professionals at the study hospital.

TAMOXIFEN METABOLISM AND ITS EFFECT ON ENDOCRINE TREATMENT OF BREAST CANCER
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Abstract: Tamoxifen is the most common endocrine therapy administered worldwide to women with hormone receptor–positive metastatic breast cancer or as adjuvant therapy for early stages of the disease. While the use of aromatase inhibitors is increasing in the postmenopausal treatment setting, tamoxifen remains the drug of choice for premenopausal women. Several factors may contribute to reduced benefit from tamoxifen. It has been increasingly recognized in recent years that pharmacogenetics may play a role in tamoxifen’s metabolism, efficacy, and safety. Cytochrome P450 (CYP2D6 encodes for a liver enzyme that is responsible for the conversion of tamoxifen into its active metabolite, endoxifen. Variant alleles in CYP2D6 or the use of medications that inhibit the enzyme clearly influence tamoxifen’s metabolism into endoxifen. In addition, several studies suggest that variants in CYP2D6 may influence long term outcomes. In this review, I will address the examined associations between CYP2D6 activity and effects on tamoxifen’s metabolism and efficacy from the past studies. Drug metabolism and excretion are important predictors of drug safety and efficacy. The main route of tamoxifen metabolism is by demethylation and hydroxylation accomplished by CYP2D6. However over 100 allelic variants have been described varying according to race and ethnicity. These alleles may lead to an enzyme that is active, or that may have reduced or no activity.

- The wild-type CYP2D6 allele is designated CYP2D6*1.
- In the Asian population, the CYP2D6*10 mutation is more frequent.
- Across the Black African and the African American population, it is CYP2D6*17.

STUDY TYPE/LOCATION STUDY CHARACTERISTICS GENOTYPE VARIANT & OUTCOME
Retrospective/North central 206 non randomized women taking adjuvant tamoxifen CYP2D6 allele only shown higher recurrences, short relapse period. Prospective/Korea 202, metastatic breast cancer, pharmacokinetics biotransformation. CYP2D6*10 decreased concentration of endoxifen than CYP2D10*10 Prospective/Italy Randomized, tamoxifen for breast cancer CYP2D6*4/*4 genotype shown higher recurrence of breast cancer.

DISCRIMINATORY DISSOLUTION METHOD DEVELOPMENT CORELATION WITH IVIVC PATH
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Abstract: Discriminatory dissolution is a dissolution approach which is sensitive to formulation variables that have an effect on the dissolution rate. It generally represents dissolution depends on the situations, such as the selection of equipment, media type and volume, hydrodynamic situations that enable to discriminate between formulations. The dissolution testing is a quantitative tool for assessment of the bioavailability of a drug from batch to batch. In vitro in vivo correlations (IVIVC) play a key role in the drug development and optimization of components. Formulation optimization requires alteration in formula, composition, equipment’s, batch sizes and manufacturing process. Hence the primary purpose of IVIVC is to update to guide biowaivers. An IVIVC may be used to validate the in vitro dissolution method and to set clinically applicable dissolution method to make sure the product quality. The method development of dissolution technique is validated with the ICH guidelines for diverse parameters including specificity, accuracy, precision, robustness, and linearity and stability etc. The discriminatory dissolution test method is developed and validated for quality control of the new formulations.

Key words: Discriminatory dissolution method; ICH guidelines; Validation.
HYPOTHESIS ON USAGE OF DIAGNOSTIC KITS FOR THE EARLY DETECTION OF ABNORMALITIES IN BODY FLUIDS

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Abstract: Usage of diagnostic kits on the regular basis leads to the detection of abnormalities in the body fluids (blood, urine, csf, semen etc.), before the commencement of symptoms. So it is more likely possible to diagnose these abnormalities by comparing with the normal values. Can be treated at the early stage with the reported abnormal values by changing the diet and life style modifications, beneficial to the public in the form of decreased mortality rate by avoiding the unwanted effects produced by different classes of medications and minimizing time and expenditure on the diagnosis and treatment on pathological conditions.

Key words: Diagnostic kits, abnormalities, body fluids, diet, benefits.

RECENT DEVELOPMENTS IN AYURVEDA

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Abstract: Ayurveda an ancient science of life originated through the Vedas which mainly emphasized on the maintenance of health and prevention of the diseases. According to literature 80% Of the people in India use some form of traditional medicines a category which includes Ayurveda. The current scenario of Ayurveda mainly depend on Ayurveda Pharmacy education, Drug discovery, Formulations in ayurvedic industry, Standardization, Quality control and maintain the GMP standards in ayurvedic industry. It leads to a Revolutionary step in the present situation in progress in prosperity of the growing Industries. The growing demand of ayurvedic Formulations in the national and international market needs more input of raw materials with quality and consistency. So Many ayurvedic industries are producing medicines with high therapeutic range by the Incorporation of modern technology.

Keywords: Ayurveda, Vedas, GMP, Standardization.

WRIGHTIA TINCTORIA - ANTI PSORIATIC ACTIVITY

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Abstract: Since from ancient times plants have always been used as a source of medicine since from olden days and play a very important component of the health care system in India. Wrightiatinctoriais also known as the jaundice curative tree which is useful for various diseases especially in south India. Wrightiatinctoriahas been assigned to have good analgesic, anti-inflammatorry, anthelmitic, antiallergic, antisynergetic, antidiabetic, anticancer, antipycotic effects and also effective in the treatment of psoriasis. The main active biological principles present in this plant are Indigotin, Indirubin, Tryptanthrin, Isatin, Anthranilrate, Rutin.

Keywords: Wrightiatinctoria, Psoriasis, Tryptanthrin.

A STUDY TO COMPARE EFFICACY OF METFORMIN-GLIMEPIRIDE VERSUS METFORMIN-TENELIGLIPTIN IN TYPE II DIABETIC PATIENTS

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Abstract: Diabetes mellitus relates a metabolic disorder of collective aetiology which is characterized by chronic hyperglycaemia caused due to disturbances of carbohydrate, lipid and protein metabolism due to impaired β cell function of pancreas or insulin resistance or both. Biguanides and Sulphonylureas are the most commonly prescribed drugs due to their efficacy and safety. A total of 60 patients were enrolled in the present study who met the inclusion criteria. They were divided into two groups based on their treatment plan-Group A and Group B. The Group B (P = 0.001) exhibited a significantly greater reduction in HbA1c as compared to Group A (P = 0.002). The reductions in FPG and PPG were also found to be significantly more in the Group B. In the present study, we observed that patients on Metformin-Teneligliptin exhibited better control over glycemic profile as well as lipid profile when compared to patients who are on Metformin-Glimepiride combination. Since, this study was conducted in less number of patients, to make consecutive remarks about the superiority of either of the treatment regimen, further more analysis of clinical trials is required for appropriate selection of best combination of anti-diabetic medication.

Key Words: Diabetes mellitus, HbA1c, glycemic control, Metformin-Teneligliptin, Metformin-Glimiperide.
A REVIEW ARTICLE ON ROLE OF PROBIOTICS SUPPLEMENTATION IN TREATING DEPRESSION

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Abstract: Depression is a common but serious mood disorder in which a person experiences deep, unshaken sadness and diminished interest in nearly all activities, some of the main cause in depression are leaky gut, stress, anxiety, inflammation of gut, poor diet, obesity, etc. The relationship between the brain based disorders and probiotics has gained lots of interest since last decades. Probiotics are useful for the prevention or treatment of symptoms of depression and anxiety. Probiotics are bacteria that line our digestive tract and support our body’s ability to absorb nutrients and fight infections. The most common are lactobacillus and bifidobacterium. The gut-brain axis consists of bidirectional communication between the central and enteric nervous system, linking emotional and cognitive centers of brain with peripheral intestinal functions. Recent evidence also points to certain bacteria as influencing mood, by producing compounds that travels from the intestine to brain, through the gut brain axis. Medical professional have dubbed the gut over “second brain” because of its connection to brain through the enteric nervous system (ENS), which resides in gut. The good microbes (probiotics) can signal our brain through the vagus nerve. Microbes in our gut can improve our mood by (1) producing brain chemicals: produce and regulates GABA 2 and serotonin (which has a calming effect), (2) Lowering cortisol: Hormone cortisol spikes during stressful situations. (3) Reducing inflammation: can reduce temporary inflammation, which has been linked to mood issues. Many observational studies have shown that the probiotics may lead to increase secretion of neurotransmitters like dopamine and serotonin and shows improved results in decrease of depression symptoms.

Key Words: DEPRESSION, PROBIOTICS, GUT BRAIN AXIS , ENTERIC NERVOUS SYSTEM.

THE HETEROGENEOUS EVOLUTION OF MULTIDRUG-RESISTANT MYCOBACTERIUM TUBERCULOSIS

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Abstract: Recent surveillance data of multidrug-resistant tuberculosis (MDR-TB) reported the highest rates of resistance ever documented. As further amplification of resistance in MDR strains of Mycobacterium tuberculosis occurs, extensively drug-resistant (XDR) and totally drug resistant (TDR) TB are beginning to emerge. Whilst for the most part, the epidemiological factors involved in the spread of MDR-TB are understood, insights into the bacterial drivers of MDR-TB have been gained only recently, largely owing to novel technologies and research in other organisms. Herein, we review recent findings on how bacterial factors such as persistence, hypermutation, the complex interrelationship between drug resistance and fitness, compensatory evolution, and epistasis affect the evolution of multidrug resistance in M. tuberculosis. Improved knowledge of these factors will help better predict the future trajectory of MDR-TB, and contribute to the development of new tools and strategies to combat this growing public health threat.

LONG TERM HEALTH CONSEQUENCES OF POLYCYSTIC OVARIAN SYNDROME

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Abstract: Polycystic ovarian syndrome (PCOS) is the commonest endocrinopathy among women of reproductive age with an estimated prevalence of about 10%. Type 2 diabetes, cardiovascular disease, endometrial cancer, breast cancer and ovarian cancer are some of the most important emerging issues regarding syndromes influence in womens future well being. The aim of this review is to provide clear and up to date information, based on clinical evidence, in order to advise clinicians about the late consequences of the syndrome.

Keywords: Polycystic ovarian syndrome (PCOs) and cancer, cardiovascular risk and PCOs, diabetes and PCOs

DEVELOPMENTS IN NANOTECHNOLOGY FOR DRUG DELIVERY

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Abstract: Nanoparticles has high potential as an effective drug delivery system. In this review we discussed about nanotechnology, its developments and applications as drug delivery system. To overcome the problems of drug delivery Nano systems with different compositions and biological properties have been investigated. To achieve efficient drug delivery, it is important to understand the interactions of nanoparticles with biological systems, drug release, multiple drug administration, molecular mechanisms of cell signaling involved in pathophysiology of disease etc. Several malignances can be treated using Nano particles.Nano materials including peptide based Nano tubes to target the vascular endothelial growth factor (VEGF)receptor and cell adhesion molecules like
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integrin’s, cadherin’s and selectins to control disease progression are used. This review emphasizes the developments and approaches of Nano technology based drug delivery systems.

**Keywords:** Nano technology, Nano particles, drug delivery systems, drug administration, drug release, cell signaling, vascular endothelial growth factors, cell adhesion, integrin’s, cadherin’s, selectins.

**NIS/2K18/POSTER/128**

**PHARMACOVIGILANCE OVERVIEW**

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**Abstract:** The practice of monitoring the effect of medicine drugs after they have been licensed for use, especially in order to identify and evaluate previously unreported adverse reaction. Pharmacovigilance also known as drug safety is pharmacological science relating to the collection, detection, assessment, monitoring, understanding and prevention of adverse effects with pharmaceutical products or any other drug related problem. Pharmacovigilance provides reliable balance information for the effective assessment of the risk/benefit profile of medicines. No medical product is entirely or absolutely safe for all people in all places at all time we must always live with assurance of uncertainty. The objective of pharmacovigilance is the reduction of the frequency and the severity of adverse effect of drugs while maintaining or, better improving their efficiency. The adverse effect of a drug should not be considered without taking account of its beneficial effects. The detailed description of the pharmacovigilance system (DDS) contain the company wide definition, independent of products and licences of the working structure and processes established in the company for ensuring the safety of the medicinal product. The nationwide programme, sponsored and coordinated by the country’s control drug regulatory agency central drug standard control organisation (CDSCO) to establish and manage a database of adverse drug reaction (ADR) for making informed regulatory decisions regarding marketing authorization of drug in India for ensuring safety of drug. The national centre will operate under the supervision of the NPAC to recommend procedures and guidelines for regulatory interventions. ISOP is an international non-profit scientific organisation. Which aims to foster pharmacovigilance both scientifically and educationally and enhance all aspect of the safe and proper use of medicines in all countries.

**Keywords:** pharmacovigilance, adverse drug reaction, monitoring, risk benefit ratio .

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**DNA VACCINES:A HOPEFULL RAY IN IMMUNOLOGY**

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**Abstract:** DNA vaccines hold promises for protection against a range of diseases caused by viruses and intracellular bacteria for which there at present are no efficient vaccines based on either live attenuated viruses or vaccines containing recombinant viral antigens. DNA vaccines uses foreign DNA to express an encoded protein and stimulates the body's immune system. It represents a new approach to immunization which is potentially less expensive than the old vaccines. After inoculation into the host, DNA enters the cells, where the antigen is expressed, processed and subsequently recognized by immune system as in a natural infection. Certain methods like gene gun and electroporation are used to deliver DNA vaccines. DNA vaccines undergo through clinical trails to find the way to treat auto immune diseases, hepatitis, mycobacterial diseases, allergy and malaria. The better understanding of mechanism responsible for the generation of immune response after DNA inoculation is leading to the design of more efficacious protocols. It is expected that DNA immunization will become the treatment of choice for both prophylactic and therapeutic protocols in the very near future. This review focuses on mechanism by which DNA vaccination induces immune response, delivering method and applications of DNA vaccinations.

**Key Words:** DNA vaccines, Mechanism, Delivering methods.

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**GLAUCOMA**

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**Abstract:** Glaucoma is derived from ancient Greek called ‘Glauxos’ which means ‘gleaming’. It is a group of related eye disorder or intra ocular pressure that cause damage to the optic nerve which carries information from the eye to the brain. They are different types of glaucoma in which common types are chronic open angle glaucoma and acute-angle closure glaucoma. Chronic open angle glaucoma (COAG) develops slowly & painlessly, so that damage to the optic nerve & vision loss is noticed until the condition is advanced. Sudden & severe intra ocular pressure (IOP) elevation can quickly damage the optic nerve, resulting in Acute-angle closure glaucoma (AACG). Even old age and thyroid problems also increase the glaucoma disease.
NIGELLA SATIVA – A MIRACULOUS CURE FOR HIV/AIDS
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Abstract: Nigerian physicians and researchers have discovered a tested cure for HIV, the cause of AIDS. The team of researchers who found this cure in pilot studies, Dr. Onifode Abdulfattah Adekunle, University of Ibadan, Jewell AP from India, Dr. Aedeje WA, converted several patients from HIV positive status to a negative status in 4 months after first eliminating most of the symptoms of AIDS in the first three weeks on the remedy. The cure is based on the statement of Prophet Mohammed (S.W) that “Black Seeds can cure all the diseases except death.” Nigella sativa is an annual herbaceous plant belonging to the Ranunculaceae family native to southwest Asia. It has functional component thymoquinone which is an immune-stimulant and immune system modulator. Nigella sativa had been documented to possess many therapeutic functions in medicines but the least accepted is Sero/reversion of adult HIV patient after treatment of Nigella sativa concoction for a period of 6 months. The patient was commenced on Nigella sativa concoction 10ml twice daily for 6 months. He was contacted daily to monitor the side effects and drug efficacy. Repeated ELISA and Western blot tests on 187th day of therapy was sero-negative. This case report reflects the fact that there are possible therapeutic agents in Nigella sativa that effectively control the HIV infection/AIDS.

Keywords: black seeds, thymoquinone (TQ), HIV/AIDS cure.

AMYOTROPIC LATERAL SCLEROSIS
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Abstract: Amyotrophic lateral sclerosis is a type of motor neuron disease that weakens muscle and impacts physical functions of the body. ALS, causes due genetic mutation, chemical imbalance, disorganized immune response and protein mishandling. As disease progresses, people with ALS experiences complications such as breathing, speaking, eating problems and dementia. ALS often starts in hands, limbs or feet. And then spreads to other parts of the body. As the disease advances and nerve cells are destroyed muscles progressively weaken

HAIRY CELL LEUKEMIA: ITS DIAGNOSIS AND TREATMENT

Abstract: Leukaemia is a cancer of bone marrow due to damage of DNA of immature blood cells. Generally the condition of fatal and haematologic cancer, in which the bone marrow produces an excessive amount of a type of blood cell called B Cells, cause by a mutation known as V600E in aspecific gene. There are several methods diagnosis in addition natural methods for the treatments of hairy cell leukaemia.

Key Words: Leukaemia, Hairy cell leukaemia, Chemotherapy, Complications, Natural treatments.

ANTI–HIV DRUG DISCOVERY Where Do We Stand and Where Do We Go?
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Abstract: The human immunodeficiency virus (HIV) has now been established as the causative agent of the acquired immunodeficiency syndrome (AIDS) for over 27 years. During this time an unprecedented success has been achieved in discovering anti-HIV drugs as reflected by the fact that there are now more drugs approved for the treatment of HIV than for all other viral infections taken together. The currently Food and Drug Administration (FDA) approved anti-HIV drugs can be divided into seven groups: nucleoside reverse transcriptase inhibitors (NRTIs), nucleotide reverse transcriptase inhibitors (NtRTIs), non-nucleoside reverse transcriptase inhibitors (NNRTTs), protease inhibitors (PIs), fusion inhibitors (FIs), co-receptor inhibitors (CRIs), and Integrase inhibitors (INIs). This arsenal of drugs, which is used in combinations, has moved the prognosis of HIV patients from that of high morbidity and mortality to, for many at least, a chronic, manageable but still complex disease. However, the use of these drugs has been relatively limited by their toxicity, drug resistance development, and more worryingly, the fact that some newly HIV-infected patients carry viruses that are already resistant to the currently approved AIDS treatments. These issues along with drug-related side effects as well as, in some cases, poor tolerability of these drugs make it apparent that new anti-HIV drugs with acceptable toxicity and resistance profiles and, more importantly, new anti-HIV agents with novel mechanisms of action are clearly needed.
THE NEEDLE-FREE INJECTION TECHNOLOGY
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Abstract: The Needle-free injection (NFI) systems are novel ways to introduce various medicines. The needle injection has many complications like anxiety, fever, avoidance, disgust and needle stick injuries. Therefore NFI systems are used to overcome these complications. In NFI’s a jet of fluid is accelerated to high speed providing an significant penetrating power through a fine diameter nozzle when placed against skin. Energy sources such as spring, gas cartridge and electricity can be used. The transmission of diseases is prevented, it has a take home option and since, we can also deliver solid dosage form through it, can be used to overcome the stability factor encountered in liquid dosage form. The NFIs have many emerging applications some of which are like its use in diabetes by giving regulated and user friendly insulin injections, its use in treating hemophilia, for giving local anesthetics etc. Excessive prices relative to those of standard syringes is a disadvantage. However, there appears to be tremendous opportunity for needle-free technology to have major impact in the industry. It is likely that dramatic change may occur only when a large pharmaceutical company adopts needle-free technology and demonstrates its versatility, acceptance and value in major therapeutic area.

THERMOGRAVIMETRIC ANALYSIS
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Abstract: Thermo gravimetric analysis (TGA) is an analytical technique whereby the weight of the substance, in an environment heated or cooled at a controlled rate is recorded as a function of time or temperature. The changes in the mass can be caused by a variety processes such as decomposition, degradation, sublimation, vaporization, adsorption, desorption, oxidation, and reduction. The instrument used for thermogravimetry is programmed precision balance for rise in temperature is known as Thermobalance. The main principle of Thermo gravimetric analysis is the change in the weight of the substance is recorded as a function of temperature or time. The temperature is increased at a constant rate for a known initial weight of substance and a change of weight is recorded. TGA is used in analysis of volatile products, gaseous products lost during the reaction in thermoplastics, thermosts, elastomers, composites, films, fibers, coatings, paints, etc. Among practical applications, a particular attention is paid to determining composition and thermal stability of materials, evaluating the kinetics of thermally stimulated processes, predicting lifetimes, and studying reactions of materials with gases. Other TGA applications include Kinetic studies, corrosion studies, material characterization, and thermal stability.

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Abstract: Preserving biological specimen or sample such as tissue or organ in cold temperature cryo: -cold climate .preservation : -preservation of tissue in cold temperature it is almost -195 degree celsius which is below subzero temperature -195 degree celsius is boiling point of liq nitrogen .DISCRIPTION : cryo- preservation or cryo conservation is a process where organelles ,cells, tissues, extracellular,matrix,organs, or any other biological constructs susceptible to damage caused by unregulated chemical kinetics are preserved by cooling to very low temperatures ( typically -80 degree celsius using solid carbodioxide / -196 degree celsius using liq nitrogen .at low enough temperatures any enzymatic or chemical activity which might cause damage to the biological material in question is effectively stopped. Cryopreservation methods seek to reach low temperatures without causing additional damage caused by the formation of ice crystals during freezing . Traditional cryopreservation has relied on coating the material to be frozen with a class of molecules termed cryoprotectants .new methods are constantly being investigated due to the inherent toxicity of many cryoprotectants there are different cryopreservations. NATURALCRYOPRESERVATION: Microscopic multicellular organisms can survive freezing by replacing most of their internal water with the sugar trehalose. SEMEN CRYOPRESERVATION: Semen cryopreservation called sperm banking is a procedure to preserve sperm cells . EMBRYO PRESERVATION: cryopreservation of embryos is the process of preserving an embryo at sub zero temperature. OOCYTE CRYOPRESERVATION: Human oocyte cryopreservation (egg freezing) is a procedure to preserve a womens eggs . AMNIOTIC STEM CELL BANK (SECTION PRESERVATION): After freezing .the sample is transferred to a liq nitrogen storage tank . PAPAVERINE: cryopreservation of blood vessels along with the other glycosaminoglycans and protein suspension . CELL BANK ; Pharmaceuticals with cryopreservation being the traditional method of keeping cellular material intact.
PHARMACOGNOSTICAL AND PRELIMINARY PHYTOCHEMICAL EVALUATION OF LEAVES OF TEPHROSIA VILLOSA PERS.

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Abstract: OBJECTIVE: An attempt has been made to highlight this folk herbal medicine through present study which will assist in the identification of the plant both pharmacognostically as well as physiochemically. METHOD: Various parameters like macroscopy, microscopy, Physiochemical parameter and Preliminary phytochemical studies of the leaves powder were also carried out. RESULT: Physiochemical parameters like total ash content, water soluble ash, acid insoluble ash, sulphated ash, alcohol soluble extractive and water soluble extractive were found to 9.34%, 0.72%, 4.28%, 5.20%, 8%

MEASLES RUBELLA VACCINE (MR VACCINE)

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Abstract: This abstract aimed to make awareness about MR vaccine in people. Introduction: MR vaccine have been launched on international immunization program. Recently launched on 5th Feb 2017 and in Hyderabad it is launched on 17th August. About 41crore children's will be covered under the campaign. About 400million children in 36 states targeted to cover in this campaign in next 2 yrs. Due to this measles disease infants are also dying so govt have decided to remove this disease by the Year, 2020.
Use : MR vaccine is given for preventing both measles & rubella diseases in the child. No specific treatment is available for measles &rubella but these diseases can easily be prevented by vaccination. This vaccine is given to children's of age from 9months to below 15yrs .Then it come in routine immunization.As like first in 9th month and then in 16th month only. MR vacaciones diluted with accompanying diluent &is administed by subcutaneous injection on the arm of child .

RISE OF CLINICAL TRAILS INDUSTRY IN INDIA : (An Analysis)

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Abstract: Clinical trials industry has seen a phenomenal increase in last ten years or so, and India has emerged as one of the foremost global destinations for clinical trials. Changed intellectual property regimen after WTO(world trade organization)has been the prime mover of the phenomenon, and maximizing profits rather than serving any altruistic motives forms the main ideological underpinning of the rise of clinical trial industry in India.The paper examines the ideological underpinnings of the rise of clinical trials industry in the country in detail and how the ruling classes of India have tried to capitalize on this as a great economic opportunity. In the process the interests of India’s poor, have been the main casualty.

ORAL CANCER

Neha Zarin & Nabeela Begum

Abstract: Oral cancer is a common neoplasm worldwide. Its incidence and mortality have also increased over the past decades. It is characterized by poor prognosis and a low survival rate despite sophisticated surgical and radiotherapeutic modalities. Metastasis of oral cancer is a complex process involving detachment of cells from tumor tissue, regulation of cell motility and invasion, proliferation and evasion through the lymphatic system or blood vessels. In this review, we will focus on creating awareness & knowledge about oral cancer regarding facts, such as incidence; stage, signs, symptoms ,early detection, prevention , clinical manifestations; diagnosis; and treatment. Certainly, such information will contribute in understanding of oral cancer & early detection which may save a life
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Abstract: Pain can be mild, moderate or severe. Mild pain is often treated with non-opioid drugs (paracetamol and anti-inflammatory drugs). Moderate to severe pain is usually treated with pain killers called opioids (morphine, tramadol etc). All pain killers carry risks—even OTC ones, but it’s the narcotic pain killers that carry the highest risk of addiction. Many believe that the pain killers prescribed by doctors would be safe and non-addictive, however the risk of addiction to those is also more. Opioid addiction shows effects all over the body including brain, heart, kidney etc. Opioid receptors are present in brain, spinal cord and others. Opioids bind to those receptors and decrease sending of pain messages to brain and reduce feeling of pain. However, over dose causes side effects. Effects of addiction on BRAIN include weakened immunity, dyspnea, hallucinations, depression, craving and coma.78 people die each day due to effects of pain killers on brain. Effect of painkiller addiction on CVS includes heart failure, cardiac arrest, stroke etc. It was found that the overall risk of experiencing a coronary failure was 20-50% higher in people that use these drugs vs. those who didn’t use pain killers. Maternal use of opioids causes neonatal abstinence syndrome (NAS) in newborns. According to a survey, in 2013, 27 cases out of 1000 have been reported as NAS and it drastically increases to 741/1000 and 819/1000 in 2016 and 2017 respectively. Ultimately, painkiller addiction is leading to deaths of people all around the world, an estimate of 60 people in a day. Chances of mortality are also increasing due to over prescription of painkillers by doctors. Hence, it is the responsibility and duty of the PHARMACIST to create awareness in society by organizing educational campaigns. Counselling can also help the addicted patients to overcome craving and dependency on painkillers, especially the narcotic painkillers.

Key Words: NEONATAL ABSTINENCE SYNDROME, DEPENDENCY, CRAVING, DEPRESSION.

INNOVATIONS OF NEURAL IMPLANTS THAT ENHANCE THE BRAIN ACTIVITY
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Abstract: Neural implants or prosthetics are a class of devices that communicate with nervous system- usually placed on the surface of the brain, or attached to the brain's cortex. A common purpose of modern brain implants and the focus of much current research is establishing a biomedical prosthesis circumventing areas in the brain that have become dysfunctional after a stroke or other head injuries.[1] This includes sensory substitution, e.g., in vision. Other brain implants are used in animal experiments simply to record brain activity for scientific reasons. Some brain implants involve creating interfaces between neural systems and computer chips. This work is part of a wider research field called brain-computer interfaces in order to treat damaged parts of the brain or, in the future to enhance the functionality of brain.

Key Words: Brain implants, research, neuron, chips, electrical signals, brain.

PHARMACOGNOSTICAL AND PRELIMINARY PHYTOCHEMICAL EVALUATION OF LEAVES OF TEPHROSIA VILLOSA PERS.
'Mohammad Shoeb, Patel Mohin' 

Abstract: OBJECTIVE: An attempt has been made to highlight this folk herbal medicine through present study which will assist in the identification of the plant both pharmacognostically as well as physiochemically. METHOD: Various parameters like macroscopy, microscopy, Physiochemical and Preliminary phytochemical studies of the leaves powder were also carried out. RESULT: Physiochemical parameters like total ash content, water soluble ash, acid insoluble ash, sulphated ash, alcohol soluble extractive and water soluble extractive were found to be 9.34%, 0.72%, 4.28%, 5.20%, 8% and 20% respectively. The qualitative parameters are reported. The plant is rich in carbohydrates, saponins, coumarin glycosides, flavanoids and phytosterol. CONCLUSION: The present study on Pharmacognostical investigation of Tephrosia villosa Pers. leaves might be useful to supplement information in regard to its identification parameters assumed significantly in the way of acceptability of herbal drugs in present scenario lacking regulatory laws to control quality of herbal drugs.

Keywords: Tephrosia villosa Pers.

INNOVATIVE PHARMACEUTICAL FORMULATION
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Abstract: Over the past decades, nano-medicines have been translated into various commercial products, from the lab to the market. Many pharmaceutical companies are paying more attention to nanotechnology than before, in order to find new solutions for pharmaceutical innovation with lower cost, lower risks and much higher efficiency compared to traditional drug development.
Currently, nano-medicine is dominated by nanoscale drug delivery systems. As we know, materials have unique properties at nanoscale dimensions that meet important medical needs and are already being used as the basis for new drug delivery formulation. Nanoscale particle/molecule based drug delivery formulations improve the bioavailability and pharmacokinetics for better therapy, such as liposomes, nano-suspensions and polymeric nanoparticles. Some of the nanoparticles (NPs) are effective in improving safety and efficacy, and also decreasing the toxicity.

Key words: Pharmaceutical care, Quality of life, Nano medicine.

EVALUATION OF THE INVITRO ANTIOXIDANT EFFECT OF ANOGEISSUS ACUMINATE
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Abstract: Free radicals are responsible for causing a large number of diseases it induced by peroxidation have gained much importance because of their involvement in several hydroxyl pathological conditions. Reactive oxygen species (ROS) damage important cellular components causing injury through covalent binding and lipid peroxidation. The Anogeissus acuminate is known as Button tree. It is traditionally used to treat skin diseases, pain and inflammation. The present study was aimed to investigating the antioxidant activity of the ethanolic extract of Anogeissus acuminate was studied by using different invitro methods such as DPPH scavenging assay and Hydrogen peroxide scavenging (H2O2) assay. Used ascorbic acid as a standard. The ethanolic extract of the plant 500µg/ml had shown potent activity in DPPH assay and Hydrogen peroxide scavenging assay. The findings suggest that the ethanol extract of Anogeissus acuminate is an effective free radical scavenger, augmenting its therapeutic value.

Keywords: Anogeissus acuminate, DPPH, H2O2, Free radical, Antioxidant.

ANALYSIS OF PRESCRIBING PATTERN OF COPD PATIENTS IN A TERTIARY CARE HOSPITAL SALEM
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Abstract: Chronic obstructive pulmonary disease (COPD), a common preventable and treatable disease, is one of the leading causes of morbidity and mortality in the industrialized and the developing countries. The problems get compounded with inappropriate and irrational use of medicines. An attempt was made to assess the current prescribing pattern with the WHO prescribing indicators to see whether the prescription pattern followed WHO guidelines in a tertiary care hospital in Salem. Retrospective analysis of 150 patients admitted in the General Medicine department over a period of six months from November 2015 to April 2016 in VMKVMCH, Salem, Tamil Nadu was selected for analyzing the drug use pattern using WHO prescribing indicators and drug-drug interactions in the prescriptions. The prescriptions were analyzed using descriptive statistics and results were expressed in percentage. A total of 1015 drugs were prescribed and the average number of drugs per prescription was found to be 7.69±2.24. Most of the drugs were prescribed by brand name (63.34%). The percentage of drugs prescribed as per EDL-WHO 2015 was 22.36%. The most commonly prescribed COPD drug was Deriphylline [123(20.5%)]. When drug-drug interactions were checked via Medscape online Drug Interaction checker, 168 interactions were found. The prescribing patterns were not in accordance with WHO guidelines so it is necessary to make doctors aware about the use of drugs, importance of prescribing drugs with generic names, safety of prescribing drugs from EDL and patient’s point of view.

Keywords: Prescribing pattern, COPD, WHO guidelines, EDL.

DRUG PRESCRIBING PATTERN OF DRUGS IN ANESTHESIA DEPARTMENT IN A TERTIARY CARE HOSPITAL, SALEM
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Abstract: A study of prescription patterns is an important tool to determine rational drug therapy and maximize utilization of resources. To improve the overall drug use, especially in developing countries, international agencies like the World Health Organization (WHO) and the International Network for the rational use of drugs (INRUD) have applied themselves to evolve standard drug use indicators. These indicators help us to improve our performance from time to time. The principal aim of drug utilization research is to facilitate the rational use of drugs in populations. For the individual patient, the rational use of a drug implies the prescription of a well documented drug at an optimal dose, together with the correct information, at an affordable price. In this study was carried out in a tertiary care hospital, Salem in department of anesthesia, patients attending anesthesia department during November 2015 to April 2016. In the present study 100 patients were selected it includes 38 females and 62 males and most of the patients were found to be in the age group of 31-40. Our study revealed almost all the prescriptions in the anesthesia department was appropriate following the rational usage of medicines since the route of administration, dosages frequency and duration of treatment was mentioned. The average number of drugs per prescription was found to be 5.6±1.7. Our study gives an insight into the current
practice pattern of anesthetists for pre medication in various surgical conditions. From the above study it may be concluded that the prescribing patterns of drugs in the anesthesia department was found to be a rational.

Key words: WHO, INRUD

CERVICAL CANCER IS PREVENTABLE : ACT NOW BEFORE IT'S TOO LATE
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Abstract: Cervical cancer is the leading cancer killers among all over the world. Cervical cancer is the most common female cancer in developing countries. Despite of successful cervical cancer screening test and vaccines in India, population based cervical screening is largely non-existent in most regions due to competing healthcare priorities, insufficient financial resources and a limited no. of trained providers. Hence most of the cases present in advanced stages of the disease, thus leading to increased mortality and reduced survival i.e. over 122,844 women develop & 67,477 women die from cervical cancer each year. HPV (Human Papilloma Virus), a sexually transmitted virus is known to cause cervical cancer. The concept of Cervical Intraepithelial Neoplasia (CIN) was introduced in 1968 which means “dysplasia” i.e. abnormal maturation. Cervical cancer progresses slowly from preinvasive CIN to invasive cancer. It is widely accepted that detection and treatment of HPV-related dysplastic epithelial change in the form of CIN-2 and CIN-3 can prevent the development of invasive cervical cancer. This development is done by PAP-smeer screening test & HPV test. Hybrid capture is latest refinement of HPV test, out of many strains HPV 16,18 are main causes of cervical cancer.16+18=70 i.e. 70% of cancers are caused due to these specific strains. Risk factors include various aspects of sexual behavior (ex: no. of sexual partners, age of first sexual activity), smoking, long term use of oral contraceptives, immunosuppression, poor hygiene. Women aged 30yrs & older should preferably be screened with HPV testing every 3-5yrs.GARDASIL-9 (9-valent) may provide protection against up to 85% of Cervical Intraepithelial Neoplasia(CIN-3) and 90% of cervical cancer and 90% of cervical cancer. If Pap test result is abnormal then colposcopy & sample of tissue can be collected for laboratory study (biopsy). Survival rates are high if detected at early stages i.e at Stage 0 (or) IA the survival rates are 93%. Survival rates decrease with increase in the no. of the stage. Incorporating periodic health publicity programs in the market, religious setting and working place will improve the knowledge and uptake of the cervical screening.

Keywords: Cervical cancer, Human papilloma virus, PAP smear, Gardasil

NIS/2K18/POSTER/149

IMMUNOLOGY OF NEONATAL GENE TRANSFER
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Abstract: Gene therapy could result in the permanent correction or amelioration of the clinical manifestations of many genetic diseases. However, immune responses to the therapeutic protein pose a significant hurdle for successful gene therapy. Problematic immune responses can include the development of a cytotoxic T lymphocyte (CTL) response that results in the destruction of genetically-modified cells and/or the formation of antibodies directed against the therapeutic protein. One approach to avoid an immune response is to perform gene therapy in newborns, which takes advantage of the fact that the immune system is relatively immature at birth. This approach has been highly effective in mice, and has resulted in stable expression without antibody formation for proteins that are highly immunogenic after transfer to adults. High levels of expression after neonatal gene therapy were more effective at inducing tolerance than low levels of expression in mice, which suggests that high antigen levels are more efficient at inducing tolerance. A criticism of this approach is that the murine immune system is less mature at birth than the immune systems of larger animals. Indeed, neonatal gene therapy to cats with mucopolysaccharidosis I resulted in a CTL response after gene therapy.

NIS/2K18/POSTER/150

NOVEL DRUG DELIVERY SYSTEM A BRIEF NOTE
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NIS/2K18/POSTER/151
Advantages:
- Optimum dose at the right time and right location.
- Efficient use of expensive drugs expiements and reduction in production cost.
- Beneficial to patients, better therapy, improved comfort and standard of living.

Novel approaches in drug design and development is an interdiscriminary, peer reviewed open access journal that brings out most current research in fields related to drug design, research focusing upon drug designing methodologies. The new drug development is chemicals and biological researches. This welcome author to submit their articles in the multidisiplinary field, ranging from drug designing, drug development, drug discovery.It also publishes articles related to medicinal chemistry, pharmacology, drug delivery systems, pharmacokinetics and pharmacodynamics drug absorption and metabolism, drug targeting, clinical drug evaluation, pharmacuetical technology, pharmaceutical biotechnology. To minimize drug degradation and less to prevent harmful side effect and to increase the drug bio availability and fraction of the drug accumulated in the required zone, various drug delivery.

NIS/2K18/POSTER/152

ASSESSMENT OF COMPLICATIONS DUE TO BETA BLOCKERS IN PATIENTS SUFFERING WITH ASTHMA AND COPD WITH MODIFICATION OF THERAPY BY A CLINICAL PHARMACIST

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Abstract: Beta blockers are the drugs which are used for the treatment of hypertension may cause bronco constriction in the patients suffering with hypertension. Asthma and COPD is the condition which shows its effects on respiratory system may leads to severe complications and in some conditions life threatening events may takes place. Materials and methods: Study procedure: A prospective observational study conducted for a period of 12 months in a tertiary care hospital. Study settings: The study was conducted by collecting the information from the patients suffering with hypertension with all the demographic details was taken into study. Study methods: It was a prospective observational study carried out in the rural areas. Study sites: study was conducted in rural areas in and around karimnagar with having minimum of 256 plus houses. Study procedure: Study was done by collecting an information who and HRQOL (health related quality of life) questionnaire. Nearly considered 1600 people out of which 693 people are interested to give their information and about health conditions and the use of drugs. Study material: Patient consent form was collected by using self design consent form and was made into three languages. Data analysis: The data was analyzed by different statistical software’s in which the information is analyzed by using Microsoft excel 2007 and results are given in percentages. Result: The data was collected from the patients and the details was tabulated and discussed. Discussion: Out of 780 patients 693 patients are willing to give the information. Conclusion: Our study concluded that the physician prescribing beta blockers without confirmation of part medical history. Due to unknown knowledge and past medical history several complications can occur. So the treatment regimen should be changed to overcome the complications. we as a clinical pharmacist should provide information regarding beta blockers in the asthmatic patients and COPD and also create awareness about the complications and treatment regimen for the patients who are visiting the hospital.

Key words: Complications, beta blockers, modifications, treatment regimen.

NIS/2K18/POSTER/153

OPTOGENTICS IN NEUROTECHNOLOGICAL SCIENCES.

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Abstract: Optogenetic control of the peripheral nervous system (PNS) would enable novel studies of motor control, somatosensory transduction, and pain processing. Such control requires the development of methods to deliver opsins and light to targeted peripheral neurons and robust optogenetic modulation of motor neuron activity in freely moving, non transgenic mammals. We show that intramuscular injection of adeno associated serotype 6 enables expression of channelrhodopsin (chR2) in motor neurons innervating the injected muscle. Illumination of nerves containing mixed optogenetic activation restricted to the injected muscle. We demonstrate that an implanted optical nerve cuff is well tolerated, delivers light to the sciatic nerve, and optically stimulates muscle in freely moving rats. These methods can be broadly applied to study paralysed persons and lay a groundwork for future therapeutic application of optogenetics in neuroscience. Introduction: Optogenetics is a neurotechnology deals with use of light to control the cells, typically neurons, that have been genetically modified to light sensitive cells. Its main aim is to pass a light to a certain intensity to activate nerves or nerve ion channels. Description: How paralysis is cured???Currently there is no cure for paralysis itself in certain cases; some or all muscle control and feeling returns on its own after treatment of the cause for the paralysis for example; spontaneous recovery often occurs in case of bell’s palsy; a temporary paralysis of the face. It might also occur to some extent with treatment after a stroke. Sometimes; the optogenetic treatment is important to prevent further worsening of paralysis; for example in multiple sclerosis.Paralysis is treated by optogenetics; which is neurotechnological technique firstly in the mice in 2014 in Malaysia. When light intensity is passed into the brain of the mice at certain intensity. Then it innervates the neurons and respond to stimuli which intimately activate the neuron sensitive nerve cells as these cells provide warm blood by generating heat through action potential and hence the muscle started for movements and hence paralysis is treated by passing light intensity of certain wavelength for a number of times.
**POLYCYSTIC OVARY SYNDROME (PCO’S)**

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**Abstract:** Polycystic ovarian syndrome is a hormonal endocrine disorder causing enlarged ovaries with small cysts on the outer edges. It is the most common syndrome which affects women in their reproductive years. It is mainly caused due to anovulatory infertility; hyperandrogenism; excess production of insulin and genetic factors. Hyperandrogenism is exacerbated by hyperinsulinaemia and androl follicle arrest and may itself increase the risk of follicle arrest. According to WHO PCO’s has affected 116 million women (3.4%) world wide in 2012. Globally prevalence estimates of PCO’s are highly variable ranging from 2.2% to as high as 26%. Irregular periods; Acne; Weight gain; Male- pattern baldness are commonly seen symptoms. PCOS women had a higher prevalence of hypertension and higher triglyceride levels than controls. MI, stroke, diabetes, cancer, and mortality prevalence was similar in two cohorts with similar body mass index. Lifestyle interations are first treatments doctors recommend for PCOS and they often work well. Weight loss can treat PCOS symptoms and improve the odds of getting pregnant. Diet and aerobic exercise are two effective ways to lose weight. Medicines are an option if lifestyle changes don’t work. Birth control pills and Metformin can both restore more normal menstrual cycles and relieve PCOS symptoms.

**REVIEW ON TREE MAN SYNDROME-A Genetic disorder [Believe or not-a virus turning man into tree]**

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**Abstract:** TREE MAN SYNDROME also known Epidermodysplasia Verruciformis. It is an extremely autosomal recessive genetic hereditary skin disorder associated with high risk of carcinoma of the skin. Rare Geno dermatosis is characterized by susceptibity to HPV. Mutations are seen in EVER1 Or EVER2 genes on chromosome 17 due to defect in cell mediated immunity and susceptibity to HPV [5, 8]. Lifelong eruptions of pytriasis versicolor like macules, flat wart like papules, cutaneous carcinoma are seen. In EV viral genomes E6 and E7 detected. More than 90% EV patients have low oncogene potential. Ginormous warts that looked like bark are seen on hands and fee. This disorder was first described by Lewandowsky and Lutz in 1922 as epidermal nevus. Recent surgery was performed in Bangladesh which is known to be successful.

**Keywords:** Geno dermatosis, human papilloma virus, EVER1orEVER2 genes, warts, oncogene potential, squamous cell carcinoma, tree bark

**MAGNETIC MICROSPHERES : MAGICAL NOVEL DRUG DELIVERY SYSTEM**

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**Abstract:** A number of novel drug delivery systems have emerged encompassing various routes of administration, to achieve controlled and targeted drug delivery, magnetic micro carriers being one of them. Magnetic microspheres hold great promise for reaching the goal of controlled and site specific drug delivery. Magnetic microspheres as an alternative to traditional radiation methods which uses highly penetrating radiations that is absorbed throughout the body. This kind of delivery system is very much important which localises the drug to the disease site. In this larger amount of freely circulating drug can be replaced by smaller amount of magnetically targeted drug. Magnetic carriers receive magnetic responses to a magnetic field from incorporated materials that are used for magnetic microspheres are chitosan, dextran etc. magnetic microspheres can be prepared from a variety of carrier material. One of the most utilized is serum albumin from human or other appropriate species. Drug release from albumin microspheres can be sustained or controlled by various stabilization procedures generally involving heat or chemical cross-linking of the protein carrier matrix. Magnetic microspheres were developed to overcome two major problems encountered in drug targeting namely: RES clearance and target site specificity.

**Keywords:** Magnetic, Micro carriers, microspheres

**ATROCIOUS ACNE , ZITS ARE PITS**

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**Abstract:** Introduction: The severity of acne has a substantial impact on patient’s self-esteem in different age groups and cultures, with the greatest impact on women and in those with more severe acne, according to the studies that evaluated self-esteem in patients with acne. so, we are here to share you with some of the techniques where we still lack of their knowledge . let’s keep acne at bay ; see how • Microneedling technique • Topical retinoid plus benzoyl peroxide • Hi-tech skin patches • Spirinolactone MICRO NEDDILING TECHNIQUE: It is an effective and safe treatment for acne scars associated with pigmentation in dark skinned patients, without adding any risk of causing worsening of pigmentation HI-TECH SKIN PATCHES: The patch which looks like an ordinary plaster,
works by producing an electric charge to kill the bacteria. It has a knock—on effect on the skin which contains salicylic acid and azelaic acid which kills bacteria and removes dead skin blocking follicles. TOPICAL RETINOIDS PLUS BENZOYLPEROXIDE: As we know, Despite of the severity of acne, we are prescribing antibiotics to the patients which causes resistances in it. Hence to avoid, the first line therapy should be of topical retinoids, then if not work, go to the antibiotics. SPIRONOLACTONE: It effectively treat acne in adolescent females by affecting androgen receptors in the sebaceous glands causing reduced sebum productions and thereby causing an improvement in acne symptoms.

MIGRAINE
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Abstract: Migraine is one of the most common and misunderstood disease encountered in general medical practice and estimated 23 million Americans suffer disabling migraines yet only a minority or diagnosed (1,2). And even smaller percentage receive optimal care. Migraine extracts a significant personal psychological, social and economic toll from migraineurs and their families. And estimated 150 million workdays are lost annually due to headache at an estimated cost of $6 to $17 billion (3,4). Recent advances in understanding of the pathophysiology and acute therapy provide the potential to markedly reduce the impact of migraine. Available abortive medications have efficacy rates as high as 80%, but only a minority of afflicted patients currently receive this therapies. While reducing headache pain, they also restore function, enabling an individual to return to work, family, and personal commitments (5). Future progress in migraine management resides in early identification and optimization of migraine treatment. Migraine frequency appears to be exacerbated by carbohydrates-rich and salt-and water-poor diet and may be worsened by medications that block voltage gated calcium or sodium channels. Stopping this medicines, reducing carbohydrates and increasing saline in electrolytes appears to prevent and/or stop migraines.

Keywords: Migraine, abortive medications, carbohydrate rich and salt and water-poor diet.

ADVANCES IN THE DIAGNOSIS, EVALUATION AND MANAGEMENT OF CHOLANGIOCARCINOMA
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Abstract: Cholangiocarcinoma is an enigmatic malignancy of the biliary tract that has recently been shown to be increasing in incidence globally. Different factors including liver-fluke infestation, viral hepatitis, exogenous nitrosamine-mediated DNA damage, and chronic inflammation have been linked to CCA genesis. There has been recent progress in identifying potential risk factors for the tumour, and in the use of emerging technologies for diagnosis and palliative treatment. Recent findings: Hepatitis B and C, cirrhosis and have been described as risk factors for cholangiocarcinoma. Diagnosis may be improved by new approaches to enhance the diagnostic yield and utility of biliary cytology. The role of new imaging approaches such as positron emission tomography scanning endoscopic ultrasound or optical coherence tomography for diagnosis are being examined and defined. Photodynamic therapy looks promising for adjunct therapy of intrahepatic mass lesions. SUMMARY: Recent advances in the epidemiology, classification, diagnosis and therapy of CCA are expected to enhance the evaluation and management of patients with this devastating malignancy.

Key words: CCA, Intrahepatic, Tomography, Photodynamic therapy, Malignancy.

ANTIBIOGRAM: A NECESSITY FOR EFFECTIVE ANTIBIOTIC USAGE
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Abstract: Antimicrobial resistance (AMR) has emerged as a major public health problem all over the world. Infections caused by resistant microbes fail to respond to treatment, resulting in prolonged illness and greater risk of death. Under such circumstances, antibiotic policy emerges as a mandatory requirement for accreditation, making the antibiogram an essential factor in framing the antibiotic policy. An antibiogram is an overall profile of antimicrobial susceptibility testing of a specific microorganism to a range of antimicrobial drugs. This profile is generated by the laboratory using data from a hospital or healthcare system. The data is summarized periodically and presented, showing percentages of organisms which are susceptible to a particular antimicrobial drug. The method involves testing the efficacy of antibiotics by introducing an antibiotic into the middle of a bacteria-laden petri dish. A clear zone indicates bactericidal activity. Greater the diameter of the zone, higher is the efficacy of the antibiotic. Antibiograms help guide the clinician and pharmacist in selecting the best empiric antimicrobial treatment in the event of pending microbiology culture and susceptibility results. While the antibiogram is useful, it should not be relied upon as the sole tool for guiding therapy as limitations do exist. The future of antibiogram would be the incorporation of patient related data to make it more reliable and informative.

Keywords: Antimicrobial resistance (AMR), antibiotic, antibiogram
MONOCLONAL ANTIBODIES-Roles of monoclonal Antibodies in cancer therapy

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Abstract: Monoclonal antibodies are antibodies that are made by identical immune cells that are all clones of unique parent cells. They are used in radio immune therapy (cancer treatment) by binding only to cancer cells specific antigen and induce immunological response on the target cells. Monoclonal antibodies are produce by typically fusing myeloma cell with B-cells of spleen from mouse that has been immunized with desired antigen however, recent advance allowed the use of rabbit B-cells. However monoclonal antibodies that delivers radioactive particles or chemotherapy drug may be associated with low blood count that can be severe and persistent, heart problems, risk of high blood pressure, congestive heart failure, heart attack and lung problems. Examples of monoclonal antibodies drugs use in cancer therapy are:
1. Gemtuzumab; for relapsed acute myeloid leukemia that target myeloid cell surface antigen CD33 on leukemia cells.
2. Alemtuzumab; for B-cell leukemia drugs that target antigenCD52 on T and B-lymphocyte.
3. Trastuzumab; for breast cancer and target HER2 Receptors.

NANOMEDICINE AND ITS USES BY NANO TECHNOLOGY

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Abstract: Nanomedicine is a key science of the 21st century. Although the production and use of nano sized particles had taken place in several ways in ancient times and hundreds of years ago, nanomedicine as a modern interdisciplinary science was first established in the nineties of the last century only. The basis of new science derives from the development of an array of ultramicroscopic devices and the studies of cellular, molecular and finally atom sized structures in biology, chemistry and physics in the 20th century. The nano technological approach, first framed in the 1950’s, was the constitutive force to establish nanomedicine as a paramount section of medicine and medical treatments. As nanoparticles inch closer to being fully deployed at the clinical level, some of the recent advances in applications of nanoparticles in medicine are reviewed. From imaging and diagnostics to therapy and treatment, a variety of nanoparticles are presented along with their physical and optical properties to be used in a diverse array of medical application. While other reviews are tailored to specific applications or to single nanoparticle types, this review aims to offer a more widespread view or visualisation, diagnosis and treatment of disease and treatment with various types of nanoparticles.

Available online at www.saspublisher.com
PLASTIC BLOOD
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Abstract: Artificial blood is a product acts as a substitute for red blood cells, which are made up of plastic molecule with iron atom at their core. While true blood serve many different functions, artificial blood is designed for the purpose of transporting oxygen and carbon-di-oxide throughout the body. The artificial blood is light to carry unlike blood plasma, does not need to be refrigerated, it also has a longer shelf life. Many people die from superficial wounds. When they are trapped in an accident or injured on the battle field and cannot get blood before they get to hospital. Plastic blood cells could be used as a substitute when the supply of natural human blood runs low, this product can be stored more easily than blood, large quantities could be carried easily by ambulance and the armed forces. It can be produced in different ways using synthetic production, chemical isolation or recombinant bio chemical technology or by stem cells of the body.

Key words: Blood, Artificial blood, Perfluorocarbons

ANTIOXIDANT ACTIVITIES OF PYRIMIDINE, ITS DERIVATIVES AND FUTURE SCOPE
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Abstract: The body is under constant attack from oxidative stress. Oxidative stress induces the excessive production of free radicals particularly reactive oxygen species in the body which causes damage to cells, proteins and DNA. Free radicals are associated with progression of a number of pathological disturbances in humans, including cancer, inflammation, atherosclerosis, Alzheimer’s disease, Parkinson’s disease and many others. Evidence proved their link to aging as well. Antioxidants are able to reduce the risk for chronic diseases by diminishing oxidative damage. The free radical scavenging activity of pyrimidines is a stimulating field in the study of their utilization in therapeutics as antioxidants. Many novel approaches have been made and significant progress occurred in last few years to overcome damage caused by free radical generation using pyrimidine derivatives. The current review focuses on the synthesis of some promising pyrimidine derivatives having desirable antioxidant activity and recent developments in pyrimidine research as antioxidant.

GLOBALANTI-NICOTINETHERAPIES: FUTURISTICAPPROACH.
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Abstract: Introduction: A cigarette is a drug delivery device that is intentionally engineered to deliver nicotine to the brain in seconds. Cigarette smoking is the leading cause of many diseases like Alzheimer’s, Cancers, Obesity, Parkinsonism, ADHD, Depression, Anxiety. Objective: There are different smoking cessation aids that use the nicotine replacement therapy, E-Cigarettes, DNA mapping techniques, Copper nanoparticles, Anti nicotine vaccines. Methods: The present study reviewed the combination of different anti-nicotine therapies including the use of “Nicotine eating bacteria”-Pseudomonas putida which is isolated from the soil collected from nicotine fields. It contains an enzyme NICA2 that identifies nicotine as a source of carbon & nitrogen. Thus this can be used in anti-nicotine therapy. Research is under progress to bring this into a successful therapy. Conclusion: Although there are many widely spread anti-nicotine therapies used anti-nicotine vaccine and use of nicotine eating bacteria are seen as futuristic approaches. Also NICA2 enzyme successfully eliminates the cause of addiction. But initially some supporting therapies are required to conflict the withdrawal symptoms of nicotine. The anti-smoking aids used today like nicotine patches, nicotine lozenges etc. have very low success rates and have prevalent side effects.

PREFORMULATION STUDIES OF PHARMACEUTICAL NEW DRUG MOLECULE AND PRODUCT

Abstract: Preformulation is a group of studies that focus on the physicochemical properties of a new drug candidate that could affect the drug performance and the development of a dosage form. This could provide important information for formulation design or support the need for molecular modification. Every drug has intrinsic chemical and physical properties which has been consider before development of pharmaceutical formulation. This property provides the framework for drugs combination with pharmaceutical ingredients in the fabrication of dosage form. Objective of preformulation study is to develop the elegant, stable, effective and safe dosage form by establishing kinetic rate profile, compatibility with the other ingredients and establish Physico-chemical parameter of new drug substances. Among these properties, drug solubility, partition coefficient, dissolution rate, polymorphic forms and stability are plays important role in preformulation study. Polymorphism having crystal and amorphous forms shows different chemical
physical and therapeutic description of the drug molecule. And product how they affected and prevention is mentioned. Preformulation study is a step in time saves nine that is disastrous effect after formulation is prevented in advance. Pharmaceutical Pre-formulation: Studies need to be conducted, routinely to appropriately align dosage form components and processing with drug. The drug-excipient blends or compacts with or without moisture at elevated temperature and determining drug content. This article explain some properties and techniques for pre-formulation evaluation parameters of drug.

Advantages of Pre-formulation studies:-
- Easy of Handling.
- Easy of Administration.
- Better stability or better bioavailability.
- It helps in asessing the “Drug Ability” of a molecule.

NUTRITIONAL APPROACHES TO ACHIEVE WEIGHT LOSS IN NON ALCOHOLIC FATTY LIVER DISEASE
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Abstract: Nonalcoholic fatty liver disease (NAFLD) can range in spectrum from simple hepatic steatosis to nonalcoholic steatohepatitis (NASH), which is characterized by lipotoxicity, hepatocellular ballooning, and inflammation and can progress to cirrhosis. Weight loss is the cornerstone treatment for NAFLD and NASH. Various randomized controlled trials have shown that weight loss of ≥5–10% leads to significant improvements in hepatic steatosis. Diets high in sodium and fructose have been implicated in the pathogenesis of NAFLD. Although some clinical studies suggest that an isocaloric high-fructose diet does not worsen NAFLD, these clinical studies are often short in duration. More recently, the Dietary Approaches to Stop Hypertension diet, a sodium-restricted diet, has been associated with less prevalence of NAFLD and has been shown to improve NAFLD. In addition, the Mediterranean diet has been promising in improving hepatic steatosis, and a larger randomized controlled trial is currently enrolling subjects. For those who are unable to pursue weight loss through dietary approaches, bariatric surgery has been shown to improve hepatic steatosis and steatohepatitis. This method has been valuable in improving hepatic fibrosis. In conclusion, weight loss is crucial to the improvement of NAFLD and NASH, and patients should attempt various diets in an attempt to achieve weight loss.

HEPATO PROTECTIVE AND EX-VIVO ANTPASMODIC ACTIVITY OF PSIDIUM CATTLEIANUM SABINE LEAVES
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Abstract: Objective: The objective of the present study was to evaluate the hepatoprotective and ex-vivo antispasmodic activity of extract of Psidium cattleianum Sabine leaves in Wistar albino rats. Methods: The in-vitro hepatoprotective activity of hydroalcoholic extract of P. cattleianum (HAEPC) was screened by MTT Assay using Silymarin as standard. It was further studied by an in-vivo method, hepatotoxicity was induced by Carbon tetrachloride (0.1ml/kg b.wt with CMC (1:1), i.p) in Wistar albino rats. The study duration was 14 days. Silymarin (100mg/kg b.wt p.o) was used as the standard. The effect of HAEPC were evaluated at doses of 200 and 400mg/kg. Ex-vivo antispasmodic activity also performed on excised rat ileum in which Atropine was used as standard. Results: The HAEPC showed a significant hepato protective activity. The percentage cell viability was identified using MTT assay (In-vitro). The EC50 Value of HAEPC was estimated. In in-vivo study, there is a significant increase in the serum parameters such as SGPT, SGOT, ALP and total bilirubin were seen in rats treated with Carbon tetrachloride (0.1ml/kg/day) in negative control when compared with normal control. The increased levels of these parameters were significantly reduced in groups treated with different doses of extracts (200mg/kg and 400mg/kg). CCl4 induced liver damage is associated with the increased levels of lipid peroxidation which is significantly reduced in case of hydro alcoholic extract of Psidium cattleianum Sabine leaves treated rats. The catalase, glutathione peroxidase levels are elevated by administration of hydro alcoholic extract of Psidium cattleianum Sabine leaves. the extract also showed an antispasmodic activity on excised rat ileum with increasing concentration. Conclusion: Results obtained suggests that the hydroalcoholic extract of Psidium cattleianum Sabine leaves exhibits a significant hepatoprotective activity in a dose dependent manner and also possess an antispasmodic activity with increasing concentration.
RISK OF BLEEDING IN WARFARIN PLUS ASPIRIN THERAPY IN CARDIAC EVENTS

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Abstract: Thromboembolic disease treatment requires anticoagulants. Several clinical trials have shown strong evidence about its benefits. But a keen examination is needed for the risks of bleeding. These considerations play key role about the antiplatelet drugs that are been interacting with warfarin. So we need to consider certain mechanisms like:
1. mechanism of antithrombotic action of these drugs
2. major risks of combined therapy of warfarin and aspirin
3. assessment of patients haemorrhagic risks
4. strategies to minimize the risk of bleeding

For Patients with history of Myocardial Infarction, Atrial Fibrillation etc, Warfarin is added to the aspirin as to lower the risk of cardiac events such as clot formation. It thereby also increases the risk of bleeding in the patients. This risk may be further increased by the Patients Age, and other illness such as cerebrovascular disease, renal disease, liver disease, history of bleeding etc, thus there should be regular monitoring of International Normalised Ratio (INR). The INR should be kept 2.0-3.0, and for high risk clot formation, the INR can be kept at 3.0-3.5. Warfarin inhibits the vitamin K-dependent synthesis of clotting factors II, VII, IX and X in the liver, leading to anti thromboalytic effect and risk of bleeding. Aspirin causes Irreversible blockade of platelet cyclo-oxygenase preventing the formation of thromboxane A2, leading to decrease in new platelets activation and aggregation, but not adhesion, thus having blood thinning effect. For patients with INR 5.0-7.9, and Asymptomatic i.e not bleeding then anticoagulants should be omitted, and 1mg PO Phytomenadione given and INR monitored frequently. For patients with INR >8, and Asymptomatic, then anticoagulants are omitted and 1-2mg IV Phytomenadione given and INR monitored frequently. If major bleeding nevertheless of elevated INR, then hold warfarin treatment and give 5mg IV Phytomenadione. Fresh Frozen Plasma, Prothrombin Complex Concentrates.

Keywords: Aspirin, Warfarin, Bleeding, INR, Platelet.

TOES TO NOSE : GUILLAIN-BARRE SYNDROME

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Abstract: Guillain-Barre Syndrome (GBS) is clinically defined as an acute peripheral neuropathy, causing limb weakness, that progresses over a time period of days or at the most upto 4 weeks. GBS is a rare auto immune disorder in which our body’s immune system attacks our nerves. The term Guillain-Barre Syndrome (GBS), the most frequent cause of acute paralytic neuropathy, covers a number of recognisably distinct variants. Guillain-Barre Syndrome is named after Guillain, Barre and Strohl, who first reported in 1916. It is currently considered the most common global cause of acute flaccid paralysis. GBS occurs throughout the world with a median annual incidence of 1.3 million cases per population of 1 lakh with men being more frequently affected than women. GBS is triggered by preceding bacterial or viral infection. Campylobacter jejuni, Cytomegalo virus, Mycoplasma pneumonia are commonly identified antecedent pathogens. GBS starts in our feet, legs and spreading to our upper body and arms. As GBS progresses, muscle weakness can evolve into paralysis. GBS can be hard to diagnose, possible tests include Nerve test and Spinal tap test.

GLOBALANTIC NECTOTHERAPIES: FUTURISTIC APPROACH.

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Abstract: A cigarette is a drug delivery device that is intentionally engineered to deliver nicotine to the brain in seconds. Cigarette smoking is the leading cause of many diseases like Alzheimers, Cancers, Obesity, Parkinsonism, ADHD, Depression, Anxiety. There are different smoking cessation aids like the use of Nicotine replacement therapy, E-Cigarettes, DNA mapping techniques, Copper nano particles, Anti-nicotoin vaccines. The present study reviewed the use of "Nicotine eating bacteria"- Pseudomous putida which is isolated from the soil collected from nicotine fields. It contains an enzyme NICA2 that identifies nicotine as a source of carbon & nitrogen. Thus this can be used in anti-nicotoin therapy. Research is under progress to bring this into a successful therapy. Although there are many widely spread anti-nicotoin therapies used anti-nicotoin vaccine and use of nicotine eating bacteria are seen as futuristic approaches. Also NICA2 enzyme successfully eliminates the cause of addiction. But initially some supporting therapies are required to conflict the withdrawal symptoms of nicotine. The anti-smoking aids used today like nicotine patches, nicotine lozenges etc; have very low success rates and have prevalent side effects.
A REVIEW: IRON DEFICIENCY—AN EMERGING POTENTIAL THERAPEUTIC TARGET IN HEART FAILURE
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Abstract: Iron deficiency is an emerging problem in patients with chronic heart failure with a prevalence of 30%-50% and can be a potential therapeutic target. It was recently shown that patients with chronic heart failure are more susceptible to become iron deficient. This could be explained by gradual depletion of iron stores due to low iron intake, gastrointestinal blood loss, or iron malabsorption apart from this chronic inflammation causes reduced iron absorption and availability of iron recycled in the reticuloendothelial system. Iron deficiency contributes to cardiac and peripheral muscle dysfunction; apart from this it is associated with poorer clinical outcomes and a greater risk of death. Therefore, iron deficiency emerges as a new comorbidity and a therapeutic target of chronic heart failure. Clinical trials have demonstrated that intravenous iron supplementation therapy therapy is associated with improved quality of life parameters, exercise capacity and reduction in hospitalizations. Treatment with i.v. iron is safe, with no increased rate of adverse events. Ongoing clinical trials are exploring the benefits of iron deficiency correction on various heart failure parameters

A REVIEW ON CARDIAC RESYNCHRONIZATION THERAPY—AS A CONTRIVANCE IN TREATMENT OF DILATED CARDIOMYOPATHY
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Abstract: Cardiac resynchronization refers to pacing techniques that change the degree of atrial and ventricular electromechanical asynchrony in patients with major atrial and ventricular conduction disorders. It involves simultaneous pacing of the right ventricle and the left ventricle. To this end, a coronary sinus lead is placed for left ventricle pacing in addition to a conventional ventricular endocardial lead (with or without a right atrial lead). The basic goal of resynchronization therapy is to restore left ventricle synchrony in patients with dilated cardiomyopathy and a widened QRS. Dilated cardiomyopathy refers to congestive cardiac failure secondary to dilatation and systolic dysfunction of the ventricles (asynchronous beating of two ventricles) in the absence of congenital, valvular, or coronary artery disease or any systemic disease known to cause myocardial dysfunction. Resynchronization therapy helps to re-coordinate ventricular contraction simultaneously and restore the efficiency of the weakened heart. Studies with Cardiac resynchronization therapy have demonstrated its ability to improve the symptoms, the exercise capacity, and the feeling of well-being of many patients with moderate to severe heart failure. Studies have also shown that Cardiac resynchronization therapy can improve both the anatomy and function of the heart tending to reduce the size of the dilated left ventricle, and therefore improving the left ventricular ejection fraction. Cardiac resynchronization therapy remains technically challenging, and implantable devices expose patients to clinical risks, including device-related symptoms, device failure and surgical complications. Rapid technologic advances in device and lead design and implantation techniques are simplifying the implantation procedure and minimizing the risks.

A REVIEW ON DIAGNOSIS AND TREATMENT OF PORTAL VEIN THROMBOSIS
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Abstract: Portal vein thrombosis (PVT), previously known as Cauchois–Eppinger–Frugoni syndrome is a form of venous thrombosis affecting the hepatic portal vein, which can lead to portal hypertension and reduction in the blood supply to the liver. In the acute phase, the presentation of portal vein obstruction is relatively uncommon and easily missed because the patient may be asymptomatic. Symptoms most often begin in the chronic or subacute stage. Right upper quadrant pain, nausea, and/or fever along with Splenomegaly, Ascites. Increased risk of spontaneous bacterial peritonitis and hepatorenal syndrome may be the clinical features of PVT. Causes of PVT include pancreatitis, cirrhosis, diverticulitis, and cholangiocarcinoma. The diagnosis of portal vein thrombosis is usually made by ultrasound, computed tomography with contrast or magnetic resonance imaging. D-dimer levels in the blood may be elevated as a result of fibrin degradation. Acutely only the thrombus may be evident, with associated findings related to ischemic bowel. In chronic cases, cavernous transformation of the portal vein may be seen, with numerous periportal veins replacing the normal single channel of the portal vein. In symptomatic noncarvenomatous PVT, anticoagulation is recommended with low molecular weight heparin. Oral anticoagulants, Beta-adrenergic blocking agents, Somatostatin analogs and thrombolytic agents are used as pharmacotherapeutic agents to reduce morbidity and to prevent complications. In patients with cavernomatous formation of portal vein or chronic PVT, decompressiveshunt surgery, should be performed if endotherapy fails to prevent bleeding from varices especially in children. Rarely livertransplantation may be considered. There was a 93% survival with bleeding control, and 82% had a patent conduit.
AN APPRAISAL ON CLINICAL TREND OF ATTENTION DEFICIT HYPERACTIVITY DISORDER

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Abstract: Attention-deficit/hyperactivity disorder (ADHD) is a brain disorder of the neurodevelopmental type marked by an ongoing pattern of inattention and/or hyperactivity-impulsivity that hampers with functioning or development. The cause of most cases of ADHD is believed to involve interactions between genetic (change in genes affecting dopamine neurotransmission and neurotransmitters) and environmental factors (intake of alcohol during pregnancy, exposure to lead or polychlorinated biphenyls, Extreme premature birth, very low birth weight, and extreme neglect, abuse, or social deprivation). Current models of ADHD suggest that it is associated with functional impairments in some of the brain's neurotransmitter systems, predominantly those involving dopamine and norepinephrine. The underlying brain regions mostly thought to be involved are frontal and prefrontal; the parietal lobe and cerebellum; deformations in the basal ganglia nuclei (caudate, putamen, globus pallidus) may also be involved. The more prominent the deformations, the greater will be the severity of symptoms. ADHD is diagnosed by an assessment of a person's childhood behavioral and mental development, including ruling out the effects of drugs, medications and other medical or psychiatric problems as explanations for the symptoms. The therapeutic approach to ADHD has been ever-changing. In some cases, environmental restructuring and behavioral therapy alone has been effective. Developments in behavioral parent training and behavioral classroom management have also proven beneficial. Additionally, behavioral psychotherapy often is successful when used in conjunction with an effective medication regimen. The medications of choice are stimulants (methylphenidate, dextroamphetamine), Atomoxetine, Tricyclic antidepressants (imipramine, desipramine, nortriptyline) and Centrally acting antihypertensives(clonidine and guanfacine) have been used to treat children with ADHD.

UP-TO-DATE DEVELOPMENTS IN THE MANAGEMENT OF PULMONARY ARTERIAL HYPERTENSION

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Abstract: Pulmonary arterial hypertension is a rare but life-threatening disease characterized by elevated pulmonary artery pressure and severe right heart failure. Frequently occurring symptoms include dyspnea, recurrent syncope, tiredness, swelling of the legs, and a fast heartbeat. Additional symptoms include fatigue, lethargy, anorexia, chest pain, and right upper quadrant pain. The pathogenesis of pulmonary arterial hypertension involves the narrowing of blood vessels connected to and within the lungs may be due to vasoconstriction, thrombosis, and vascular remodeling (excessive cellular proliferation, fibrosis, and reduced apoptosis/programmed cell death in the vessel walls, caused by inflammation, disordered metabolism and dysregulation of certain growth factors). These changes lead to a progressive increase in pulmonary vascular resistance, increased afterload on the right ventricle and, ultimately, right heart failure. PHA occurs due to endothelial dysfunction which results in a decrease in the synthesis of endothelium-derived vasodilators such as nitric oxide and prostacyclin and increase in synthesis of vasoconstrictors such as thromboxane and vascular endothelial growth factor there by causing severe vasoconstriction and vascular smooth muscle and adventitial hypertrophy. Several therapies should be considered in patients with pulmonary arterial hypertension including diuretic, oxygen, anticoagulant, and digoxin therapy, as well as exercise. Advanced therapy is directed at the pulmonary hypertension (PH) itself (PH-targeted therapy), rather than the underlying cause of the PH. It includes treatment with endothelin receptor antagonists (bosentan and Sitaxentan), phosphodiesterase type 5 inhibitors (sildenafil and tadalafil), prostacyclin derivatives (Epoprostenol). Activators of soluble guanylatecyclase (cinaciguat and riociguat). For patients with refractory disease, Atrial septostomy and lung transplantation are reserved. All have important limitations and morbidity and mortality remain high. Several new agents with similar mechanisms of action are in clinical development.

Keywords: Pulmonary arterial hypertension; pathogenesis; treatment.

UNDERSTANDING ON MANAGEMENT OF VASODILATORY SHOCK

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Abstract: Shock is one of the most common reasons for admission of patients to an intensive care unit. Low blood pressure is a hallmark of shock, and raising blood pressure is one of the foremost therapeutic goals in this situation. In patients with vasodilatory shock, who represent approximately two thirds of all patients with shock, the usual method of raising blood pressure after fluid resuscitation is intravenous infusion of a vasopressor agent. The agents most commonly used to raise blood pressure in patients with vasodilatory shock are the adrenergic agents norepinephrine (recommended first-line therapy). When these measures are inadequate to restore BP, vasopressor or epinephrine can be added. Adjunctive therapies, such as hydrocortisone, thiamine, and ascorbic acid, may increase BP in severe shock and should be considered when combination vasopressor therapy is needed. Novel vasopressor agents, such as synthetic human angiotensin II, can increase BP and reduce the need for high doses of catecholamine vasopressors in severe or refractory vasodilatory shock. Few effective rescue therapies exist for established refractory shock, which emphasizes the importance of aggressive intervention before refractory shock develops, including the earlier initiation of rational combination vasopressor therapy.
REVIEW ON NEW STRATEGIES FOR MANAGEMENT OF DIABETIC KIDNEY DISEASE

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Abstract: Purpose of review: Among diabetic complications, kidney disease remains one of the most devastating as it is closely associated with early mortality in both type 1 and type 2 diabetes. The purpose of this review is to provide an outline of recent preclinical and clinical studies, which demonstrate new insights for the treatment of diabetic kidney disease (DKD) and to outline future directions with respect to novel therapies. Recent findings: Positive findings with respect to new glucose-lowering agents such as sodium-dependent glucose transporter 2 inhibitors may lead to a change in the way we treat diabetic individuals with or at risk of DKD. Additional positive phase 2 clinical studies with drugs that have hemodynamic actions such as endothelin antagonists and mineralocorticoid receptor antagonists have led to larger phase 3 trials with atrasentan and finerenone, respectively, in order to address if these drugs indeed delay the development of end-stage renal disease. A number of other pathways such as Targeting the Metabolic Pathways Responsible for Diabetic Kidney Disease, Advanced Glycation End Products/Receptor for Advanced Glycation End Products Pathway, NADPH Oxidase, Xanthine Oxidase, Nuclear 1 Factor (Erythroid-Derived 2)-Related Factor 2, Inflammatory Chemokines, Profibrotic Growth Factors (Transforming Growth Factor-β1) and Micro-RNAs and Phosphodiesterase Inhibitors are currently under active preclinical investigation. Hopefully, the new studies will lead to major improvements over the next decade in the way to manage diabetes and its complications. Summary: As the epidemic of DKD continues unabated, new treatments strategies to reverse, attenuate or prevent DKD are desperately needed to reduce the progression of this disorder.

RECENT STRATEGIES FOR THE MANAGEMENT OF ANEMIA IN CHRONIC KIDNEY DISEASE

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Abstract: Anemia is a severe complication of chronic kidney disease (CKD) that is seen in more than 80% of patients with impaired renal function. Normocytic normochromic anemia is one of the hallmarks of progressive chronic kidney disease. It is a multifactorial process due to relative erythropoietin deficiency, uremic-induced inhibitors of erythropoiesis, shortened erythrocyte survival, blood loss and disordered iron homeostasis (deficiency of iron, folate, or vitamin B12). Hepcidin excess also causes impairment in dietary iron absorption and iron mobilization from body stores. The preferred initial form of therapy for anemia of chronic kidney disease is the use of erythropoiesis-stimulating agents (epoetin alfa and darbepoetin alfa). The routine application of erythropoiesis-stimulating agents has also led to the need for concomitant iron supplementation. Erythropoiesis-stimulating agents (ESA) and iron therapy now form the cornerstone of anaemia management in CKD. Intravenous iron administration is effective with acceptable safety, and may improve ESA responsiveness. ESA causes some serious side effects may include heart attacks, stroke, increased cancer growth, or pure red cell aplasia. The development of new strategies to treat anemia is still an evolving area of clinical research. At present, the most promising class of agents seems to be Hypoxia-Inducible Factor Stabilizers which increases EPO production in the kidney and liver, improves uptake and use of iron, and changes to the bone marrow microenvironment that encourage erythroid progenitor maturation and proliferation. EPO Mimetic Peptides that stimulate EPO receptors are another promising class. Activin Traps (Sotatercept) which contribute to regulation of erythropoiesis either by directly affecting erythroid progenitor or precursor cells or by altering the behavior of bone marrow accessory cells is another interesting drug given its potential for not only correcting anemia but also checking osteoporosis.

MANAGEMENT OF SEVERE/RESISTANT HYPERCHOLESTEROLEMIA

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Abstract: Hypercholesterolemia, and in particular, an elevated level of serum (or plasma) low density lipoprotein cholesterol (LDL-C), is associated with an increased risk of adverse cardiovascular events. Lipid lowering drug therapy, particularly with statins, is indicated to decrease the risk of cardiovascular events in most individuals with established atherosclerotic cardiovascular disease and in many who are at high risk. Hypercholesterolaemia, an elevation of total cholesterol and/or low-density lipoprotein –cholesterol or non-high-density lipoprotein-cholesterol in the blood, is also often referred to as dyslipidaemia, to encompass the fact that it might be accompanied by a decrease in HDL-cholesterol or an increase in triglycerides. This disorder is associated with an increased risk of adverse cardiovascular events. Several treatment options exist for hypercholesterolemia, which may be instituted individually or in combination. They include lifestyle changes to diet and exercise, medications, and dietary supplements. Rarely, experimental therapies or procedural interventions can be applied. HMG-CoA reductase inhibitors (statins) are frequently prescribed against hypercholesterolemia, and these agents successfully suppress levels of serum LDL-cholesterol in most cases. However, even with optimal statin treatment, 60% to 80% of residual cardiovascular risk still exists. The patients with resistant hypercholesterolemia are intolerant or unresponsive to statins are the others hurdle of statin treatment. The pro-protein convertasesubtilisin/kexintype 9 (PCSK9) inhibitor increases the expression of low density lipoprotein (LDL) receptor in hepatocytes by enhancing LDL receptor recycling. The microsomal triglyceride transport protein (MTP) inhibitor and antisense oligonucleotide against apolipoprotein B (ApoB) reduce the ApoB containing lipoprotein by blocking the hepatic very low density lipoprotein synthesis pathway. The apolipoprotein A1 (ApoA1)
mimetics pursuing the beneficial effect of high density lipoprotein cholesterol and can reverse the course of atherosclerosis. These new lipid-lowering drugs can be used for additional benefits beyond statin treatment.

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**INSIGHT ON APPROACHES FOR THE NONSUGICAL TREATMENT OF NASAL POLYPOSIS**

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**Abstract:** Nasal polyposis is an inflammatory condition of unknown etiology. Nasal polyps are the most common tumors of the nasal cavity. Approximately 30% of patients with nasal polyps test positive for environmental allergies. Polyp formation in the nasal cavity is due to chronic allergic rhinitis, chronic sinusitis, and, less commonly, underlying disease such as cystic fibrosis. Obstruction and nasal obstruction are the most important considerations in terms of symptoms. Patients usually present with nasal obstruction, rhinorrhea, sinus infection, and anosmia of prolonged duration. These polyps can be removed by two types of surgical procedures i.e. Polypectomy and Endoscopic Sinus Surgery. Oral corticosteroids are the most effective medication for the short-term treatment of nasal polyps, and oral corticosteroids have the best effectiveness in shrinking inflammatory polyps. Intranasal steroid sprays may reduce or retard the growth of small nasal polyps, but they are relatively ineffective in massive nasal polyposis. Intrapap steroid injections have been shown to reduce polyp growth and nasal symptom scores compared with intranasal medical therapy. Leukotrienes synthesis inhibitors have shown improvements in nasal airflow and reduction in nasal polyps. Nasal saline irrigation can be especially helpful in people with nasal polyps and chronic sinus infections. Other agents with a possible role in management of nasal polyposis are macrolides antibiotics, topical diuretic therapy, and intranasal lysine-acetylsalicylic acid. Medical therapy for nasal polyposis is usually reserved for patients who are not surgical candidates or who require temporization of symptom relief.

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**DIAGNOSTIC AND TREATMENT CHALLENGES IN PEDIATRIC SCHIZOPHRENIA**

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**Abstract:** Pediatric schizophrenia is a type of mental disorder that is characterized by degeneration of thinking, motor, and emotional processes, with onset before age 18 (early onset) or before age 13 (very early onset). It occurs in less than 1 in 10,000 children and less than 1% of patients with schizophrenia receive this diagnosis in childhood. The disease presents symptoms such as auditory and visual hallucinations, strange thoughts or feelings, and abnormal behavior, profoundly impacting the child's ability to function and sustain normal interpersonal relationships. The evaluation of a child with suspected Pediatric schizophrenia, includes collecting extensive collateral information, observing patients/families over several visits, excluding underlying medical illnesses and evaluating, with a high index of suspicion, for speech/language/educational deficits and comorbid mood or anxiety disorders. Treatment strategies focus on alleviating positive and negative symptoms, reducing long-term morbidity, and preventing relapse. Clozapine remains the gold standard treatment for schizophrenia, and has been shown to have a more favorable profile of clinical response compared with haloperidol and olanzapine in treatment-refractory Pediatric schizophrenia. Psychosocial therapies (cognitive behavioral therapy, family intervention, social skills training, and cognitive remediation) are effective adjuncts to pharmacological interventions in Pediatric schizophrenia along with Electroconvulsive therapy.

**Keywords:** Pediatric schizophrenia; cognitive behavioral therapy; treatment

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**CORRELATION BETWEEN STRESS AND SEVERE OBESITY**

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**Abstract:** Obesity is a global public health challenge that upsurges the risk of various diseases including type 2 diabetes mellitus, hypertension and cancer, and will in the impending cause further increases in the incidence of chronic disease. Sedentary lifestyle and easy accessibility to highly palatable nutrient-dense foods produces an environment that stimulates overweight and obesity. Chronic social stress, often arising from poor interpersonal relationships, job or unemployment stress, poor self-esteem, and low socioeconomic status has been linked with obesity and its associated illnesses. Chronic activation of the Sympathetic Nervous System and hypothalamic pituitary adrenal axis contribute to anabolic state that promotes fat storage within visceral depots. Stress can stimulate production of possible abnormalities in biochemical hormones and peptides such as leptin, ghrelin, and neuropeptide Y. Stress may play a major role in the development and maintenance of obesity in individuals who have an increased glucocorticoid exposure or sensitivity. Stress can also enhance weight gain and fat deposition through changes in feeding behavior. Chronic stress is known to alter the pattern of food intake, dietary preference, and the rewarding properties of foods. These insights may lead to more effective and individualized strategies for the management of obesity.

**Keywords:** Obesity, Stress, Hormones
CARDIOPROTECTIVE EFFECTS OF ROSA DAMASCENA FLOWERS ON ISOPROTERENOL-INDUCED MYOCARDIAL INFARCTION IN WISTAR RATS: A BIOCHEMICAL AND HISTOARCHITECTURE ASSESSMENT

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Abstract: The present study is designed to evaluate the cardioprotective effect of Rosa damascena flowers called rose on isoproterenol induced myocardial infarction in experimental rats. Materials and methods: The experimental rats were divided into 4 groups, each consisting of 6 animals. Group 1 (Negative control) rats received standard diet and drinking water ad libitum for 45 days and will serve as control group. Group 2 (Positive Control) received standard diet and drinking water ad libitum for 45 days. Group 3 (Standard) Rats received metoprolol succinate via oral route at a daily dosage of 2.5 mg/Kg body weight for a period of 45 days. Group 4 (Rosa damascena extract) Rats received Rosa damascena extract via oral route at a daily dosage of 500 mg/Kg body weight for a period of 45 days. All the groups except group 1 were then treated with isoproterenol in two doses (85 mg/kg body weight) by subcutaneous injection on 46 and 47th day at an interval of 24 hrs. At the end of the treatment, blood was collected from all the groups by puncturing the retro-orbital plexus for the estimation of biochemical parameters and the animals were sacrificed to remove the heart for histopathological studies. Serum cardiac marker enzymes such as creatine kinase muscle brain (CK-MB), lactate dehydrogenase (LDH), aspartate aminotransferase(AST), alanine aminotransferase (ALT), and total protein (TP) were estimated. Plasma total cholesterol (TC), triglycerides (TG), high density lipoprotein (HDL), low density lipoprotein (LDL) and very low density lipoprotein (VLDL) levels were also measured. Antioxidant parameters like catalase (CAT), superoxide dismutase (SOD), glutathione (GSH), and malondialdehyde (MDA) levels were evaluated in heart tissue homogenate. Results: The results of the present study indicated that, ethanolic extract of Rosa damascena showed myocardial retrieval by restoring the cardiac marker enzymes and decreasing the level of plasma lipid profile along with an increase in HDL. Additionally, level of myocardial antioxidants increased along with a lessening in the content of malondialdehyde. The cardioprotective effect was compared with Metoprolol which was used as the standard. Histopathological findings revealed a decrease in the degree of necrosis and inflammation following pretreatment with Rosa damascena. Conclusion: The present investigation indicates that Rosa damascena exerts cardioprotective activity against isoproterenol induced cardiac damage in rats.

Key words: Myocardial Infarction, Isoproterenol, cardiac markers

ASSESSMENT ON CLINICAL TREND OF ATTENTION DEFICIT HYPERACTIVITY DISORDER

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Abstract: Attention-deficit/hyperactivity disorder (ADHD) is a brain disorder of the neurodevelopmental type marked by an ongoing pattern of inattention and/or hyperactivity-impulsivity that hampers with functioning or development. The cause of most cases of ADHD is believed to involve interactions between genetic (change in genes affecting dopamine neurotransmission and neurotransmitters) and environmental factors (intake of alcohol during pregnancy, exposure to lead or polychlorinated biphenyls, Extreme premature birth, very low birth weight, and extreme neglect, abuse, or social deprivation). Current models of ADHD suggest that it is associated with functional impairments in some of the brain’s neurotransmitter systems, predominantly those involving dopamine and norepinephrine. The underlying brain regions mostly thought to be involved are frontal and prefrontal; the parietal lobe and cerebellum; deformations in the basal ganglia nuclei (caudate, putamen, globus pallidus) may also be involved. The more prominent the deformations, the greater will be the severity of symptoms. ADHD is diagnosed by an assessment of a person's...
childhood behavioral and mental development, including ruling out the effects of drugs, medications and other medical or psychiatric problems as explanations for the symptoms. The therapeutic approach to ADHD has been ever-changing. In some cases, environmental restructuring and behavioral therapy alone has been effective. Developments in behavioral parent training and behavioral classroom management have also proven beneficial. Additionally, behavioral psychotherapy often is successful when used in conjunction with an effective medication regimen. The medications of choice are stimulants (methylphenidate, dextroamphetamine), Atomoxetine, Tricyclic antidepressants (imipramine, desipramine, nortriptyline) and Centrally acting antihypertensives(clonidine and guanfacine) have been used to treat children with ADHD.

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AN INSIGHT ON PATHOPHYSIOLOGICAL INSIGHT ON MANAGEMENT AND TREATMENT OF PRURITUS
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Abstract: Itching, or pruritus, is defined as an unpleasant sensation which provokes the desire to scratch. Itching can be elicited by chemical, electrical, mechanical and thermal stimulation. The sensation of pruritus is transmitted through slow-conducting unmyelinated C-polymodal and possibly type A delta nociceptive neurons with free nerve endings located near the dermoeipidermal junction or in the epidermis. These neurons appear to be located more superficially and are more sensitive to pruritogenic substances than pain receptors. Activators of these nerves include histamine, neuropeptide substance P, serotonin, bradykinin, proteases (eg, mast cell tryptase), and endothelin (which stimulates the release of nitric oxide). Impulses are transmitted from the dorsal root ganglion to the spinalthalamatic tract. Stimulation of opioid mu receptors accentuates pruritus, both peripherally and centrally. The patient with a generalised itch should be advised to keep the body cool since the intensity of itching is usually enhanced if the skin is warm. A stepwise approach to management of generalised itch is recommended, including broadband or narrow band ultraviolet, tricyclics such as doxepin, opioid antagonists including naltrexone and selective serotonin reuptake inhibitors such as paroxetine. For troublesome localised itches such as insect bite reactions, physical urticaria, lichen simplex chronicus or, less commonly, natalgiaparetetic, brachioradial pruritus, local cooling devices which rely on the cooling action of dimethyl ethers on thermosensitive Transient receptor potential voltage-sensitive ion channels are now commercially available for short-term relief. For troublesome localised itches, topical capsaicin, and in recalcitrant cases, transspidermal electrical nerve stimulation or cutaneous field stimulation is often very effective.

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AN EYE ON DIALYSIS COMPLICATIONS OF CHRONIC RENAL FAILURE
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Abstract: This review aims to bring to the fore, issues regarding the interface of Dialysis Complications and renal failure. Prevention and early detection of symptoms can enhance the provision of effective care and may decrease both morbidity and mortality in patients on dialysis. The most common clinically significant complication is Electrolyte abnormalities which include Hyperkalemia (due lower estimated glomerular filtration rate and use of ACE inhibitors or angiotensin-receptor blockers); and Hyponatremia, hypocalcemia, and hypermagnesemia (due to fluid overload). Dialysis Dysequilibrium Syndrome characterized by weakness, dizziness, headache, and in severe cases, mental status changes have been noted as the biggest deniers of psychiatric illness in patients with renal failure. Vascular access problems include infections, which are typically manifest with symptoms such as redness, warmth, local pain or fluctuance and fever. Continuous ambulatory peritoneal dialysis is associated peritonitis. Hemorrhage, Aneurysms or pseudoaneurysms may form due to venous access problems influencing the site of venous access. Other problems that may arise in the dialysis patient include Changes in calcium and phosphorus metabolism, acidosis, Lipid disorders, Pericarditis, Serositis, Gout, pseudogout, Hypothyroidism, seizures, fractures. Accelerated hypertension, Infertility, impotence, spontaneous abortion, Bleeding, gastrointestinal mucosal ulcerations and arteriovenous malformations. Identification of the major causes of morbidity in dialysis patients can lead to improving strategies for reduction of complication rates, improvement of quality of life and sparing of resources.

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ANTIBIOTICS RESISTANT
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Abstract: Antibiotics are the drugs designed from bacteria and used to kill bacteria itself. These are certainly one of the great advances in medicine for treatment of various infectious conditions. Naturally produced antibiotics have been synthetically modified to produce range of better tolerable forms. But in past years it has been discovered that some strains have become resistance to many antibiotics which indicates the other unwanted effects of antibiotics Resistance is ability to resist the antibiotics. It arises through either resistance in certain types of bacteria, genetic mutation, or by one species acquiring resistance from another. All classes of microbes can develop resistance. This may lead to hazardous outcomes in future. Resistance development has been recorded vastly due to Frequent and inappropriate use of antibiotics which causes bacterial or other microbes to change so antibiotics don’t work against them. Preventive measures include only using antibiotics when needed, thereby stopping misuse of antibiotics or antimicrobials. Narrow-spectrum antibiotics are preferred over broad-spectrum antibiotics when possible, as effectively and accurately targeting
specific organisms is less likely to cause resistance and complete full course as prescribed by the physician. This poster presents a view of antibiotic resistance.

**DEVELOPMENT AND EVALUATION OF PHOSPHATIDYLCHOLINE COMPLEXES OF SOME PHYTOPHARMACEUTICALS AS SKIN WHITENING AGENTS**

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Abstract: Variability of skin tones throughout the world is well-documented, some skin tones being reported as more susceptible to pigmentation disorders than others. Skin pigmentation disorders occur because the body produces either too much or too little melanin. There are various issues relating to available marketed formulation of synthetic compounds. In this research work problem related to permeability of arbutin as skin whitening agent was solved by development of drug complexes with phosphatidylcholine. Development of complexes was performed by Rotary Flak Evaporation Technique. Based on results of Preliminary trials and literature reviews, selection of independent and dependent factors was performed. Box-Behnken design was selected for optimization. Evaluation of optimized batch was performed by parameters like percentage entrapment efficiency, particle size, zeta potential, and In-vitro drug release. After the nine random preliminary trials, optimized values for percentage entrapment efficiency using desirability factor is 68.73 ± 3.29, and 65.092 as actual value, and predicted value, respectively. Average particle size and zeta potential of optimized batch is 285.6 nm., -15.8 mV, respectively. Developed complexes shows better -in-vitro drug release profile compared to aqueous solution of Arbutin, which indicates optimized complexes improves permeability or absorption of drug through skin as skin whitening agent.

**FORMULATION AND DEVELOPMENT OF BOSENTAN LOADED ONCE A DAILY TABLET FOR PULMONARY ARTERY HYPERTENSION USING LIPID MATRICES BY 32 FULL FACTORIAL DESIGN**

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Abstract: To avoid problems of conventional therapy of drug delivery and reduced dose, sustained release matrix tablet of Bosentan was prepared using lipid base material as matrices. Primary screening of polymer was done by selecting different lipid base materials like Compritol 888 ATO, Precirol ATO 5, Eudragit RSPO, Glycerly monostearate (GMS) and Cetosteryl Alcohol. All the batches were prepared by direct compression method. Theoretical drug release profile was carried out for dose calculation up to 24 hrs. All the batches were evaluated for hardness, weight variation, thickness and friability (Physicochemical parameters). In vitro drug release and FTIR study was carried out along with experimental design. From the drug release profile it was observed that Compritol 888 ATO (F1) shows better retardant effect and Precirol ATO 5 (F2) shows effective burst release. But remaining formulations (F3-F5) were not able to release the drug as per theoretical drug release profile. After selecting lipid matrices it was optimized by 32 full factorial design by applying analysis of variance (ANOVA). Concentration of Compritol 888 ATO and Precirol ATO 5 were selected as independent factor and time require for 20% drug release (Y1) and time require for 80% drug release (Y2) were selected as response. Optimized batch showing drug release 99.45% at 24 hrs. With desire burst release. Pharmacokinetic study shows best fit model is Higuchi model having R2 value 0.9886. Combination of two lipid base material Compritol 888 ATO and Precirol ATO 5 shows most desire sustained release as compare to individual.

Keywords: Compritol 888 ATO; Precirol ATO 5; Direct compression method; Factorial design.

**DEVELOPMENT AND OPTIMIZATION OF BOSWELLIA SERRATA SELF-MICRO EMULSIFYING FORMULATION: AN AMELIORATIVE EFFORT TOWARDS THE HERBAL FORMULATION**

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Abstract: Development of self-micro emulsifying drug delivery system (SMEDDS) of herbal extracts is challenging task per se, as the herbal extracts contains many active and non-active constituents with various physicochemical properties. Present work focuses on development and evaluation of self-micro emulsifying formulation of Boswellia Serrata Extracts (BSE). An optimized formulation of BSE-SMEDDS composed of the equal fraction of Capmul-MCM®80, Acrysol EL135® and Acconon MC8® was developed by employing the 33 Full Factorial experimental design. The optimized formulation having capability to self-micro emulsification within less than one minute and droplet size of 189.3 nm (0.432 PDI) was evaluated for In-vitro drug release and ex-vivo diffusion for its comparison with the marketed formulation of the Boswellia Serrata Extract.

Keywords: Boswellia Serrata, Self-Micro Emulsifying Drug Delivery System, SMEDDS, Herbal Formulation.
**ARTIFICIAL NEURAL NETWORK- A BRAIN INSPIRED ARTIFICIAL INTELLIGENCE**

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**Abstract**: There are problem categories that cannot be formulated as an algorithm. Problems that depend on many subtle factors, for example the price changes of a real estate which our brain can (approximately) calculate. Without an algorithm a computer cannot do the same. Humans have a brain that can “learn”. Computers have some processing units and memory. They allow the computer to perform the most complex numerical calculations in a very short time, but they are not adaptive. Artificial neural networks (ANNs) technology is a group of computer methods for modelling and pattern recognition. The ANNs are a type of mathematical model that simulates the biological nervous system and draws on analogues of adaptive biological neurons. Basically, there are 3 different layers in a neural network. Input Layer (All the inputs are fed in the model through this layer), Hidden Layers (There can be more than one hidden layers which are used for processing the inputs received from the input layers) and Output Layer (The data after processing is made available at the output layer). Similarly to a single neuron in the brain, artificial neuron unit receives inputs from many external sources, processes them, and makes decisions. A major advantage of ANNs compared to statistical modelling is that they do not require rigidly structured experimental designs and can map functions using historical or incomplete data. So it is applicable to numbers of real world problems along with technical fields.

**QUALITY BY DESIGN IN PHARMACEUTICAL DEVELOPMENT**

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**Abstract**: Pharmaceutical industry has been emerging rapidly for the last decade by focusing on product Quality, Safety, and Efficacy. Pharmaceutical firms increased the number of product development by using scientific tools such as QbD (Quality by Design) and PAT (Process Analytical Technology). Quality by design could increase efficiencies, provide regulatory relief. It supports both industry and FDA to grow towards scientific, holistic approach for quality assurance in pharmaceutical product development. Quality cannot be tested into products but quality should be built in by design. The goal of pharmaceutical development is to design a quality product, it is essential to define desire product performance profile [Target Product Profile (TPP), Target Product Quality Profile (TPQP)] and identify critical quality attributes. (CQA). The company then designs the product formulation and processes to meet the product attributes. The application of concept of quality by design is based on principles of ICH Q8, Q9, Q10 for pharmaceutical quality systems.

**A STUDY OF RARE DISEASE ON COTARD’S DELUSIONS**

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**Abstract**: Cotard’s delusions is a rare mental illness and also known as nihilistic delusion (or) Walking corpse syndrome. In this review we discussed about its existence, Pathophysiology, Symptoms, Diagnosis and Treatment. It is a rare Neuropsychiatric disorder where individuals hold delusional belief that they are dead (Figurately or literally) and no longer exist, in alternative versions that they are putrefying and/or have lost their blood and/or internal organs. One of the consequence of cotard’s syndrome is self starvation because of negation. In starvation conditions, who denied the existence parts of body and need to eat and individuals are condemned to eternal damnation. This syndrome is linked with Depression and Schizophrenia individuals. The delusion of the negation is central symptom in cotard’s syndrome, others include mental illness, feelings of unreality and being dead, expressing themselves of death. The underlying Neurophysiology and Psychopathology of cotard’s syndrome is neural misfiring in fusiform face area of brain, in fusiform gyrus and in the cerebrum, organic lesions in parietal lobe. The diagnostic procedure for cotard’s syndrome is Neuroimaging. Treatments include Electroconvulsive therapy, Pharmacotherapy, Behavioural therapy, Psychotherapy, rehydration and removal of offending drugs. To conclude cotard’s delusions occur in context of a relatively wide spectrum of neurological, psychiatric and medical disorders and present with various neural changes.

**Key Words**: Neuropsychiatric, Depression, schizophrenia, Neurophysiology, psychopathology, Neuroimaging, Electroconvulsive therapy, Pharmacotherapy, Psychotherapy.
Abstract: Herbal medicines are rapidly gaining popularity throughout the world as a result of dissatisfaction with conventional medicines. Herbal medicines are complex mixtures of organic chemicals that may come from raw or processed parts of the plant, including leaves, stems, flowers, roots, and seeds. Recently, WHO classified herbal medicines into four different classes according to their origin, evolution, and forms of current usage. With the rising realization of herbal medicines, safety and efficacy of herbal medicines have become a public health concern. Traditional medicines are generally considered as safe due to the large history of being in practice, especially under the specified conditions for use reported in ancient literature. However, adverse effects in some individuals due to long-term use of certain herbal medicines have been reported recently. The adverse effects range from liver failure (Hepatotoxicity-comfrey root), to abnormal heart rhythm (cardio toxicity-ephe'dra leaf death (pennyroyal)). Herbal medicines also induce herb-drug interactions like Ginkgo with thiazide diuretics which causes increased in BP and many more. World health organization advocates use of herbal medicines that have a long history of use only if no adverse effects have been reported. In case of herbs where some adverse effects are reported, toxicity data in its dosage form is required mark for pharmaceuticals. Incense evidence and possible toxic effects of herbal medicine, has highlighted the demand and necessity of toxicological studies for herbal medicine. Therefore, herbal medicines are limited by scientific terms due to lack of proper documentation and validation.

Key words: Herbal medicines, Safety and efficacy, Toxicities, Herb-drug interactions.

TRANSFEROSONES-A VESICULAR TRANSDERMAL DELIVERY SYSTEM FOR ENHANCED DRUG PERMEATION

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Abstract: Transdermal administration of drugs is generally limited by the barrier function of the skin. Vesicular systems are one of the most controversial methods for transdermal delivery of active substances. The interest in designing transdermal delivery systems was re-launched after the discovery of elastic vesicles like transferosomes, ethosomes, cubosomes, phytosomes, etc. This paper presents the composition, mechanisms of penetration, manufacturing and characterization methods of transferosomes as transdermal delivery systems of active substances. For a drug to be absorbed and distributed into organs and tissues and eliminated from the body, it must pass through one or more biological membranes/barriers at various locations. Such a movement of drug across the membrane is called drug transport. For the drugs to be delivered to the body, they should cross the membrane barrier. The concept of these delivery systems was designed in an attempt to concentrate the drug in the tissues of interest, while reducing the amount of drug in the remaining tissues. Hence, surrounding tissues are not affected by the drug. In addition, loss of drug does not happen due to localization of drug, leading to the maximum efficacy of the medication. Therefore, the phospholipid-based carrier systems are of considerable interest in this era.

HYPOGLYCEMIC AND HYPOLIPIDEMIC POTENTIAL OF PSIDIIUM CATTLEIANUM SABINE LEAVES

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Abstract: Objective: The study was undertaken to evaluate the antidiabetic and antihyperlipidemic potential of P. cattleianum leaves. Methods: The in-vitro antidiabetic activity of hydroalcoholic extract of P. cattleianum (HAEPC) was screened by α-amylase and α-glucosidase inhibition assay using Acarbose as a standard. It was further studied by two in-vivo methods, Streptozotocin induced β-cell destruction (Inducer- STZ 40mg/kg, Standard- Glibenclamide 5mg/kg, Duration- 28 days) and Dexamethasone (Inducer- Dexamethasone 10mg/kg, Standard- Metformin 50mg/kg, Duration- 11 days) induced insulin resistance in Wistar albino rats. The effect of HAEPC was evaluated at doses of 200 and 400mg/kg. Results: The HAEPC showed a significant inhibitory effect on α-amylase and α-glucosidase. In in-vitro study the diabetic rats showed significant reduction in body weight, increase in levels of blood glucose, triglyceride, total cholesterol, LDL and VLDL and decrease in HDL level. In STZ induced diabetes, HAEPC at different concentrations gradually improved the body weight but in contrast to this it did not show a significant improvement in weight reduction in case of dexamethasone induced diabetic rats. Both the concentration of HAEPC produced a significant lowering effect on blood glucose, triglyceride, total cholesterol, LDL and VLDL levels and significant increase in HDL level of diabetic rats. Conclusion: Results obtained suggests that the hydroalcoholic extract of Psidium cattleianum Sabine leaves exhibits a significant protection against hyperglycemia and hyperlipidemia in a dose-dependent manner.

Keywords: Psidium cattleianum, Hyperglycemia, Hyperlipidemia, α-amylase, α-glucosidase, Streptozotocin, Insulin resistance.
CLINICAL PRESENTATION PATTERN AND MANAGEMENT APROACHES OF DIGOXIN TOXICITY

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Abstract: Digoxin is a drug that is extracted from Digitalis lantana and is approved by FDA in the year 1975 for treatment of clinical conditions such as Heart Failure and atrial fibrillation. Digoxin mainly acts by slowing down the atrioventricular conduction, increasing the Heart muscle contractility (positive inotropic effect) by means of increasing the intracellular potassium ion and calcium ion concentration respectively. Digoxin poisoning occurs through blockade of the Na-K ATPase transporter and upregulation of Na-Ca exchanges which increases the vagal tone, followed by AV nodal blockade, thereby resulting in the increased automaticity, contractility and decreased dromotropy that leads to a condition called Digoxin toxicity. It is mainly observed in CHF patients who are on prolonged digoxin therapy. Globally, around 1% of CHF patients treated with digoxin develop toxicity and this incidence rises to greater than 3% in patients among the people over age 85. Digoxin toxicity occurs at doses exceeding 3.1 ng/L and noticed by the typical symptoms like Irregular pulse, Loss of appetite, Nausea, vomiting, diarrhea and signs such as irregular ECG intervals, hyperkalemia. Digoxin-specific antibody antigen-binding fragments (DSFab) are used at the times of acute toxicity. If DSFab is not available, then treatments such as multidose-activated charcoal, atropine, and antidysrhythmics such as phenytoin or lidocaine may be employed. This review mainly focuses on typical presentation pattern and management approaches for digoxin toxicity.

PROGERIA
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Abstract: Progeria is an ageing disorder characterised by premature ageing in children, due to LMNA gene mutation. LMNA gene encodes lamin A and lamin C. Lamins are structural protein components of nuclear lamina, a protein network underlying the inner nuclear membrane that determines nuclear shape and size. Hutchinson and Gilford independently described progeria, hence known as Hutchinson Gilford Progerian Syndrome (HGPS). According to a study only one in 4 million new born cases are suspected with such mutation. Life expectancy of kids affected with this type of mutation is 13 to 14 years. Most kids with progeria look healthy when they are born but they start to show signs of disease during their first year like; bigger head, high pitch voice, hair loss including eye lids and eyebrows. Progerian research foundation (PRF), provides a definitive scientific way to diagnose the children affected with HGPS which leads to more accurate and earlier diagnosis so that children can receive proper care.

Keywords: premature ageing, gene mutation, nuclear lamina.

RISK OF BLEEDING IN WARFARIN PLUS ASPIRIN THERAPY IN CARDIAC EVENTS
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Abstract: Thromboembolic disease treatment requires anticoagulants. Several clinical trials has shown strong evidence about its benefits. But a keen examination is needed for the risks of bleeding. These considerations play key role about the antplatelet drugs that are being interactin with warfarin. So we need to consider certain mechanisms like
1. Mechanism of antithrombotic action of these drugs
2. Major risks of combined therapy of warfarin and aspirin
3. A of patients haemorrhagic risks
4. Strategies to minimize the risk of bleeding
For Patients with history of Myocardial Infarction, Atrial Fibrillation etc, Warfarin is added to the aspirin as to lower the risk of cardiac events such as clot formation. It thereby also increases the risk of bleeding in the patients. This risk may be further increased by the Patients Age, and other illness such as cerebrovascular disease, renal disease, liver disease, history of bleeding etc, thus there should be regular monitoring of International Normalised Ratio (INR). The INR should be kept at 2.0-3.0, and for high risk clot formation, the INR can be kept at 3.0-3.5. Warfarin inhibits the vitamin K-dependent synthesis of clotting factors II, VII, IX and X in the liver, leading to anti thrombotic effect and risk of bleeding. Aspirin causes Irreversible blockade of platelet cyclo-oxidase enzyme preventing the formation of thromboxane A2, leading to decrease in new platelets activation and aggregation, but not adhesion, thus having blood thinning effect. For patients with INR 5.0-7.9, and Asymptomatic i.e not bleeding then anticoagulants should be omitted, and 1mg PO Phytomenadione given and INR monitored frequently. For patients with INR >8, and Asymptomatic, then anticoagulants are omitted and 1-2mg IV Phytomenadione given and INR monitored frequently. If major bleeding nevertheless of elevated INR, then hold warfarin treatment and give 5mg IV Phytomenadione, Fresh Frozen Plasma, Prothrombin Complex Concentrates.

Keywords: Aspirin, Warfarin, Bleeding, INR, Platelet.
A REVIEW ON AUTOIMMUNE RHEUMATIC DISEASE AND SLEEP
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Abstract: Purpose of review Sleep has an important role to play in the human immune system and it is critical in the restoration and maintenance of homeostasis. Sleep deprivation and disorders may have a profound impact on health, well being and the ability to resist infection. Autoimmune rheumatic diseases are multisystem disorders that involve complicated hormonal and immunological pathophysiology. Previous studies have suggested that sleep deprivation may lead to immunological disturbance in experimental mouse models. Recent findings Sleep disorders may trigger immune system abnormalities inducing autoantibody production, possibly leading to the development of autoimmune disease such as systemic lupus erythematosus, scleroderma or rheumatoid arthritis. Indeed, in experimental models, it has been suggested that sleep deprivation may induce the onset of autoimmune disease. Summary Chronic deprivation of sleep is common in modern society and has been seen in various autoimmune inflammatory rheumatic diseases. We have reviewed various aspects of sleep deprivation and sleep apnoea syndrome, and their effects on the immune system and their relevance to autoimmune diseases. We hope that these data will encourage greater awareness of the role that improved sleep hygiene may play in the management of these rheumatic diseases.

Key Words: Autoimmune, Lupus Erythematosus, Rheumatoid arthritis, Apnoea syndrome

INCIDENCE AND TREATMENT RECOMMENDATIONS OF EXTRAPYRAMIDAL SYMPTOMS ASSOCIATED WITH ANTIPSYCHOTIC THERAPY
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Abstract: Extrapyramidal symptoms(EPS) are the frequently encountered adverse drug reactions during the Antipsychotic therapy affecting an average of half of the patients treated with typical antipsychotics or First generation Antipsychotics(FGA) such as Haloperidol, Fluphenazine, Chlorpromazine, etc. These are caused by the antipodaminergic action of Psychotropic drugs. The EPS are broadly categorised into acute symptoms (Acute Dystonia, Akathisia, Bradykinesia, Parkinsonism) and tardive symptoms(Tardive Dyskinesia, Tardive Dystonia).The second generation antipsychotics(SGA) have much lesser incidence of EPS compared to the FGA due to their multi receptor action profile. The SGA includes Olanzapine, Risperidone, Quetiapine, Clozapine, Ziprasidone, Aripiprazole, etc. Even with the advent of newer drugs or SGA, EPS still remains to be a serious problem affecting the patient’s functional ability, medication adherence and even leading to rehospitalization. The management options depends on the type of movement disorder, onset and the cause. Most often, conservative measures such as lowering the dose of the medication, switching to medication with lower incidence of EPS are preferred. The pharmacological management includes the use of anticholinergic drugs( Benztropine, Diphenylhydramine, Trihexyphenyldyl), GABA Agonist(Mirtazapine, Clonazapine), NMDA antagonist( Amantadine) and others.Hence, this review mainly focuses on incidence of EPS with regard to individual drugs, clinical presentation and the various management approaches in detail. Extrapyramidal symptoms, E.P.S, Parkinsonism, Haloperidol, Acute Dystonia, Akathisia, Tardive Dyskinesia.

NUTRACEUTICALS: NEW ERA OF MEDICINE AND HEALTH
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Abstract: Nutraceutical is the hybrid of “nutrition” and “pharmaceutical”. Nutraceuticals, in broad, are food or part of food playing a significant role in modifying and maintaining normal physiological function that maintains healthy human beings. The food products used as nutraceuticals can be categorized as dietary fiber, prebiotics, probiotics, polysaturated fatty acids, antioxidants and other different types of herbal natural foods. In 2006, the Indian government passed Food Safety and Standard Act to regulate the nutraceutical industry In whole, “nutraceutical” has lead to the new era of medicine and health, in which the food industry has become a research oriented sector.

Keywords: nutraceutical, polyunsaturated fatty acids

ROLE OF NANOTECHNOLOGY IN COSMECEUTICALS
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Abstract: Nanotechnology manifests the progression in the arena of research and development, by increasing the efficacy of the product through delivery of innovative solutions. Nanocosmeceuticals used for skin, hair, nail, and lip care, for conditions like wrinkles, photoaging, hyperpigmentation, dandruff, and hair damage, have come into widespread use. Novel nanocarriers like
Abstract: Herbal medicines are rapidly gaining popularity throughout the world as a result of dissatisfaction with conventional medicines. Herbal medicines are complex mixtures of organic chemicals that may come from raw or processed plant material, including leaves, stem, flowers, roots, and seeds. Recently, WHO classified herbal medicines into four different classes according to their origin, evolution, and current usage. With the increasing utilization of herbal medicines, safety and efficacy have become a public health concern. Traditional medicines are generally considered safe due to the long history of being in practice, especially under the specified conditions for use reported in ancient literature. However, adverse effects in some individuals due to long-term use of certain herbal medicines have been reported recently. The adverse effects range from liver failure (hepatotoxicity), cardiotoxicity, to death (pennyroyal). Herbal medicines also induce herb-drug interactions similar to Ginkgo with thiazide diuretics which cause increased BP and many more. World Health Organization advocates use of herbal medicine that has a long history of use only if no adverse effects have been reported. In cases of herbs with some adverse effects reported, toxicity data in its dosage form is required for pharmaceuticals. Increased evidence and possible toxic effects of herbal medicine have highlighted the demand and necessity of toxicological studies for herbal medicines. Therefore, herbal medicines are limited by scientific terms due to lack of proper documentation and validation.

Keywords: Herbal medicines, Safety and efficacy, Toxicities, Herb-drug interactions.

BREAST CANCER AND LATEST ADVANCEMENTS IN ITS THERAPY

October 2018

ARTIFICIAL INTELLIGENCE IN PHARMACY

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Abstract: Pharmacy as a profession and business continues to face challenges, and how it contributes value to the overall healthcare industry will determine its ongoing success. A key component of that may turn out to be effective use of technology, specifically artificial intelligence. In the healthcare space, AI is working with researchers supporting the decision-making processes for existing drugs and expanded treatments for other conditions, as well as expanding the clinical trials process by finding the right patients from a number of data sources. Pharma is even working to predict with certain accuracy when and where epidemic outbreaks might occur, using AI learning based on a history of previous outbreaks and other media sources. In the future, we already have an early form of AI in place. It’s called our pharmacy management system, housing patient utilization and drug data, as well as potentially identifying drug-related problems through clinical decision support screening. The next generation in pharmacy technology is the introduction of a technology-based information expert system to identify timely drug-related problems based on patient data captured from the pharmacy system and other external data systems. Consistent with workflow robotics, this would leave less of the work on the pharmacist to shoulder responsibility of identifying serious drug-related problems.

Keywords: Nanocosmeceuticals, Novel nanocarriers, Niosomes, Nanoemulsions.
HOW PHARMACISTS CAN ENCOURAGE PATIENT ADHERENCE TO DRUGS.

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Abstract: The problem of poor patient adherence has been extensively researched, but the rates of nonadherence have not changed much in the past 3 decades. Healthcare providers play a unique and important role in assisting patients' healthy behavior changes. We conducted a narrative review of the current literature to help providers become more familiar with proven interventions that can enhance patient adherence. We then grouped the interventions into categories that can be remembered by the mnemonic “SIMPLE”. Evaluating adherence. Chronic lifestyle behavior change often requires a combination of all the aforementioned strategies. We suggest a conceptual framework, which calls for a multidisciplinary approach with the above strategies in the context of a healthcare team and system-related factors. We hope that this framework would not only help design scientifically proven interventions, but also reduce the time and cost involved with implementing these strategies in a healthcare setting. Simplifying regimen characteristics; Imparting knowledge; Modifying patient beliefs; Patient communication; Leaving the bias; and evaluating adherence. Over the last few years, various constructs of adherence have been conceptualized, and extensive research on the efficacy of adherence-enhancing strategies has been performed. One significant development has been the inclusion of the patient in the determination and success of therapy, with the term “adherence” seeming to indicate this action more accurately than “compliance”. However, the rates of non-adherence have not changed much over the past 3 decades. Recent reviews have shown that as many as of patients still do not adhere to their treatment regimens. One possible reason could be the lack of consensus guidelines on this issue. Many of the studies and reviews done have been narrowly focused on one disease condition or one kind of adherence-enhancing strategy. Although this may be useful in a research setting, this fragmented. Approach may not be practical for healthcare providers dealing with a diverse patient population In addition; most of the literature on patient adherence has been published in social science journals rather than in the medical literature. This study provides a current review of critical adherence-enhancing interventions across a broad spectrum of patients and diseases and suggests an integrated framework to facilitate their implementation in clinical settings.

Keywords: Adherence, Healthcare providers, Chronic life style, Compliance.

BAZEDOXIFENE-CONJUGATED ESTROGENS FOR TREATING ENDOMETRIOSIS.

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Abstract: The conjugated estrogen/Bazedoxifene tissue-selective estrogen complex (TSEC) is designed to minimize the undesirable effects of estrogen in the uterus and breast tissues and to allow the beneficial effects of estrogen in other estrogen-target tissues, such as the bone and brain. However, the molecular mechanism underlying endometrial and breast safety during TSEC use is not fully understood. Estrogen receptor α (ERα)-estrogen response element (ERE)-DNA pull-down assays using Hela nuclear extracts followed by mass spectrometry–immunoblotting analyses revealed that, upon TSEC treatment, ERα interacted with transcriptional repressors rather than coactivators. Therefore, the TSEC-mediated recruitment of transcriptional repressors suppresses ERα-mediated transcription in the breast and uterus. In addition, TSEC treatment also degraded ERα protein in uterine tissue and breast cancer cells, but not in bone cells. Interestingly, ERα-ERE-DNA pull-down assays also revealed that, upon TSEC treatment, ERα interacted with the F-box protein 45 (FBXO45) E3 ubiquitin ligase. The loss-of- and gain-of-FBXO45 function analyses indicated that FBXO45 is involved in TSEC-mediated degradation of the ERα protein in endometrial and breast cells. In preclinical studies, these synergistic effects of TSEC on ERα inhibition also suppressed the estrogen-dependent progression of endometriosis. Therefore, the endometrial and breast safety effects of TSEC are associated with synergy between the selective recruitment of transcriptional repressors to ERα and FBXO45-mediated degradation of the ERα protein.

Keywords: Bazedoxifene, endometriosis, estrogen receptor α protein, breast cancer cells.

PREADMET FILTERS IN DRUG DESIGNING- In-silico drug design: An approach which revolutionized the drug discovery process using ADMET models.

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Abstract: In silico toxicology in its broadest sense means “anything that we can do with a computer in toxicology.” Many different types of in silico methods have been developed to characterize robust database for pharmacokinetic studies and predict toxic outcomes in humans and environment. The prediction of the ADMET properties plays an important role in the drug design process because these properties account for the failure of about 60% of all drugs in the clinical phases. Where traditionally ADME tools were applied at the end of the drug development pipeline, nowadays ADMET is applied at an early phase of the drug development process, in order to remove molecules with poor ADME properties from the drug development pipeline and leads to significant savings in research and development costs.
In this regard, a variety of useful in silico ADME models (human intestinal absorption, human oral bioavailability, plasma protein binding, blood brain barrier and water solubility) have been developed with different levels of complexity for the screening of large data sets of compounds. PreADMET is one of the online servers to predict ADME, toxicity, Drug likeness and molecular descriptor calculation. PreADMET predicts the mutagenicity and carcinogenicity of compounds, so that toxicity is avoided in compounds. ADMET Predictor is a software tool which accurately predicts over 140 properties including solubility, logP, pKa, sites of CYP metabolism. The newest module offers advanced data mining, clustering, and matched molecular pair analysis. The program has an intuitive user interface that allows one to easily manipulate and visualize data.

TOURETTE SYNDROME
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Abstract: Tourette syndrome is a common neuropsychiatric disorder with onset from childhood only. My poster involves all the causes, symptoms of this syndrome with its most possible treatment and role of a pharmacist in the recovery of the patients. Although the one suffering from this disease may not have any danger to his/her life expectancy from this syndrome but its Symptoms like motor and vocal tics may cause him/her some problems in normal communications and thus makes it difficult for them for socialising with others. Researches are going on for finding proper treatment to this syndrome and my posters includes some of these to reduce some Symptoms of this syndrome.

A CONCISE REVIEW ABOUT NIPAH VIRUS INFECTION, ITS MANAGEMENT AND AN UPDATE ON NIPAH VIRUS OUTBREAK IN KERALA
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Abstract: Nipah virus (NiV) is a zoonotic virus (it is transmitted from animals to humans) and can also illness an causes a range of illnesses from asymptomatic (subclinical) infection to acute respiratory be transmitted through contaminated food or directly between people. In infected people, it d fatal encephalitis. Nipah virus was first recognized in 1999 during an outbreak among pig farmers in, Malaysia. It was also recognized in Bangladesh in 2001. Recently this type of virus identified (2018) in Calicut which is part of Kerala state. Transmission of Nipah NiV infected people. virus to humans may occur after direct contact with infected bats, infected pigs, or from other Then the incubation period is generally 4-14days though health officials say it can extend to 60 days as well. The symptoms shown by the host are; Influenza likes symptoms, Fever, Headache, Sore throat. There is no specific vaccine for nipah but in Kerala health professionals used antiviral drug called ribavirin and a human monoclonal antibody that targets the G glycoprotein of NiV. A combination of test diagnoses NiV that includes viral isolation, RT-PCR, ELISA test etc. It can be prevented by the isolation of patient and by avoiding close contact with the patient. In Kerala 14 fatalities have been recorded and Nipah virus, zoonotic virus, encephalitis, KEY WORDS ministry confirmed that it is from bats. ribavirin, human monoclonal antibody.

OVERVIEW AND RECENT ADVANCES IN MIDDLE AND INNER EAR DRUG DELIVERY
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Abstract: Eminence of Pharmacy Practice and advancement in Pharmaceutical and life sciences, poster presentation
Introduction- The inner ear in humans consists of the bony labyrinth, a system of passages comprising two main parts: (a) the cochlea (b) vestibular apparatus. Blood labyrinth barrier (BLB) and round window membrane (RWM) constitute the barriers of drug delivery to the inner ear. Aim: To study the new developments including intratympanic and intracochlear delivery to overcome the challenges, comparing various methodologies and pointing out their efficiency for inner ear drug delivery. Content: The conventional systemic method and the potential nanoparticles delivery to inner ear can pose life threatening situations and certain drugs via this route can be ototoxic. Example: Gentamicin. Hence, designing a safer and more effective inner drug delivery system is a necessity. Methodologies involved: intratympanic route performed via magnetic injection, perfusion, cannula, sustained release and gel foams/hydrogels to the middle ear with the aim of drug diffusion through the RWM into the inner ear, overcoming BLB. The only disadvantage being mechanical barrier and variability of drug delivery. Intracochlear delivery includes usage of ear tubes, osmotic pump or syringe. Micro fabrication and microfluidics of drug ease the process of this delivery. However, risk due to lack of precision and complications are accompanied. Conclusion: The efficacy of inner ear drug delivery in the future lies within the sustained release systems via the intratympanic approach or systems in which drugs are administered through intracochlear routes.
Key Words: Inner ear, middle ear, BLB, RWM, Drug, Intratympanic, Intracochelear
MONOCLONAL ANTIBODIES-Roles of monoclonal Antibodies in cancer therapy

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Abstract: Monoclonal antibodies are antibodies that are made by identical immune cells that are all clones of unique parent cells. They are used in radio immune therapy (cancer treatment) by binding only to cancer cells specific antigen and induce immunological response on the target cells. Monoclonal antibodies are produce by typically fusing myeloma cell with B-cells of spleen from mouse that has been immunized with desired antigen however, recent advance allowed the use of rabbit B-cells. However monoclonal antibodies that delivers radioactive particles or chemotherapy drug may be associated with low blood count that can be severe and persistent, heart problems, risk of high blood pressure, congestive heart failure, heart attack and lung problems. Examples of monoclonal antibodies drugs use in cancer therapy are:
1. Gemtuzumab; for relapsed acute myeloid leukemia that target myeloid cell surface antigen CD33on leukemia cells.
2. Alemtuzumab; for B-cell leukemia that target antigenCD52 on T and B-lymphocyte.
3. Trastuzumab; for breast cancer and target HER2 Receptors.
Monoclonal antibodies can bring about some side effect namely; fever, weakness, headache, rashes, vomiting, nausea, and low blood pressure. There is no doubt that the invention of monoclonal antibodies technique has brought new dimension to possibilities given that any substance ,it is possible to produce monoclonal antibodies that specifically bind to that substance which then serve to detect or purified the substance.

CORRELATION BETWEEN NUTRITION AND EARLY PUBERTY AND MENSTRUAL DISORDERS
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Abstract: Early puberty is emerging condition in present generation. Nearly 1 million cases have been reported per year (In India) for early puberty. Proper nutrition plays a major role in women’s Menstrual health, starting from Menarche to Menopause. 65% of a women’s life consists of Menstruation where as 35% are of pre menarche and post menopause, in order to overcome any menstrual disorders and lead a healthy life nutrient rich diet need to be taken. Nutritional deficiencies alter Menarche, length of Menstrual cycle and Menopause. Consumption of animal protein like meat, vegetables, fruits and caloric intake like fat, soft drinks relates with conditions like early puberty, Dysmenorrhea, Amenorrhea, Menorrhagia and Pre Menstrual Syndrome. Heavy intake of few foods like salt and sugar affects the reproductive organs and endocrine system which leads to early puberty and other menstrual problems. Urban girls are more prone to early puberty due to their lifestyle and food habits. PURPOSE: Early Puberty and Menstrual problems can be reduced by consuming proper nutrients and by avoiding unhealthy foods.

Key Words: Nutrition, Early puberty, Menstrual cycle, Menorrhagia, Amenorrhoea, Dysmenorrhea, Pre Menstrual Syndrome, salt, sugar, reproductive organs, endocrine system

TOES TO NOSE: GUILAIN-BARRE SYNDROME
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Abstract: Guillain-Barre Syndrome (GBS) is clinically defined as an acute peripheral neuropathy, causing limb weakness, that progresses over a time period of days or at the most upto 4 weeks. GBS is a rare auto immune disorder in which our body’s immune system attacks our nerves. The term Guillain-Barre Syndrome (GBS), the most frequent cause of acute paralytic neuropathy, covers a number of recognisably distinct variants. Guillain-Barre Syndrome is named after Guillain, Barre and Strohl, who first reported in 1916. It is currently considered the most common global cause of acute flaccid paralysis. GBS occurs throughout the world with a median annual incidence of 1.3 million cases per population of 1 lakh with men being more frequently affected than women. GBS is triggered by preceding bacterial or viral infection. Campylobacter jejuni, Cytomegalovirus, Mycoplasma pneumonia are commonly identified antecedent pathogens. GBS starts in our feet, legs and spreading to our upper body and arms. As GBS progresses, muscle weakness can evolve into paralysis. GBS can be hard to diagnose, possible tests include Nerve test and Spinal tap test.
**PHARMACOVIGILANCE: A WAY FOR BATTER TOMORROW**

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**Abstract:** Pharmacovigilance, defined as the science and series of activities related to the detection evaluation, understanding and avoidance of adverse drug reactions can be augmented by various means such database studies, intensive monitoring, spontaneous reporting and other new process at dictatorial and scientific method are being developed with intention of escalation pharmacovigilance. On dictatorial level these include risk management plans and conditional approval and scientific level increased patient involment and transparency are two vital elements. The main objective of this review is to give awareness about pharmacovigilance program in India.

**Key words:** pharmacovigilance, adverse drug reactions, clinical trials, Indian pharmacopeia commission.

**COOLING CAP- A NOVEL APPROACH USED IN THE TREATMENT OF CHEMOTHERAPY INDUCED ALOPECIA**

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**Abstract:** Alopecia is a temporary consequence of cancer chemotheraphy that can be depressing to the patient. This condition is usually temporary, but the patient undergoes lot of emotional stress due to hair loss. Hence minimizing or relieving these kind of side effects is considered important in overall treatment as they boost the emotional status of the patient. Therefore, patients were counselled to purchase a wig or other head covering for the duration of their treatment. But these methods cannot reduce or inhibit hair loss, hence there arises a need to find an alternative method to reduce chemotherapy induced alopecia. Cooling of the scalp has proved to reduce chemotherapy induced hair loss. As of now, only one cold cap has been approved by the U.S. Food and Drug Administration (FDA). FDA approved the marketing of the DigniCap Scalp Cooling System in the United States on December 8, 2015. On July 3, 2017 the U.S. FDA cleared the expanded use of a cooling cap; the DigniCap is made by Dignitana, a company based in Sweden. The present article gives detailed explanation on mechanism of cooling caps, their advantages and drawbacks. The DigniCap system consists of a universal fit silicone cooling cap which is connected to a cooling and control unit. Sensors that are present in the cap monitor scalp temperature allowing the system to regulate cooling temperature automatically throughout the treatment, also a separate a sensor fitted in the cap makes sure that the temperature does not drop below the freezing point of 32°F (0°C).

Key words: Cooling cap, Alopecia, Chemotherapy, dignicap

**CORAL REEFS PROVIDE POTENT NEW ANTI-HIV PROTEINS**

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**Abstract:** Here our presentation deals about the researchers have discovered a new class of proteins capable of blocking the HIV virus from penetrating T-cells, raising hope that the proteins could be adapted for use in gels or sexual lubricants to provide a potent barrier against HIV infection. The proteins, called cnidarins, were found in a feathery coral collected in waters off Australia’s northern coast. Researchers zeroed in on the proteins after screening thousands of natural product extracts in a biorepository maintained by the National Cancer Institute. In the global fight against AIDS, there is a pressing need for anti-HIV microbicides that women can apply to block HIV infection without relying on a man’s willingness to use a condom. Koreen Ramesar, Ph.D., a postdoctoral research fellow at the National Cancer Institute and a member of the research team, said cnidarins could be ideally suited for use in such a product because the proteins block HIV transmission without encouraging the virus to become resistant to other HIV drugs. “When developing new drugs, we’re always concerned about the possibility of undermining existing successful treatments by encouraging drug resistance in the virus,” said O’Keefe. “But even if the virus became resistant to these proteins, it would likely still be sensitive to all of the therapeutic options that are currently available.” The research team identified and purified the cnidarins proteins, then tested their activity against laboratory strains of HIV. The proteins proved astonishingly potent, capable of blocking HIV at concentrations of a billionth of a gram by preventing the first step in HIV transmission, in which the virus must enter a type of immune cell known as the T-cell. “We found that cnidarins bind to the virus and prevent it from fusing with the T-cell membrane,” said Ramesar. “This is completely different from what we’ve seen with other proteins, so we think the cnidarins proteins have a unique mechanism of action.”

**Key words:** HIV, Biorepository, AIDS, T-cells, Beta lactum antibodies.
ANALYTICAL METHOD DEVELOPMENT AND VALIDATION OF LEVOFLOXACIN AND ORNIDAZOLE TABLETS
BY RP-HPLC METHOD

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Abstract: Reversed-Phase high-performance liquid chromatographic method which has been developed and validated for the simultaneous estimation of Levofloxacin and Ornidazole in bulk drug and in combined dosage forms. RP-HPLC separation was achieved on a Hypersil BDS (250 x 4.6 mm,5µm) with ammonium di-hydrogen ortho phosphate buffer 100%, pH 3.5 (adjusted with ortho - phosphoric acid ) and detection at 300nm. The flow rate was kept at 1.0mL/min and injection volume 20µl. These parathion was performed at 360C for column and 250C for sample. Retention time of Levofloxacin and Ornidazole was found to be 3.192 and 10.723 minutes respectively. Linearity of the method was found to be for Levofloxacin 25-75µg/ml and for Ornidazole 40-120µg/ml respectively. The correlation coefficient of Levofloxacin was found to be 0.9997 and Ornidazole is 0.9996. Accuracy of the method was determined and was found to be 98.98% for Levofloxacin and 99.52% for Ornidazole respectively and precision of the method was demonstrated which less than 2%. The system suitability parameters such as theoretical plates and tailing factor were found to be 6745&1.24 and 14632 & 1.37 respectively for Levofloxacin and Ornidazole. This method was validated according to ICH guidelines and can be used for routine analysis. A simple and reproducible RP-HPLC procedure was developed and validated as per ICH guidelines for the simultaneous estimation of Levofloxacin and Ornidazole. The linearity studies were performed for the standard and found to be linear. The precision was checked and found to be within limits, hence the method is precise. From accuracy studies, % recovery was calculated and found to be within limits. The ruggedness of the method was checked on different systems and by different columns and standard was able to give same results which indicate that the method is rugged. The robustness of the method was checked by changing flow rate and temperature, and standard was able to give system suitability parameters within limit, which indicates that the method is robust. The developed method for the simultaneous estimation of Levofloxacin and Ornidazole has the advantages of sensitivity, accuracy, precision and low cost. The non-interference of tablet excipients makes the method suitable for the determination of these drugs in tablets, and hence can be used for routine quality control of Levofloxacin and Ornidazole in this dosage form.

Keywords: levofloxacin, ornidazole, RP-HPLC.

DEVELOPMENT OF NEW TARGET PROTOTYPES FOR THE PRODUCTION OF RADIOACTIVE ION BEAMS AT CERN

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Abstract: CERN (European Organization for Nuclear Research) is the world’s largest particle physics laboratory. Cancer therapy, medical and industrial imaging, radiation processing, electronics, measuring instruments, new manufacturing processes and materials, the World Wide Web, these are just some of the many subjects to which CERN has made major contributions as a spin-off of research in particle physics. ISOLDE (Isotope Separator On Line), is a long-standing experiment at CERN illustrating the use of a variety of technologies. It consists in producing radioactive nuclides for nuclear physics, astrophysics and medical applications. Radio isotopes are produced by the interaction of particles accelerated in the CERN particle accelerator complex onto serious solid refractory materials so called “targets”. They are extracted under vacuum and at high temperatures, purified, ionized and delivered as intense beams for various experiments. The target and ion source units are therefore a central part for the production of these beams. The Marie Curie fellowship undertaken at CERN consists in being a part of the R&D team designing targets/ion source prototypes at ISOLDE. This is a multidisciplinary experimental activity which involves nuclear physics, radiochemistry, material science, surface physics. A few examples of prototypes developed and successfully tested will be presented.

Keywords: Particle Physics; Ion sources; Radioactive beams; isotopes.

A PROSPECTIVE, PARALLEL GROUP, OPEN LABEL, OBSERVATIONAL STUDY TO COMPARE EFFICACY AND FETO-MATERNAL OUTCOMES IN TREATMENT OF PREGNANCY INDUCED HYPERTENSIVE PATIENTS IN A TERTIARY CARE TEACHING HOSPITAL

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Abstract: Introduction: Pregnancy induced hypertension (PIH) is defined as elevation in blood pressure 140/90 mmHg or greater after 20 weeks of gestation on two occasions more than 4 hours apart in a newly diagnosed patients. Complications of pregnancy are the major health problems leading to maternal and perinatal mortality and morbidity. Anti-Hypertensive drugs such as Nifedipine, Labetalol, Methyldopa, which are commonly used to control hypertension and delays complications during pregnancy.OBJECTIVES: The objective of our study is to find out the efficacy of Anti-Hypertensive drugs used to treat pregnancy induced hypertension and measuring the feto-maternal outcomes of diseases. Methods: A Prospective, Parallel group, Open label Observation study was carried out at SVS Medical Hospital, Mahabubnagar. Patients were divided into three groups based on severity of hypertension and the drug used for treatment. Results: A total of 120 patients diagnosed with PIH. Majority(50%) of women are in the age group of 21-24 years with...
33-37 gestational age. In the present study there was a significant reduction in BP after the treatment with Labetalol when compared to Nifedipine and Methyldopa. Although, all the three groups have shown significant reduction in BP during 24 hrs treatment and The mean time to achieve target BP was shown less in Labetalol group when compare to Methyldopa and Nifedipene and the maximum doses required to achieve target BP were in between 4-6 doses/day in 50% of patients among all the treatment. 40% of complication observed was HELLP syndrome. 80-95% of infants had completed term birth when compared to 5-13% of preterm babies in all three groups. Conclusions: Our study coincides with the previous findings that labetolol is an efficacious and safer drug for use in control of PIH and mean time required to achieve target BP is low when compared to nifedipine and methyldopa.

Key Words: Anti-Hypertensive, perinatal, pregnancy induced hypertension

**NIS/2K18/PAPER/229**

**DOWN’S SYNDROME: A CASE REPORT**

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**Abstract:** Down's syndrome or Trisomy 21 is the commonest form of chromosomal abnormality which occurs in new borns/infants which leads to stunted growth and mental retardation. It is considered as a genetic disorder with a defect in all or a part of a third copy of chromosome 21. This case report highlights clinical presentation of 3 months old patient with Down’s Syndrome.

**Keywords:** Chromosome, Ultrasonography, Syndrome

**NIS/2K18/PAPER/230**

**BIOREACTORS AS A BRAIN SPECIFIC ORGANOIDS: ZIKV EXPOSURE AND MICROCEPHALY**

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**Abstract:** Cerebral organoids, three-dimensional cultures that model organogenesis, provide a new platform to investigate human brain development. High cost, variability, and tissue heterogeneity limit their broad applications. Researchers had developed a miniaturized spinning bioreactor (SpinU) to generate forebrain-specific organoids from human iPSCs. These organoids recapitulate key features of human cortical development, including progenitor zone organization, neurogenesis, gene expression, and, notably, a distinct human specific outer radial glia cell layer. Also mid brain and hypothalamic organoids developed. Finally, fore brain organoid platform to model Zika virus, a Flavi virus (ZIKV) exposure. Quantitative analyses revealed preferential, productive infection of neural rogenitors with either African or Asian ZIKV strains. ZIKV infection leads to increased cell death and reduced proliferation, resulting in decreased neuronal cell-layer volume resembling microcephaly. Brain-region-specific organoids and SpinU provide an accessible and versatile platform for modeling human brain development and disease and for compound testing, including potential ZIKV antiviral drugs.

**Keywords:** Bioreactors, Brain, Flavi virus, Cerebral Organoids, Microcephaly, ZIKV

**NIS/2K18/PAPER/231**

**OBESITY: THE GATEWAY TO ILL HEALTH**

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**Abstract:** Obesity is characterized by an increase of body fat stores. It is a BMI greater than or equal to 30kg/m2. The spread of obesity has been declared a worldwide epidemic by the World Health Organization (WHO) and national Institute of Health. In fact, a new term, globesity, has been coined to describe the recent upsurge of overweight and obesity throughout the world’s population. In India the prevalence of obesity is 12.6% in women and 9.3% in men. In other words, more than a 100 million individuals are obese in India. It has been reported that 80% of type 2 diabetes, 70% of cardiovascular diseases, and 42% of breast and colon cancers are related to obesity. Dieting and physical exercise offer the mainstays of obesity treatment, and anti-obesity drugs may be taken in conjunction to reduced appetite or fat absorption. Treatment of the obese patient is a two-step process: assessment and management. Surgeries like Bariatric surgery be performed in overtly obese patients to lessen stomach volume and nutrient absorption. Prevention should be the primary target. Dietary and behavioural modification and physical exercise should be maintained. Pharmacological therapy is second option. PURPOSE: To bring awareness amount the people in relation to risk factors of obesity.

**Keywords:** obesity, BMI, globesity, Bariatric surgery, Diabetes, CVD, Cancer
A SCIENTIFIC REVIEW ON CONTACT DERMITITIS
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Abstract: In the current scenario contact dermatitis is a major skin disease. There are many drugs are available in the market like creams, solutions, injections, and also present various transdermal patches for the treatment of dermititis. But the major problems of this dermitis treatment that they are applied many times in a day and also there is not fast action. So for the replacement of these problems many pharmaceutical industries are working against them. Pharmaceutical industries are working about like polymers which are added in the pharmaceutical creams, solutions which are behave just like cement after application of cream in the skin with in 2 minutes. The major advantage of this type of polymers that they are also work in wate. It means that they did not destroy in the water. So this is very useful in transdermal drug delivery system.

ALZHEIMER’S DISEASE POSSIBLE BOND WITH GUT MICROBIOTA
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Abstract: Gut microbiota comprises a composite neighborhood of microorganism species that resides in human gastrointestinal bionetwork and whose alterations pressure not only various gut disorders but also central nervous system disorders such as Alzheimer’s disease (AD). AD, most familiar form of dementia, is a neurodegenerative disorder associated with impaired cognition and cerebral accumulation of amyloid-β peptides (Aβ). Outstandingly, the Microbiota gut brain axis is a bidirectional communication system that is not fully understood, but includes neural, immune, endocrine, and metabolic pathways. Studies in germ free animals and in animals exposed to pathogenic microbial infections, antibiotics, probiotics, or fecal microbiota transplantation suggest a role for the gut microbiota in host cognition or AD-related pathogenesis. The increased permeability of the gut and blood brain barrier induced by microbiota dysbiosis may mediate or affect AD pathogenesis and other neurodegenerative disorders, especially those associated with aging. In addition, bacteria populating the gut microbiota can secrete large amounts of amyloids and lipopolysaccharides, which might contribute to the modulation of signaling pathways and the production of proinflammatory cytokines associated with pathogenesis of AD. Moreover, imbalances in the gut microbiota can induce inflammation that is associated with the pathogenesis of obesity, type 2 diabetes mellitus, and AD. The purpose of this assessment is to summarize and discuss the current findings that may elucidate the role of the gut microbiota in the development of AD. Understanding the underlying mechanisms may provide new insights into novel therapeutic strategies for AD.

Keywords: Ageing, Alzheimer’s disease, Amyloid β-peptides, Blood-Brain Barrier, Dysbiosis, Gut Microbiota, Lipopolysaccharides, Obesity, Type 2 Diabetes Mellitus

NOOTROPICS OR SMART DRUGS: LIMITLESS DRUGS
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Abstract: Nootropics or smart drugs are well-known compounds or supplements that enhance the cognitive performance. They work by increasing the mental function such as memory, creativity, motivation, and attention. Current researches were focused on establishing a new potential nootropic derived from synthetic and natural products. The influence of nootropic in the brain has been studied extensively. The nootropic affects the brain performances through number of mechanisms or pathways, for example, dopaminergic pathway. Previous researches have reported the influence of nootropics on treating memory disorders, such as Alzheimer’s, Parkinson’s, and Huntington’s diseases. Those disorders are observed to impair the same pathways of the nootropics. Thus, advanced established nootropics are planned sensitively and effectively towards the pathways. Natural nootropics such as Ginkgo biloba have been widely studied to support the beneficial effects of the compounds. Present review is concentrated on the main pathways, namely, dopaminergic and cholinergic system, and the involvement of amyloid precursor protein and secondary messenger in improving the cognitive performance.

Keywords: Cholinergic system, Dopaminergic system, Nootropics, Smart drugs
VERMIFORM APPENDIX: BOOST YOUR IMMUNITY

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Abstract: This literature review assesses the current knowledge about the immunological aspects of the vermiform appendix in health and disease. An essential part of its immunological function is the interaction with the intestinal bacteria, a trait shown to be preserved during its evolution. The existence of the appendiceal biofilm in particular has proved to have a beneficial effect for the entire gut. In assessing the influence of acute appendicitis and the magnitude of a normally functioning gut flora, however, multiple immunological aspects point towards the appendix as a priming site for ulcerative colitis. Describing the immunological and microbiotical changes in the appendix during acute and chronic inflammation of the appendix, this review suggests that this association becomes increasingly believable. Sustained by the distinct composition of cells, molecules and microbiota, as well as by the ever more likely negative correlation between the appendix and ulcerative colitis, the idea of the appendix being a vestigial organ should therefore be discarded.

Keywords: Appendix, Biofilm, Immunology, Inflammatory Bowel Disease

Creation of CRISPR/Cas9 Pathway Assistance for Cancer

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Abstract: The hallmarks of cancer were anticipated as a rational framework to understand the molecular mechanisms and derive treatments for this highly multifaceted disease. Comprehensive sequencing of different cancer subtypes, has illuminated how genetic and epigenetic alterations are associated with specific hallmarks of cancer. One particularly exciting development is the emergence of genome editing technologies, which enable rapid generation of precise genetic and epigenetic modifications to assess the consequences of these perturbations on the cancer phenotype. In recent times developed tools, the system of Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR), consists of an RNA-guided endonuclease that can be repurposed to edit both genome and epigenome with high specificity, and facilitates the functional questioning of multiple loci in parallel. This system has the prospective to dramatically accelerate progress in cancer research, whether by modelling the genesis and progression of cancer in vitro and in vivo, screening for novel therapeutic targets, conducting functional genomics/epigenomics, or generating targeted cancer therapies. Here, we thrash out CRISPR research on each of hallmarks of cancer, outline potential barriers for its clinical implementation and hypothesize on the advances it may allow in cancer research in the near future.

Keywords: Cancer, CRISPR, Genetic, Hallmark

DIVERGENCE BETWEEN ANKYLOSING SPONDYLITIS AND AXIAL SPONDYLOARTHITIS

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Abstract: Ankylosing spondylitis, an inflammatory disorder that in its tremendous form can lead to the bony fusion of vertebral joints, is an exceptional but well-established cause of chronic back pain. During the past decade, ankylosing spondylitis has come to be considered as a subset of the broader and more prevalent diagnostic entity referred to as axial spondyloarthritis. The estimated prevalence of axial spondyloarthritis in the India is 0.9 to 1.4% of the adult population, similar to that of rheumatoid arthritis. Axial spondyloarthritis is generally diagnosed and treated by rheumatologists, and there is specific treatment for it. However, prolonged delay in reaching the diagnosis is common and is usually the result of the failure of recognition by nonrheumatologists. This review is intended to enhance awareness and understanding of axial spondyloarthritis and ankylosing spondylitis and the connection between two in order to assist without delay and perfect diagnosis and proper treatment. Up to date advances in understanding and treatment of these conditions are further discussed.

Keywords: Ankylosing spondylitis, Axial spondyloarthritis, Rheumatologists
IMPORTANCE OF DESALINATION: A REVIEW

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Abstract: Desalination is a process that extracts mineral components from saline water. More generally, desalination refers to the removal of salts and minerals from a target substance, as in soil desalination, which is an issue for agriculture. Saltwater is desalinated to produce water suitable for human consumption or irrigation. One by-product of desalination is salt. Desalination is used on many seagoing ships and submarines. Most of the modern interest in desalination is focused on cost-effective provision of fresh water for human use. Along with recycled wastewater, it is one of the few rainfall-independent water sources. Currently, approximately 1% of the world's population is dependent on desalinated water to meet daily needs, but the UN expects that 14% of the world's population will encounter water scarcity by 2025.

Keywords: Desalination, Minerals, Saline Water

SILENT KILLER: METABOLIC SYNDROME

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Abstract: Metabolic syndrome is defined by an assemblage of interconnected physiological, biochemical, clinical, and metabolic factors that directly increases the risk of cardiovascular disease, type 2 diabetes mellitus, and all root to transience. Insulin resistance, visceral adiposity, atherogenic dyslipidemia, endothelial dysfunction, genetic susceptibility, elevated blood pressure, hypercoagulable state, and chronic stress are the several factors which symbolize the syndrome. Chronic inflammation is famous to be associated with visceral obesity and insulin resistance which is characterized by production of abnormal adipocytokines such as tumor necrosis factor α, interleukin-1 (IL-1), IL-6, leptin, and adiponectin. The interaction between components of the clinical phenotype of the syndrome with its biological phenotype (insulin resistance, dyslipidemia, etc.) contributes to the development of a proinflammatory state results in atherosclerotic processes. Lifestyle modification remains the initial interference of choice for such population. Modern lifestyle modification therapy combines specific recommendations on diet and exercise with behavioural strategies. Pharmacological treatment should be considered for those whose risk factors are not adequately reduced with lifestyle changes.

Keywords: Dyslipidemia, Hyperglycemia, Insulin resistance, Metabolic syndrome, Obesity

INTESTINAL PERMEABILITY AND AUTOIMMUNE DISEASES

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Abstract: Autoimmune diseases are characterized by tissue damage and loss of its function due to an immune response that is directed against specific organs. This review is focused on the role of impaired intestinal barrier function on autoimmune pathogenesis. The intestinal epithelial lining, with its intercellular tight junctions to be separated from the host environment and controls the equilibrium between tolerance and immunity to non-self antigens. In pathologic conditions, the permeability of the epithelial lining may be compromised allowing the passage of toxins, antigens, and bacteria in the lumen to enter the blood stream creating a “leaky gut” which is also called as “intestinal permeability”. In individuals with a genetic predisposition, a leaky gut may allow environmental factors to enter the body and trigger the initiation and development of autoimmune disease. Our discovery of zonulin, the only known physiologic modulator of intercellular tight junctions described so far, increased understanding of the intricate mechanisms that regulate the intestinal epithelial paracellular pathway and led us to appreciate that its up-regulation in genetically susceptible individuals leads to autoimmune diseases. This new paradigm subverstraditional theories underlying the development of these diseases. Both animal models and recent clinical evidence support this new paradigm and provide the rationale for innovative approaches to prevent and treat autoimmunediseases.

Keywords: Autoimmune diseases, Paracellular pathway, Intestinal epithelial barrier, Leaky gut, Tight junctions, Zonulin.

ADVERSE DRUG REACTIONS IN RHEUMATOID ARTHRITIS PATIENTS TAKING COMBINATION DMARDs

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Abstract: Aim: To ascertain the adverse drug reactions among RA patients taking combination DMARDs. Methods– It’s a prospective single centre controlled study. Patients of Rheumatoid arthritis were divided into 2Study groups, Group-1 patients were given Methotrexate (MTX) oral weekly with Hydroxychloroquine orally, Group-2 patients were given Methotrexate (MTX) oral weekly...
with Salsalazine oral daily in divided doses. Apart from the study medications, all patients were also given concomitant medications. The data was obtained from suspected ADRs reporting forms, between January 2017 to January 2018 from the Rheumatology OPD, Medicine department to the ADRs monitoring centre attached to department of Pharmacology under the Pharmacovigilance programme of India (PvPi). The reported ADRs were assessed forcausality using WHO causality assessment scale. The severity was assessed using Hartwig and Siegel scale. Observations: 131 patients who entered the study, 68 were study assigning emotional and digestive tract pathogens. The rashes found widespread all over the body with an allergic reaction to the drug. The different adverse drug reactions like nausea, blurring of vision, hyperpigmentation of skin, anemia, epigastric pain, breathlessness were observed amongst patients in group 1. Whereas in group 2 patients the nausea, diarrea, headache, hepatotoxicity and leucopenia were seen. Conclusions: DMARD’s combination cause more but tolerable adverse effects. Combination DMARDregimens are safe for use in Rheumatoid arthritis to control disease activity with tolerable, transient and reversible adverse effects. Keywords: Rheumatoid arthritis, DMARDs, Adverse drug reactions (ADR).

Abstract: Toxic epidermal necrosis (TEN) is a serious type of life-threatening skin reaction characterized by severe exfoliation and destruction of epidermis of skin. TEN is not caused due to use of drugs like antipsychotics, antiepileptics or sulphonamides. TEN is characterized by the detachment of the epidermis in a rare and potentially life threatening condition leading to mucous membrane erosions and epidermal detachment. The use of phenytoin as a prophylactic anti-convulsant after brain surgery, particularly for brain tumours is a common practice regardless of whether the patient has a previous history of convulsions. Evidence based treatment guidelines are lacking. So the best strategy is to identify and avoid potential risk factors and to provide intensive support care. A 36yr old female patient with the history of phenytoin induced TEN. This patient was prescribed tab phenytoin 300mg daily. 100mg at morning and 200mg at night for her generalised tonic-clonic seizures and patient had history of using drug for a period of 28 days. Patient developed muscular rash on skin and consulted a general physician who prescribed her with cetirizine 5mg BID. The drug phenytoin continued till she reach hospital inspite of treatment with cetirizine, the rash spread all over the body with an additional ovoidal redness with discharge. The case report describes the management of this patient. Key words: TEN, phenytoin, tonic-clonic seizures, anti-convulsant.

CASE REPORT ON PHENYTOIN INDUCED TOXIC EPIDERMAL NECROSIS

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ORAL THIN FILMS NOVEL DRUG DELIVERY SYSTEM

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A REVIEW ARTICLE ON ROLE OF PROBIOTICS SUPPLEMENTATION IN TREATING DEPRESSION

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JSS Collage of Pharmcy
producing compounds that travels from the intestine to brain, through the gut brain axis. Medical professional have dubbed the gut over “second brain” because of its connection to brain through the enteric nervous system (ENS), which resides in gut. The good microbes (probiotics) can signal our brain through the vagus nerve. Microbes in our gut can improve our mood by (1) producing brain chemicals: produce and regulates GABA 2 and serotonin (which has a calming effect). (2) Lowering cortisol: Hormone cortisol spikes during stressful situations. (3) Reducing inflammation: can reduce temporary inflammation, which has been linked to mood issues. Many observational studies have shown that the probiotics may lead to increase secretion of neurotransmitters like dopamine and serotonin and shows improved results in decrease of depression symptoms.

Key Words: DEPRESSION , PROBIOTICS, GUT BRAIN AXIS , ENTERIC NERVOUS SYSTEM.

NIS/2K18/POSTER/245

NIPAH AND HENIPAVIRAL DISEASES -CURRENT SCENARIO
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Abstract: E-POSTER Bat-borne viruses called HENIPAVIRUSES include HENDRA (HV) and NIPAH VIRUS(NiV) responsible for infections. NIPAH VIRUS infection a newly emerging zoonosis with fruit bats of PTEROPUS genus as natural host had its 1st outbreak in Malaysia(1998) and subsequent outbreak in India and Bangladesh (2004)infected humans. The disease being asymptomatic initially hinders early diagnosis and gradually leads to fatal encephalitis and seizures in severe cases.Grabing a position in WHO blueprint list of priority diseases with a CFR of about 40-75% the disease remains without proper medical treatment and vaccine and supportive care being the recommended treatment.CONCLUSION:The infection has an estimate of about 582 human cases of which 54% were fatal , indicating the need for further research.Experiments on HENDRA -SG SUBUNIT VACCINE( commercially used for horses)and MONOCLONAL ANTIBODIES(mAbs) are the hopes for battling this infection.Viable antiviral therapies involving human mAbs is expected to be the approach for addressing the infection in near future.

NIS/2K18/POSTER/246

“NASTY BEAUTY : HORMONE IS THE HELL OF PCOD”
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Abstract: Polycystic Ovarian Syndrome (PCOS) is the most common endocrinopathy that effects women. PCOS is also a leading cause of infertility. Women with PCOS may present with obesity, amenorrhea, oligomenorrhea, infertility or androgenic features. Those with PCOS are also increased risk factor for both diabetes and diabetic complications and cardiovascular disease with a risk of myocardial infarctions, 7 times the normal. We know that if patients with PCOS are screened for this diseases, many long term complications can be prevented. Prevalence of polycystic ovarian syndrome in Indian Adolescence ranging from 2.2 to 26%. Behaviour and lifestyle modifications are important part of PCOS. A number of cases in the community are due to lack of awareness and proper guidance. It remain undiagnosed. Conclusion:The main aim of this is to identify syndrome early so as to encourage young women timely treatment than preventing long term complications. Women who are having its BMI > 25 and waist hip ratio > 0.85 should be educated about its complications and should be advised weight loss. Girls who had irregularity of menses and signs of hyperandrogenism should be investigated and managed accordingly. Early diagnosis of PCOS and its prompt treatment will help the girl to improve quality of life.

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POLYCYSTIC OVARY SYNDROME (PCO’S)
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Abstract: Polycystic ovarian syndrome is a hormonal endocrine disorder causing enlarged ovaries with small cysts on the outer edges. It is the most common syndrome which affects women in their reproductive years. It is mainly caused due to anovulatory infertility; hyperandrogenism; excess production of insulin and genetic factors. Hyperandrogenism is exacerbated by hyperinsulinaemia and antral follicle arrest and may itself increase the risk of follicle arrest. According to WHO PCO’s has affected 116 million women (3.4%) world wide in 2012. Globally prevalence estimates of PCO’s are highly variable ranging from 2.2% to as high as 26%. Irregular periods; Acne; Weight gain; Male- pattern baldness are commonly seen symptoms. PCOS women had a higher prevalence of hypertension and higher triglyceride levels than controls. MI, stroke, diabetes, cancer, and mortality prevalence was similar in two cohorts with similar body mass index. Lifestyle interventions are first treatments doctors recommend for PCOS and they often work well. Weight loss can treat PCOS symptoms and improve the odds of getting pregnant. Diet and aerobic exercise are two effective ways to lose weight. Medicines are an option if lifestyle changes don’t work. Birth control pills and Metformin can both restore more normal menstrual cycles and relieve PCOS symptoms.
ADVANCES IN TECHNOLOGY IN CANCER – CONVENTIONAL MEDICINE OR ALTERNATIVE HERBAL MEDICINE
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Abstract: The term cancer refers to the uncontrolled growth of old cells and formation of new cells forming an abnormal mass of tissue in the body affecting the normal control mechanism and finally leading to tumour. Cancer can occur in any part of the body at any age. In a recent study it was found that 439 people were diagnosed with different cancer for every 1,00,000 population. During early century before development of technology herbal drugs were used which were not effective in all the cases as the plant extract that were collected not only contain useful drug but also other substituent’s that used to cause side effects. With the help of new technologies, researchers have developed new techniques such as chemotherapy and radiation which is helping in reducing the cancer death rate at 1 percent due to the side effects of chemotherapy medicines and radiation penetrating power which do not discriminate between healthy and cancerous cells and finally toxic causing lethal. Due to this failure of conventional technique, technology has raised a ray of hope on plants by extracting anticancer drugs and determining its characteristics and mode of action. Though opposed by oncologists, More than 50% of the patients suffering from cancer are opting for natural remedies than conventional medicines. The success rate of herbal remedies shows that though the technology has developed artificial intelligence and advancements but it could not able to save from the side effects it is causing in medical field. Hence it’s time to accept and learn about the alternative remedies and treatments which is proving better results and can have a high scope in future.

PHARMACOGENOMICS
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Abstract: Pharmacogenomics deals with the interaction between human genes on drug response by co-relating Gene Expression or Polymorphism with a drug’s efficacy or toxicity. In this context, it is hoped that pharmaceutical drug treatments can deviate from what is dubbed as the “ONE-DOSE-FITS-ALL” approach and also by eliminating Trial and Error method of prescribing. This presentation gives knowledge about the usage of pharmacogenomics in clinical practices and how it is being an useful tool in drug discoveries by identifying, anticipating adverse events and assist in drug repurposing efforts. We provide an introduction into basic concepts, an overview of Pharmacogenetics including Pharmacokinetics, Pharmacodynamics, Gene Target Interaction and off the target effect by clarified examples, we describe methods for discovering genetic factors in drug response including Genome Wide Association Studies (GWAS), Expression analysis and other methods which also covers the practical applications of pharmacogenomics in both pharmaceutical industry and clinical setting. Finally we consider the ethical, regulatory and reimbursement challenges that remain for the clinical implementation of pharmacogenomics.

ARE MRI EXAMINATION SAFE FOR WOMEN USING COPPER CONTAINING CONTRACEPTIVE IUDs?
Safety assessment of copper containing intrauterine devices at 1.5 T, 3 T and 9.4 T
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Abstract: Magnetic resonance imaging is an increasingly powerful imaging method. The new generation of 3.0-T scanners has been used more often in the clinical routine for several years now, and these scanners offer various advantages due to high spatial resolution and improved signal-to-noise ratio, leading to an improvement in the diagnostic yield. However, safety concerns about imaging metallic implants, such as copper-containing IUDs, have arisen with the higher field strengths, and devices proven to be safe at 1.5-T need to be evaluated again in a 3.0-T magnetic field environment. Dislocation, torsion, and perforation of the uterine wall, leading to unintended pregnancies, bleeding, and pelvic inflammatory disease (PID), may be caused by field interactions. The copper utilized in these devices might also lead to susceptibility artifacts and interfere with image quality, resulting in less optimal diagnostic efficacy. However, there are still no data in vivo with regard to safety conditions and the presence and impact of artifacts with these IUDs. Therefore, the aim of this study was to evaluate the magnetic field interactions of copper-containing IUDs in vivo in patients examined at a 3.0-T field strength.
Keywords: MRI, copper IUD’s, 1.5T, 3T, artifacts.
Preclinical Studies Evaluating the Cancer Inhibitory Potential of Cranberry and Cranberry Derived Constituents.

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Abstract: Cranberries are rich in bioactive constituents reported to influence a variety of health benefits, ranging from improved immune function and decreased infections to reduced cardiovascular disease and more recently cancer inhibition. A review of cranberry research targeting cancer revealed positive effects of cranberries or cranberry derived constituents against 17 different cancers utilizing a variety of in vitro techniques, whereas in vivo studies supported the inhibitory action of cranberries toward cancers of the esophagus, stomach, colon, bladder, prostate, glioblastoma and lymphoma. Mechanisms of cranberry-linked cancer inhibition include cellular death induction via apoptosis, necrosis and autophagy; reduction of cellular proliferation; alterations in reactive oxygen species; and modification of cytokine and signal transduction pathways. Given the emerging positive preclinical effects of cranberries, future clinical directions targeting cancer or premalignancy in high risk cohorts should be considered.

Keywords: Cranberries, cancer, immunity.

MAGNETIC THERAPY
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Abstract: Magnotherapy is a safe, non-invasive therapeutic method. Various kinds of magnets are used to supply natural pain relief for a wide range of conditions without any adverse effects. Magnets are also used to treat arthritis, cancer, circulatory disorders, diabetic neuropathy, immune dysfunction, infection, inflammation, insomnia, muscle pain, neuropathy, rheumatoid arthritis, stress and to increase energy and prolong life. Magnetic fields are administered by applying magnets to required parts of the body. This is done by magnetic field-generating gadgets. Magnets are tools and not medicine, they aid underlying conditions like circulation, improve energy levels, and provide oxygen to body cells, thus helping to heal. The body is a dynamic organism that consists of individual electrical cells. Each cell has a positive charge a nucleus, and negative charge at its outer membrane. When the polarities are equal, the body functions at its finest level. This imbalance can result in tiredness and fatigue, headache and migraines, insomnia, muscle and joint pain, and other ailments of circulatory, lymphatic and nervous system. Magnets can help the body correct this imbalance.

METHOD DEVELOPMENT AND VALIDATION FOR SIMULTANEOUS ESTIMATION OF LINAGLIPTIN AND EMPAGLIFLOZIN IN TABLETS BY HPLC

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Abstract: A very simple, accurate, precise, robust and rugged method with gradient elution was developed for simultaneous estimation of Linagliptin and Empagliflozin in tablets. The developed method was rapid with a run time of 25 minutes eluting the peaks at 5.88 min (Linagliptin) and 8.390 min (Empagliflozin) and economic. The Chromatographic separation was achieved by gradient elution on a Hypersil ODS 3V, 250 x 4.6 mm. 5.0µ. Column by using Potassium di-hydrogen phosphate (adjusted to pH 2.20 with ortho phosphoric acid) as mobile phase – A. Water: Acetonitrile (5:95) is used as mobile phase-B. Flow rate of 1mL/min with UV detection at 225nm was used. The retention times of Linagliptin & Empagliflozin are 5.888 min and 8.390 min respectively. The developed method was specific and well separated from the impurities of both Linagliptin & Empagliflozin. The method is linear in a range of 40% to 160% against the standard concentration for both Linagliptin & Empagliflozin. The correlation coefficient was found to be R2= 0.995 & 0.996 for Linagliptin & Empagliflozin respectively. Both standard and test solutions proved to be stable for up to 48 Hrs. The developed method can be used for routine analysis of Linagliptin & Empagliflozin fixed dose combination.

Keywords: RP-HPLC, Linagliptin & Empagliflozin, Gradient Elution, Stability Indicating, Validation.

DISEASE PREVALENCE, PHARMACOECONOMIC STUDY AND PRESCRIPTION PATTERN STUDY IN PEDIATRIC PATIENTS

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Abstract: Introduction: Paediatrics is the branch of medicine which deals with the development, growth, diseases and disorders in children. Materials and Methods: Our research as a prospective observational study was performed on 140 type 2 paediatric patients in...
Mahabubnagar (INDIA). Patients diagnosed with multiple diseases were included in the study. Patient demographic details, medication chart, cost of drugs and Pharmacy bills were collected from the patient. KUPPUSWAMY SCALE was used to analyse the socio economic status of guardians of patients. Gained data was analysed by using SPSS statistical software version 22.2 and Microsoft Excel 2007. Results: It is observed that male infants are more prone to diseases than female infants. The most commonly occurring diseases among paediatrics was found to be fever. Antibiotics were found to be most commonly used drugs. The most common type of antibiotics prescribed were penicillin’s, cephalosporins, macrolide, aminoglycoside, tetracyclines, glycopeptides antidepressants. The mean cost of generic drug prescriptions is 169.27±47.2 whereas that of brand drug prescriptions is 347.85±59.6. The P value was found to be 0.015. Conclusion: There should be close monitoring over prescription pattern in paediatric population. It also highlights the need of rational use of drugs, prescribing by generics and from EDL. Continuing education regarding rational prescribing and developing easy guidelines for prescribing in common diseases in children is highly recommended.

**Key Words:** Paediatrics, prescription pattern, cost minimisation analysis, rational drug use.

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**SUPERCritical FLUID CHROMAtography**

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**Abstract:** Supercritical fluid chromatography (SFC) is also known as double-stage separation analysis method. This method incorporates supercritical fluid extraction as first separation step and supercritical fluid chromatography as second separation step. A supercritical fluid is the phase of a material somewhere between a gas and a liquid, a dense gas. It happens in the area on a phase diagram where the boundaries between liquid and gas become blurred. It behaves like a liquid and a gas and exhibits properties of liquids and gases. SFC is used for analysis and purification of low to moderate molecular weight, thermally labile molecules and also for the separation of chiral compounds. SFC is of importance because it permits the separation and determination of a group of compounds that are not conveniently handled by either Gas chromatography (GC) or Layer chromatography (LC). This system allows pressure programming and modifier gradient runs. Excellent reproducibility of retention values, essential for routine analysis is achieved by simultaneous control of flow and pressure. High efficiency separation in short analysis time is demonstrated. The commonly used mobile phase in SFC is carbon dioxide (CO2). In stationary phase open-tubular columns are similar to the fused-silica columns with internal coating of bonded and crossed-linked Siloxanes of various types. Columns may be of c18 or of amino propyl bonded silica. A SFC characteristic consists of fast linear velocities, greater separation efficiency per unit time than LC and greater solubility and mobile phase selectivity than GC.

**Keywords:** Gas Chromatography, Layer Chromatography, Supercritical fluid

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**MELATONIN: HALE AND HEARTY SLEEP**

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**Abstract:** A neural output signal, generated by the suprachiasmatic nucleus (SCN), induces the synthesis of melatonin at night by the pineal gland. The hormone is released into the third ventricle and subsequently the circulation. Light, in addition to tuning the SCN, acts to inhibits melatonin synthesis. Because melatonin is metabolized rapidly, plasma melatonin levels are low during the day and high during the night. The dim light melatonin onset, which is the initial surge in melatonin release in the early part of the night under low light conditions, is a consistent and reliable measure of the intrinsic circadian phase. In mammals, a central circadian clock, located in the SCN of hypothalamus, tunes the innate circadian physiological rhythms to the ambient 24 h light–dark cycle to invigorate and optimize the internal temporal order. The SCN-activated, light-inhibited production of melatonin conveys the message of darkness to the clock and induces night-state physiological functions, for example, sleep/wake blood pressure and metabolism. Importantly, melatonin has been shown to serve as a mediator between the thermoregulatory and arousal system in humans, such that exogenous administration of melatonin during the day can result in sleepiness in association with reduced core temperature.

**Keyword:** Melatonin, Pineal gland, Sleep, Suprachiasmatic nucleus

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**PSYCHEDELICS (SEROTONERGIC HALLUCINOGENS): BRAIN BOOSTERS**

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**Abstract:** Psychedelics are powerful psychoactive substances that alter perception, mood and affect numerous cognitive processes. They are generally considered physiologically safe and do not lead to dependence or addiction. LSD and other psychedelics had a serotonergic basis for their action. Psychedelics are agonists or partial agonists at brain serotonin 5-hydroxytryptamine 2A receptors.
with particular importance on those expressed on apical dendrites of neocortical pyramidal cells in layer. A variety of imaging techniques have been employed to identify key brain areas that are directly affected by psychedelics. Administration of a psychedelic, and results indicate that intravenously administered psilocybin and LSD produce decreases in oscillatory power in areas of the brain’s default mode network.

**Keyword:** Cognitive, LSD, Psilocybin, Psychedelics

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**APPLICATION OF NANOMATERIALS IN HEALTH SCIENCES AS ANTIMICROBIAL AGENTS**

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**Abstract:** Bacterial strains resistant to the antibiotics now in use have become grave public health problems that increases the need to develop new bactericidal materials. Consequently, there is a tough demand for developing novel strategies and new materials that can deal with these problems. The emergence of nanotechnology has created many new antimicrobial options. The small size of the nanoparticles is very suitable for carrying out antimicrobial biological operations. Metals such as silver, zinc, copper and iron nanoparticle types have shown incredible potential as bactericidal and fungicidal elements, demonstrating their potential as efficient antibiotic reagents in wound care and related medical issues. These nanomaterials displayed antimicrobial activity against numerous pathogenic viral and bacterial species. Nanomaterials today are a promising platform for alternative measures to control bacterial infections as they offer prolonged antimicrobial activity with negligible toxicity, compared with small molecular antimicrobial agents that display short term activity and environmental toxicity. The antimicrobial nanoparticle physically destroys cell membranes of the organism which prevent development of drug-resistance microbes.

**Keyword:** Antimicrobial Agents, Bacteria, Nanoparticles

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**CONCEPTS AND PROSPECTS OF NUTRACEUTICAL: AN IMPERATIVE TO WELLNESS**

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**Abstract:** Nutraceuticals have received considerable awareness due to their exploratory safety, potential nutritive and therapeutic effects. They are substitute to modern medicines and also provide healthy living. To avoid side effects associated with medicines, live longer expectancy and increase the health value of our diet, nutraceuticals are being preferred. They possess numerous therapeutic benefits like anti-obesity, immune enhancement, natural antioxidant, cardiovascular effects, anti-diabetic, anti-inflammatory effects, etc. Major constituents of nutraceuticals are nutrients, herbals and dietary supplements which help to maintain health, function against various diseases and ensure better quality of life. The aim of this article is to provide the current knowledge about the application of various nutraceuticals in different diseases.

**Keyword:** Dietary supplement, Global Market, Nutraceutical, Regulation

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**MICROVASCULAR TARGETS DESIGNED FOR ANTI-FIBROTIC THERAPEUTICS**

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**Abstract:** Fibrosis is characterized by disproportionate extracellular matrix deposition and is the pathological outcome of repetitive tissue injury in many disorders. The gathering of matrix disrupts the structure and function of the native tissue and can affect multiple organs including the lungs, heart, liver, and skin. Unfortunately, current therapies against the deadliest and most common fibrosis are ineffective. The pathogenesis of fibrosis is the result of aberrant wound healing, therefore, the microvasculature plays an important role, contributing through regulation of leukocyte recruitment, inflammation, and angiogenesis. Further exacerbating the condition, microvascular endothelial cells and pericytes can trans differentiate into matrix depositing myofibroblasts. The contribution of the microvasculature to fibrotic progression makes its cellular components and cellular products striking therapeutic targets. In this review, we scrutinize many of the cytokine, matrix, and cellular microvascular components involved in fibrosis and discuss their potential as targets for fibrotic therapies with a particular focus on developing nanotechnologies.

**Keyword:** Cytokines, Fibrosis, Microvasculature, Nanotechnology
Natural compounds can also become xenobiotics if they are part of a normal diet. Xenobiotics are chemicals which are found in an organism. Drugs such as antibiotics are xenobiotics in humans because the human body does not produce them itself, nor are they part of a normal diet. Natural compounds can also become xenobiotics if they are taken up by another organism, such as the uptake of natural human hormones by fish found downstream of sewage treatment plant outfalls. Xenobiotic metabolism is the set of metabolic pathways that modify the chemical structure of xenobiotics. In general, drugs are metabolized more slowly in fetal, neonatal and elderly humans and animals than in adults. The body removes xenobiotics by xenobiotic metabolism. This consists of the deactivation and the excretion of xenobiotics and happens mostly in the liver. Excretion routes are urine, feces, breath, and sweat. Hepatic enzymes are responsible for the metabolism of xenobiotics by first activating them (oxidation, reduction, hydrolysis and/or hydration of the xenobiotic) and then conjugating the active secondary metabolite with glucuronic or sulphuric acid, or glutathione followed by excretion in bile or urine. Environmental xenobiotics are xenobiotic substances with a biological activity that are found as pollutants in the natural environment.

**Abstract:** A xenobiotic is a chemical which is found in an organism. Drugs such as antibiotics are xenobiotics in humans because the human body does not produce them itself, nor are they part of a normal diet. Natural compounds can also become xenobiotics if they are taken up by another organism, such as the uptake of natural human hormones by fish found downstream of sewage treatment plant outfalls. Xenobiotic metabolism is the set of metabolic pathways that modify the chemical structure of xenobiotics. In general, drugs are metabolized more slowly in fetal, neonatal and elderly humans and animals than in adults. The body removes xenobiotics by xenobiotic metabolism. This consists of the deactivation and the excretion of xenobiotics and happens mostly in the liver. Excretion routes are urine, feces, breath, and sweat. Hepatic enzymes are responsible for the metabolism of xenobiotics by first activating them (oxidation, reduction, hydrolysis and/or hydration of the xenobiotic) and then conjugating the active secondary metabolite with glucuronic or sulphuric acid, or glutathione followed by excretion in bile or urine. Environmental xenobiotics are xenobiotic substances with a biological activity that are found as pollutants in the natural environment.

**Keyword:** Xenobiotics, Metabolism, Oxidation, Reduction, Hydrolysis, Secondary metabolite

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**NEW FRONTIERS IN THE MANAGEMENT OF TYPE 2 DIABETES**

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**Abstract:** Type 2 diabetes is a chronic, debilitating disease characterized by insulin resistance, impaired insulin secretion, and hyperglycaemia. This chronic disease is not benign and patients with diabetes suffer from numerous microvascular and macrovascular complications which cause a lot of morbidity and mortality. Results demonstrate that tight glucose and blood pressure control in patients with type 2 diabetes prevents the development of and delays the progression of microvascular complications and possibly macrovascular disease. Treatment of concomitant risk factors like lipids and blood pressure and the use of aspirin have favorable effects on cardiovascular complications and mortality in patients with type 2 diabetes. In order to achieve glycaemic goals, we have several anti-hyperglycaemic agents in our therapeutic armamentarium today. However, despite their availability, we have not been able to achieve glycaemic goals in our patients with diabetes due to a variety of reasons. However, there appears to be hope for the future. The progress of research in all fields of diabetes therapeutics from diabetes treatment to continuous glucose monitoring systems to novel insulin delivery systems has been spectacular. These advances have resulted in newer pharmacologic agents, implantable glucose sensors and inhaled insulin. Recent advances in non invasive insulin delivery systems (including inhaled, implant insulin); developments in continuous glucose measuring devices and finally present an update on the prevention of diabetes.

**Keyword:** Glucose lowering agents, Implant, Non invasive insulin therapy, Type 2 diabetes

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**A NEW CROWN IN OLD MAN’S FRIEND**

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**Abstract:** Objective: To Deserate Fivenovel Antibiotics In Drugpipeline Context: Pneumonia is a chronic inflammatory condition of the lung affecting primarily the small air sacs known as alveoli. The five novel antibiotics in advanced stages of development are: levofloxacin, solithromycin, omadacycline, nemonoxacin,delafloxacin..these drugs inhibit bacterial growth by binding to peptidyl transferase centre of 50s ribosome. Methodology:levofloxacin has administered both intravenous (once daily) and oral (twice daily) forms gave a (87.3%) result. solithromycin oral form is under clinical trials in 60000 patients. nemonoxacin has administered once-daily dosing in oral and intravenous well tolerated with few adverse events.omadacycline once-daily oral and intravenous omadacycline to moxifloxacin in adults. Results showed omadacycline was to moxifloxacin (81.1% vs. 82.7%) . delafloxacin: events, phase 2 and phase 3 trials of delafloxacin for bacterial skin infections showed that nearly half (47.7%) of subjects had one or more drug-related adverse events.Result’s: Antibiotics in advanced stages of development are still under phase2and phase3 clinicaltrails giving good results to cure community acquired pneumonia .above drugs according to the present study and investigation have 80-90%good therapeutic activity with mild adverse effects, Conclusion: novel antibiotics have more potent antimicrobial activity, better efficacy against resistant pathogens, enhanced safety profiles, and superior pharmacokinetics than current antibiotics. However seem to be promising in their efficacy.
ROLE OF CLINICAL PHARMACIST IN ONCOTHERAPEUTICS - A REVIEW
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Abstract: Oncology is a branch of science that deals with diagnosis, prevention and treatment of cancer. About 38.4% of population are diagnosed with cancer among which 7 million deaths worldwide were attributed to malignancy each year. Oncotherapeutics deals with treatment of tumors which includes chemotherapy, radiation therapy, hormonal therapy and surgical therapy. Most antineoplastic drugs are highly toxic and have low therapeutic indexes which predisposes patients to many drug related problems like drug-drug interactions, adverse drug events, dosing errors and many other serious consequences. Clinical pharmacist have a significant role to play in the management of people with cancer and should be members of the multi professional teams of each hospitals. Pharmacy input can lead to the decrease in the health care costs. The pharmacist has the responsibility for developing, implementing a plan and preventing medication errors through detection and evaluation. Interaction with the health care team in patient rounds, identification of drug related problems and provision of information to patients and clinicians can result in an improved outcome for the patient and hospital. In this context clinical pharmacy interventions may play an important role in treatment of cancer and can reduce the number of medication errors. The overall goal is to improve the health care system, quality of health and the success of treatment.

CLICK SYNTHESIS AND EVALUATION OF ANTI-TUBERCULAR ACTIVITY OF NOVICE 2, 2, 2-TRIFLUORO-1-(6-SUBSTITUTED-4-(THIOPHEN-2-YL) CINNOLIN-3-YL) ETHANONE DERIVATIVES.
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Abstract: The emerging need of multi drug Regimen of Mycobacterium tuberculosis strains urged us to synthesize novice and potent anti-tubercular medicaments. Our interest on this work had afforded a series of Novice 1, 2 benzodiazine as a new structural category of anti-tuberculosis agents. All seven compounds were synthesized using appropriate scheme, two step reactions with high yielding product. Diazotization of p-nitro aniline with sodium nitrite was performed in first step, followed by a condensation reaction with diketone in presence of PPA undergoes Cyclization and the final compound yielded is 2,2,2-trifluoro-1-(6-nitro-4-(thiophen-3-yl)cinnolin-3-yl)ethanone. Further, title compounds are further synthesized by treating with iron, methanol, water and hydrochloric acid, bromine, iodine (referred as compound CN-1 to CN-7). 2, 2, 2-trifluoro-1-(6-nitro-4-(thiophen-3-yl)cinnolin-3-yl) ethanone. The newly synthesized Compounds were tested for their in vitro drug-sensitive Mycobacterium tuberculosis H37Rv strain. Till date, Evaluation of many drugs in multi-drug regimen is on going out of which rifampicin highly effective component and is recommended by WHO. Title compounds are screened against standard drug rifampicin. Some of the derivatives were found to be promising inhibitors of M. tuberculosis. For example, derivatives CN-1, CN-5, >90% inhibition at 100 microg/mL in the Luciferase enzyme method. The most active compound (CN-1) 2, 2, 2-trifluoro-1-(6-nitro-4-(thiophen-2-yl) cinnolin-3-yl) ethanone exhibited 91% inhibition at the concentration of 100 microg/mL against drug-sensitive M. tuberculosis H37Rv strain.
Keywords: Benzodiazine, Cyclization, anti-tubercular.

NEUROMODULATION DEVICE FOR OBSTRUCTIVE SLEEP APNEA
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Abstract: Obstructive sleep apnea (OSA) is a serious, potentially life-threatening condition affecting millions of people worldwide. OSA is characterized by repeated episodes of airway collapse (apnea) or narrowing (hypopnea) during sleep, often leading to hypoxemia and hypercapnia. Episodes are usually terminated by a brief arousal, after which sleep resumes and the cycle repeat itself, often hundreds of times per night. Prevalence of OSA is high and increasing with greater obesity and aging of populations internationally. It has been estimated that some 20% of diagnosed OSA patients are unable to tolerate continuous positive airway pressure or any other current treatment. Approximately 100-150 of these may be suitable for hypoglossal nerve stimulation, a technique where the hypoglossal nerve is electrically stimulated causing protrusion of the tongue.
Keywords: Hypoglossal nerve, Upper airway stimulation, Obstructive sleep apnea, Snoring, Sleep endoscopy, OSA surgical treatment.
EXPLORING THE IMPORTANCE OF BREAST FEEDING

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Abstract: According to NIN report 80% pregnancy ladies are getting delivered in hospital, but only 50% of them are feeding to their new born babies. Remaining 30% are not feeding. In this 22% of them are getting diseases in future. The aim of this document is to know the advantages of breast feeding. IgA antibodies represents a key, first line of defence against invasion by inhaled and ingested pathogens at the vulnerable mucosal surfaces. Breast feeding saves the lives of infants and reduces their disease burden. Breast feeding as recommended by WHO, is the most effective for reducing childhood morbidity such as obesity, hypertension, etc. “BREAST FEEDING IS BETTER THAN UDDER MILK.” Breast feeding has benefits to both mother and neonants. While breast feeding may not seem the right choice for very parent, it is the best choice for every baby. A baby nursing at a mother’s breast is an undeniable affirmation of rootedness in nature.

Keywords: Breast feeding, maternal health, infant health, obesity, IgA antibodies.

MIRACLE DRUG

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Abstract: Miracle drug: ANTI CD 47 ANTIBODY: Anti cd47 antibody mediated phagocytosis of cancer by macrophages can initiate an anti tumour T cell immune response and also faster the activation of cancer specific lymphocytes cancer cells now display mutant proteins to which the immune system can react. A cDNA (complimentary DNA) fragment of human cd47 encoding the extracellular domain was donor from a full length of human cd47 c DNA and was fused to mouse Fc to generate a cd47/mFc fusion protein, which was used to immunise mice to produce monoclonal mouse anti human cd47 antibodies. Anti cd47 blocking monoclonal antibodies induce macrophage phagocytosis of cancer cells (don’t eat me) allowing phagocytic signals to dominate.

ATROCIOUS ACNE , ZITS ARE PITS

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Abstract: Introduction: The severity of acne has a substantial impact on patient’s self-esteem in different age groups and cultures, with the greatest impact on women and in those with more severe acne, according to the studies that evaluated self-esteem in patients with acne.

so, we are here to share you with some of the techniques where we still lack of their knowledge. let’s keep acne at bay; see how

• Microneedling technique
• Topical retinoid plus benzoyl peroxide
• Hi-tech skin patches
• Spironolactone

MICRO NEDDING TECHNIQUE: It is an effective and safe treatment for acne scars associated with pigmentation in dark skinned patients, without adding any risk of causing worsening of pigmentation. HI-TECH SKIN PATCHES: The patch which looks like a ordinary plaster, works by producing an electric charge to kill the bacteria. It has a knock –on effect on the skin which contains salicylic acid and azelaic acid which kills bacteria and removes dead skin blocking follicles. TOPICAL RETINOIDS PLUS BENZOYLPEROXIDE: As we know, Despite of the severity of acne, we are prescribing antibiotics to the patients which causes resistences in it. Hence to avoid, the first line therapy should be of topical retinoids, then if not work, go to the antibiotics.

SPIRONOLACTONE: It effectively treat acne in adolescent females by affecting androgen receptors in the sebaceous glands causing reduced sebum productions and thereby causing an improvement in acne symptoms.

A STUDY OF RARE DISEASE ON COTARD’S DELUSIONS

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Abstract: Cotard’s delusions is a rare mental illness and also known as nihilistic delusion (or) Walking corpse syndrome. In this review we discussed about its existence. Pathophysiology, Symptoms, Diagnosis and Treatment. It is a rare Neuropsychiatric disorder where individuals hold delusional belief that they are dead (Figurately or literally) and no longer exist, in alternative versions that they are putrefying and/or have lost their blood and/or internal organs. One of the consequence of cotard’s syndrome is self starvation because of negation. In starvation conditions, who denied the existence parts of body and need to eat and individuals are condemned...
to eternal damnation. This syndrome is linked with Depression and Schizophrenia individuals. The delusion of the negation is central symptom in cotard’s syndrome, others include mental illness, feelings of unreality and being dead, expressing themselves of death. The underlying Neurophysiology and Psychopathology of cotard’s syndrome is neural misfiring in fusiform gyrus and in the cerebrum, organic lesions in parietal lobe. The diagnostic procedure for cotard’s syndrome is Neuroimaging. Treatments include Electroconvulsive therapy, Pharmacotherapy, Behavioural therapy, Psychotherapy, rehydration and removal of offending drugs. To conclude cotard’s delusions occur in context of a relatively wide spectrum of neurological, psychiatric and medical disorders and present with various neural changes.

Key Words: Neuropsychiatric, Depression, schizophrenia, Neurophysiology, psychopathology, Neuroimaging, Electroconvulsive therapy, Pharmacotherapy, Psychotherapy.

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COOLING CAP- A NOVEL APPROACH USED IN THE TREATMENT OF CHEMOTHERAPY INDUCED ALOPECIA

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Abstract: Alopecia is a temporary consequence of cancer chemotherapy that can be depressing to the patient. This condition is usually temporary, but the patient undergoes lot of emotional stress due to hair loss. Hence minimizing or relieving these kind of side effects is considered important in overall treatment as they boost the emotional status of the patient. Therefore, patients were counselled to purchase a wig or other head covering for the duration of their treatment. But these methods cannot reduce or inhibit hair loss, hence there arises a need to find an alternative method to reduce chemotherapy induced alopecia. Cooling of the scalp has proved to reduce chemotherapy induced hair loss. As of now, only one cold cap has been approved by the U.S. Food and Drug Administration (FDA). FDA approved the marketing of the DigniCap Scalp Cooling System in the United States on December 8, 2015. On July 3, 2017 the U.S. FDA cleared the expanded use of a cooling cap; the DigniCap is made by Dignitana, a company based in Sweden. The present article gives detailed explanation on mechanism of cooling caps, their advantages and drawbacks. The DigniCap system consists of a universal fit silicone cooling cap which is connected to a cooling and control unit. Sensors that are present in the cap monitor scalp temperature allowing the system to regulate cooling temperature automatically throughout the treatment, also a separate a sensor fitted in the cap makes sure that the temperature does not drop below the freezing point of 32°F (0°C)

Key words: Cooling cap, Alopecia, Chemotherapy, dignicap
MANAGING PAIN IN GERIATRIC PATIENTS
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Abstract: The three most common sites of pain in older people are the back; leg/knee or hip and ‘other’ joints. COX-2 inhibitors and nonsteroidal anti-inflammatory drugs (NSAIDs) reduce the pain of osteoarthritis and arthritis by at least 30%. Combining them with tramadol or another weak opioid can increase their effectiveness. Tricyclic antidepressants moderately alleviate fibromyalgia pain. Weak opioids reduce mild to moderate osteoarthritis and low back pain by approximately 40%. Spinal cord stimulation reduces the frequency of angina attacks by 50% and improves quality of life, both short-term and long-term, in patients with severe angina pectoris or the ischemic symptoms of peripheral arterial disease. A number of complementary therapies have been found to have some efficacy among the older population, including acupuncture, transcutaneous electrical nerve stimulation (TENS) and massage. Western acupuncture alleviates chronic low back pain more effectively than placebo. Intra-articular corticosteroid injections in osteoarthritis of the knee are effective in relieving pain in the short term, with little risk of complications and/or joint damage. The literature review suggests that assistive devices are widely used and that the ownership of devices increases with age. It was observed that Pain management should be multimodal and tailored to the individual patient, and will likely include a combination of both nonpharmacological and pharmacological interventions. OBJECTIVES: Whether or not an outcome is favourable should be determined not only by the treatment's impact on pain but also by its capacity to improve function and enhance quality of life.

METHOD DEVELOPMENT AND VALIDATION FOR SIMULTANEOUS ESTIMATION OF LINAGLIPTIN AND EMPAGLIFLOZIN IN TABLETS BY HPLC
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Abstract: A very simple, accurate, precise, robust and rugged method with gradient elution was developed for simultaneous estimation of Linagliptin and Empagliflozin in tablets. The developed method was rapid with a run time of 25 minutes eluting the peaks at 5.388 min (Linagliptin) and 8.390 min (Empagliflozin) and economic. The Chromatographic separation was achieved gradually on a Hypersil ODS 3V, 250 x 4.6 mm.5.0µ. Column by using Potassium di-hydrogen phosphate (adjusted to pH 2.20 with ortho phosphoric acid) as mobile phase –A. Water: Acetonitrile (5:95) is used as mobile phase-B. Flow rate of 1mL/min with UV detection at 225nm was used. The retention times of Linagliptin&Empagliflozin are 5.388 min and 8.390 min respectively. The developed method was specific and well separated from the impurities of both Linagliptin&Empagliflozin. The method is linear in a range of 40% to 160 % against the standard concentration for both Linagliptin&Empagliflozin. The correlation coefficient was found to be R2= 0.995 & 0.996 for Linagliptin&Empagliflozin respectively. Both standard and test solutions proved to be stable for up to 48 Hrs. The developed method can be used for routine analysis of Linagliptin&Empagliflozin fixed dose combination.
Keywords: RP-HPLC, Linagliptin&Empagliflozin, Gradient Elution, Stability Indicating, Validation.

NIPAH VIRUS
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Abstract: Nipah virus (NiV) is a member of the family Paramyxoviridae, genus Henipavirus. NiV was initially isolated and identified in 1999 during an outbreak of encephalitis and respiratory illness among pig farmers and people with close contact with pigs in Malaysia and Singapore. Its name originated from Sungai Nipah, a village in the Malaysian Peninsular where pig farmers became ill with encephalitis. Given the relatedness of NiV to Hendra virus, bat species were quickly singled out for investigation and flying foxes of the genus Pteropus were subsequently identified as the reservoir for NiV In the 1999 outbreak, Nipah virus caused a relatively mild disease in pigs, but nearly 300 human cases with over 100 deaths were reported. In order to stop the outbreak, more than a million pigs were euthanized, causing tremendous trade loss for Malaysia. Since this outbreak, no subsequent cases (in neither swine nor human) have been reported in either Malaysia or Singapore.
Keywords: paramyxoviridae,encephalitis,hendra virus,pteropus,Malaysia.
TRIGEMINAL NEURALGIA
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Abstract: Trigeminal neuralgia (TN or TGN) is a chronic pain disorder that affects the trigeminal nerve. There are two main types: typical and atypical trigeminal neuralgia. The typical form results in episodes of severe, sudden, shock-like pain in one side of the face that lasts for seconds to a few minutes. Groups of these episodes can occur over a few hours. The atypical form results in a constant burning pain that is less severe. Episodes may be triggered by any touch to the face. Both forms may occur in the same person. It is one of the most painThis disorder is characterized by episodes of severe facial pain along the trigeminal nerve divisions. The trigeminal nerve is a paired cranial nerve that has three major branches: the ophthalmic nerve (V1), the maxillary nerve (V2), and the mandibular nerve (V3). One, two, or all three branches of the nerve may be affected. Trigeminal neuralgia most commonly involves the middle branch (the maxillary nerve or V2) and lower branch (mandibular nerve or V3) of the trigeminal nerve.

Keywords: pain disorder, typical, atypical, severe facial pain, trigeminal nerve division

PHAGE THERAPY IN KILLING DRUG RESISTANT SUPERBUG-A NEW ADVANCEMENT IN PHARMACEUTICAL SCIENCE

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Abstract: Chronic lung infections caused by bacteria pseudomonas aeruginosa are becoming increasingly difficult to treat due to antimicrobial resistance. With limited alternative therapeutic options available, this led to renewed interest in “PHAGE THERAPY” Phage therapy or viral phage therapy is the therapeutic use of bacteriophages to treat pathogenic bacterial infections. A major advantage of phage therapy is that, only phage target the harmful bacteria, so there are less side effects often associated with antibiotics. Phage therapy has many potential applications in human medicine as well as dentistry, veterinary science, and agriculture.

EVALUATION OF ANTI-INFLAMMATORY AND HEPATOPROTECTIVE ACTIVITIES OF ETHANOLIC EXTRACTS OF Cleome monophylla L. ON WISTAR RATS

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Abstract: The nature has provided abundant plant wealth for all the living creatures, which possess medicinal virtues. Therefore, there is a necessity to explore their uses and to ascertain their therapeutic properties. India has a great diversity of medicinal plants. The most of the plants used by the rural communities have biologically active compounds that have been shown by generations to be effective against specific disorders. Cleome monophylla L is a traditionally valuable medicinal plant. Phyto-chemical screening revealed the presence of various phytochemicals such as flavonoids, tannins, saponins, steroids, alkaloids etc. Since phenolic compounds and flavonoids have remarkable anti-inflammatory and hepatoprotective activity. The objective of present work is to evaluate anti-inflammatory and hepatoprotective activities of ethanolic extracts of Cleome monophylla L. against carrageenan induced paw edema and CCl4 induced hepatotoxicity in wistar rats. The results of the present study were showed that the ethanolic extract of Cleome monophylla L exhibits the significant anti-inflammatory and hepatoprotective activities in wistar rats.

Keywords: Cleome monophylla L, hepatoprotective, anti-inflammatory, carrageenan, CCl4.

GENETIC POLYMORPHISM AND IMPLICATIONS FOR HUMAN DISEASE

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Abstract: DNA Sequence variations are called as polymorphism. Mutation defined as changes in DNA Sequence from normal, it impacts on human being. Specific genetical allele causative factor in human genetical disorders.
SNPs: SNPs are A, T, C, G. Approximately every 500 - 1000 bases in entire human DNA Sequence leading to million, SNP are occur in both coding and Noncoding (SNPS) Facts : Only 0.1% are SNPs
SNPs occur every 1000 bases, these are hot spot of SNPs, most SNPs have 2 allele, it can cause silent, harmful, latent changes

DISEASE GENETIC ALLELE
Alzehmers APOE
Type 1 DM HLA
Type 2 DM PPARG
Caffeine is the most widely used stimulant drug in the world, usually ingested in the form of coffee, tea, chocolates, soft drinks etc. Caffeine in combination with painkillers is used in treating migraine headaches. Caffeine is one of the most commonly used stimulants among athletes as it acts as an ergo-genic (energy generating) aid in sports. Once in the bloodstream, caffeine causes a number of responses in the body. It is well known for its effects on brain as blood pressure, pulse rate & stomach acid production are increased & fat stores are broken down. Caffeine is being increasingly used in cosmetics and also stimulates the growth of hair.

DNA Microarray is a collection of large no microscopic DNA spots attached to a solid support, made up of either nylon or glass. DNA microarray or gene chips is a collection of large no microscopic DNA spots attached to a solid support, made up of either nylon or glass. DNA microarray or gene chips is used for studying gene expression patterns. DNA microarray or gene chips is a collection of large no microscopic DNA spots attached to a solid support, made up of either nylon or glass. DNA Microarray: A Powerful Tool in Functional Genomics

The promogranate, punica grantum L is an ancient, mystical fruit borne on a small, long living tree cultivated throughout the Mediterranean region, as far north as the Himalayas, in South Asia and in California and Arizona in the US. In addition to its ancient historical uses, promogranate is used in several systems of medicine for a variety of ailments. The synergistic action of the promogranate constituents appears to be superior to that of single constituents. In past decade, numerous studies on promogranate on treatment and precaution of cancer, cardiovascular disease, diabetics, dental condition, erectile dysfunction, bacterial infection and antibiotic resistance and for skin damages from UV rays. Other potential application include infant brain ischaemia

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Abstract: Introduction: Non-steroidal anti-inflammatory Drugs(NSAID) are commonly used in sports medicine. NSAID have known anti-inflammatory, analgesic, anti-pyretics, and anti thrombotic effects, although there in vivo effects in treating musculoskeletal injuries in human remains largely unknown. NSAID analgesic action is not significantly greater than paracetamol for musculoskeletal injury but they have a higher risk profile, with side-effects including Asthma exacerbation, gastrointestinal and renal side-effects, hypertension and other cardiovascular diseases. Discussion: The authors recommend an approach to NSAID used in sports medicine where by simple analgesia is preferentially used when analgesia is the primary desired outcome. How ever, based both on the current pathophysiological understanding of many injury presentations and the frequency that inflammation may actually be a component of the injury complex, it is premature to suppose that NSAID are not useful to the physician managing sports injuries. The prescribing of NSAID should be cautious and both situation and pathology specific. Both dose and duration minimisation should be prioritised and combined with simple principles of protection, rest, ice, compression, elevation(PRICE). we should allow NSAID-Sparing. NSAID used should always be coupled with appropriate physical rehabilitation. CONCLUSION: NSAIDS are probably most useful for treating nerves and soft-tissue impigments, inflammatory arthropathies and tenosynovitis. They are not generally indicated for isolated chlorine tendinopathy, or for fractures. The use of NSAIDS in treating muscle injury is controversial. Conditions in which NSAIDS required more careful assessments include ligament injury, joint injury, osteoarthritis, hemotoma, and postperitively.

Keywords: anti-inflammatories, Microarray, hybridization, Soluble Lipid Nanoparticles

NFPS INTERNATIONAL PHARMACEUTICAL SUMMIT 2018
ISSN 2347-9531 (Print) & ISSN 2320-4206 (Online)

Abstract: The aim of the present study is to formulate and evaluate solid lipid nanoparticles of Curcumin. Curcumin has many potential pharmacological effects including anti-inflammatory, antibacterial, antioxidant and anticancer activities. Curcumin has poor water solubility and oral bioavailability. Therefore, the delivery of drug molecules through the carrier systems avoid unwanted effects because of controlled biodistribution. Development of efficient drug delivery system for curcumin would be a potential approach to improve its bioavailability and clinical efficacy. To overcome these problems an attempt was made to prepare Curcumin into Solid lipid nanoparticles which has the ability to improve the solubility and enhance the oral bioavailability. In the present study Curcumin loaded SLNs was prepared by Hot Homogenization method. The Cutina® HR was used as the Lipid, Soya lecithin as lipophilic surfactant, Tween 80 and carbopol as Hydrophilic surfactants in the preparation. The prepared formulations were evaluated for various parameters like Drug content, entrapment efficiency and In Vitro drug release. The present study conclusively demonstrated that the solubility of drug was improved by entrapment of drug into solid lipid carrier which led to prolongation of drug release.

Keywords: Solid Lipid Nanoparticles, Curcumin, Cutina® HR.

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Abstract: Now a days resistance is a worldwide problem. ESBLs are β lactamases can take part on hydrolysis of β lactam bond of antibiotics. On other hand endophytes are that organism present in living tissue with establishing a mutualism. Six silver nanoparticles (Ag-NPs) & nanocapsules have been synthesized by the reduction of silver nitrate using the cell free supernatant of isolates of Cinnamon umzyalnicum, Accasus granitus, Acacia quiruliniformis, Eupatorium triplinerve, Citrus limon, Eucalypts grandis, (which were collected from Himalayan forest) and by emulsification solvent evaporation method respectively. The presence of silver nanoparticles & nanocapsules of those supernatants were confirmed by using UV-Vis spectroscopy & Transmission Electron Microscopy, Fourier Transform Infrared Spectroscopy respectively. Antibacterial activity of those nanoparticles & nanocapsules were
done by well diffusion method against three ESBL producing gram negative bacilli (Escherichia coli, Klebsiella pneumonia, Pseudomonas aeruginosa). Those bacteria were isolated from the different clinical sample of urine, sputum, bronchial wash & blood from the different hospitals of the above mentioned region and were inoculated onto blood agar & MacConkey agar media. Then bacteria were identified by biochemical tests. After that isolates tested for susceptibility by Kirby – Bauer disc diffusion method according to CLSI guidelines with Amoxycillin 20µg, Amaicaxin 30µg, Ofloxacaxin 5µg, Gentamicin 10µg, Ciprofloxacax 5µg, Cefotaxime 30µg, Cefazidime 30µg, Aztreonam 30µg, Ceftaxanon 30µg. Isolates are again tested with Cefotaxime 30µg & Clavulanic acid (30 µg / 10µg). As a result we got above mentioned three gram negative ESBL producing bacillus organism. Ultimately zone of inhibition was observed against those bacillus & this confirmed the antimicrobial properties of silver nanoparticles & nanocapsules, specially against ESBL producing gram negative bacillus which are isolated from the individuals of Garhwal region – Uttarakhand, India. Keywords: ESBL producing bacillus, Endophytic fungi, Silver nanoparticles, Silver nanocapsules, Antibacterial activity.

**NFPS Conference Proceeding.**

Abstract: The clinical pharmacy services have spread out drastically by virtue of its professional services in the multidisciplinary setup of health care over the past few years in India. The clinical pharmacist becomes a crucial element of the healthcare team to promote patient care by precise knowledge about therapeutics and bridge the gap between pharmaceutical care, physicians and patients. The role of clinical pharmacists in medication review, identification of drug-related problems, therapeutic recommendations and promotion of medication compliance by check medication errors, identify drug interactions, monitor adverse drug reactions (ADRs), suggest individualization of dosage regimen, provide patient counselling, etc. are getting in to practice in India. The role of the clinical pharmacist in deciding therapy is yet to be recognized in India. The treatment of diseases shall be done by different aspects. The community pharmacy system in India has to be entitled to a new venture called ‘Clinical Pharmacy services at counter side.’ The western countries have this system in place since years; there the society’s perception towards a pharmacist is likely as a caregiver perhaps more respected than clinicians. The clinical pharmacy services can be better provided in community pharmacy system in terms of the patient treatment outcome-oriented services like counselling, medication reconciliation, course completion of treatment (Table 1), selection of best brands of drugs to assure optimized Pharmacokinetic-Pharmacodynamic profiles etc. The number of patients comes to a community pharmacy is almost 3 fold higher than patients come to doctor’s outpatient clinic in India. The most threatening drug-drug and drug-food interactions also can be ruled out in a clinic where the services of the clinical pharmacist are more easily accessible for patients. The patient-oriented treatment would be better carried out in pharmacy clinic in association with doctor’s clinic where an effective communication is possible with clinician so as to improve health-related quality of life out of treatment (Table 2). Moreover, being a vital part of patients life would be the envious role of every clinical pharmacist would anticipate. As many studies say, the bridging of clinical pharmacy services over to the clinician’s perspectives as well as pharmaceutical care would be the best offer by the establishment of pharmacy clinic in India.

**NIS2K18/ORAL/003**

**PHARMACY CLINIC- AN UNREVEALED ROLE OF CLINICAL PHARMACIST’S IN INDIA**

Dr. P. Swathi Reddy

**Abstract:** The clinical pharmacy services have spread out drastically by virtue of its professional services in the multidisciplinary setup of health care over the past few years in India. The clinical pharmacist becomes a crucial element of the healthcare team to promote patient care by precise knowledge about therapeutics and bridge the gap between pharmaceutical care, physicians and patients. The role of clinical pharmacists in medication review, identification of drug-related problems, therapeutic recommendations and promotion of medication compliance by check medication errors, identify drug interactions, monitor adverse drug reactions (ADRs), suggest individualization of dosage regimen, provide patient counselling, etc. are getting in to practice in India. The role of the clinical pharmacist in deciding therapy is yet to be recognized in India. The treatment of diseases shall be done by different aspects. The community pharmacy system in India has to be entitled to a new venture called 'Clinical Pharmacy services at counter side.' The western countries have this system in place since years; there the society's perception towards a pharmacist is likely as a caregiver perhaps more respected than clinicians. The clinical pharmacy services can be better provided in community pharmacy system in terms of the patient treatment outcome-oriented services like counselling, medication reconciliation, course completion of treatment (Table 1), selection of best brands of drugs to assure optimized Pharmacokinetic-Pharmacodynamic profiles etc. The number of patients comes to a community pharmacy is almost 3 fold higher than patients come to doctor's outpatient clinic in India. The most threatening drug-drug and drug-food interactions also can be ruled out in a clinic where the services of the clinical pharmacist are more easily accessible for patients. The patient-oriented treatment would be better carried out in pharmacy clinic in association with doctor's clinic where an effective communication is possible with clinician so as to improve health-related quality of life out of treatment (Table 2). Moreover, being a vital part of patients life would be the envious role of every clinical pharmacist would anticipate. As many studies say, the bridging of clinical pharmacy services over to the clinician's perspectives as well as pharmaceutical care would be the best offer by the establishment of pharmacy clinic in India.

**NIS2K18/ORAL/004**

**ENTERAL/ ORAL GLUTAMINE SUPPLEMENTATION IN PATIENTS POST SURGERY AND/OR ACCIDENTAL INJURY**

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Abstract: Background: “Protein energy malnutrition” is one of the major challenges associated with the management of post-operative patients. The nutrition depletion is mostly due to increased intestinal permeability and decreased villous height. Enteral nutrition has been known to decrease the complication of infections post major abdominal surgeries. Glutamine, an immunonutrient and the precursor of protein synthesis is utilised by the mucosa and immune cells in the body as an energy source for most of the tissues. The catabolic stressful conditions results in 50% loss of glutamine from the muscles and it is utmost important to replenish adequate amount of glutamine not only to maintain the integrity of intestinal mucosa but also to improve overall nitrogen economy during this stressful condition. Objective: The objective of this investigation was to study the effect of enteral/oral glutamine supplementation in patients following an abdominal surgery. The analytical parameters used were, plasma glutamine levels, rate of infection and the duration of hospitalization. Methods: A randomized control trial was used, and the patients were randomly divided into two groups, the experimental and control with 30 patients in each. Glutamine supplement (500mg/Kg) was administered (oral and enteral) to the experimental group for 5 days post-surgery. Results: The incidence of infection in the control group was found to have almost twice that of the experimental group, confirming the role of glutamine in combating infection. Furthermore, the Length of Hospitalization (LoH) was found to be slightly higher in the control group as compared to the experimental group. Conclusion: This study has provided concluding evidence that the supplementation of enteral glutamine in post-operative patients decreases the incidence of post-surgical infections, shortening the hospital stay and thereby bringing down the overall hospital costs. Key Words: Protein energy malnutrition, Glutamine supplementation, Post-operative patients, Length of Hospitalization.
A RETROSPECTIVE STUDY ON THE COMPARISON OF EFFICACY AND SAFETY OF METFORMIN AND CLOMIPHENE CITRATE IN POLYCYSTIC OVARIAN SYNDROME

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Abstract: Objective: To evaluate and compare the safety and efficacy of metformin and Clomiphene Citrate (CC) on clinical, hormonal and fertility aspects in polycystic ovarian syndrome (PCOS). Methods: A retrospective non-randomized quasi experimental study on women with diagnosis of PCOS were enrolled and assigned into two groups based on their drug history. Group A with metformin 500mg thrice a day and Group B with Clomiphene Citrate with a starting dose of 50mg/day for the first cycle and maintained at a dose of 150mg/day for the next 2 months were prescribed and duration of the treatment was fixed as 12 weeks. After the prescribed duration oftreatment the following parameters like fasting blood glucose, fasting insulin, glucose insulin ratio, LH, FSH and LH/FSH ratio were measured and compared between two groups. Results and Discussion: Eighty (80) women of each group completed the study and it was established that the age groups between 20-30 years are more disposed to have PCOS. Among the two groups there was a significant difference in body weight, BMI, and clinical parameters like FBS,Fasting insulin, and hormonal parameters like LH,FSH, Amenorrhea, infertility got reduced and it was observed that LH/FSH ratio and glucose/insulin ratio got reduced in both the group but the difference between the two groups were insignificant. Conclusion: The present study concludes that CC found to improve Vital clinical features, biochemical markers of insulin resistance and hormonal levels and long-term health status of women with PCOS, thus CC can be considered as a substitute for insulin- reducing medications in the treatment of PCOS patients.

Key words: PCOS, Metformin, Clomiphene Citrate

CASE STUDY ON MATURITY ONSET DIABETES (MODY) IN BARDET BIELD SYNDROME

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Abstract: Laurence-Moon syndrome is a rare condition that may include cerebellar ataxia; eye abnormalities peripheral neuropathy; spastic paraplegia, intellectual disability and short stature. Bardet-Biedl syndrome is very rare genetic disorder that causes deterioration in vision, extra fingers or toes, obesity in the stomach and abdomen, kidney failures and learning difficulties. A 28 years old female was admitted with complaints of type 2 diabetes mellitus, hexadactyl, nyctalopia, optic atrophy, atypical retinopathy with maculopathy and obesity. Another 26 years old male patient visited the diabetology department as a known case of type 2 diabetes mellitus with BMI of 39.9 kg/m2 , also complaints of dim vision, obesity, postaxial polydactyl and retinitis pigmentosa. Both the patients are siblings of consanguineous marriage. Laboratory investigations shows that there is a fluctuation in sugar levels and Hba1c shows that about 10.2. Urine analysis reported the presence of proteinuria (420mg/1500ml/day). Fundoscopy reveals retinitis pigmentosa. Further investigation reported that the patients were suffering from Maturity Onset of Diabetes Mellitus of the Young (MODY). J.Madireddi et al reported that the disease is estimated incidence of 1 in 160000 in North American and European and also high level of consanguinity. In Indian sub-continent only 15 cases were reported. To add on this we are reporting the first consanguineous marriage with MODY and BBS in our population In the present case we reported first time Maturity onset type 2 diabetes mellitus in BardetBiedl syndrome in south Indian population.

Key Words: Bardet-Biedl Syndrome, MODY, Polydactyl, Type2 Diabetes Mellitus, Consanguineous Marriage.

CHRONIC STRESS ,DEPRESSIVE SYMPTOMS, ANGER,HOSTILITY,AND RISK OF STROKE AND TRANSIENT ISCHEMIC ATTACK IN THE MESA STUDY

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Abstract: Background and Purpose: This study investigated chronic stress, depressive symptoms, anger and hostility in relation to incident stroke and transient ischemic attacks (TIA) in middle-aged and older adults. Methods: Data were from the Multi-Ethnic Study of Atherosclerosis (MESA), a population-based cohort study of 6,749 adults, ages 45-84 and free of clinical cardiovascular disease at baseline, conducted at 6 U.S. sites. Chronic stress, depressive symptoms, trait anger, and hostility were assessed with standard questionnaires. The primary outcome was clinically adjudicated incident stroke or TIA during a median follow-up of 8.5 years. Results: 195 incident events (147 strokes; 48 TIA) occurred during follow-up. A gradient of increasing risk was observed for depressive symptoms, chronic stress, and hostility (all p-for-trend ≤0.02) but not for trait anger (p>0.10). Hazard ratios (HR) and 95% confidence intervals (CI) indicated significantly elevated risk for the highest-scoring relative to the lowest-scoring group for depressive
symptoms [HR=1.86; 95% CI=1.16-2.96], chronic stress [HR=1.59; 95% CI=1.11-2.27], and hostility [HR=2.22; 95% CI=1.29-3.81] adjusting for age, demographics and site. HR were attenuated but remained significant in risk-factor-adjusted models. Associations were similar in models limited to stroke and in secondary analyses utilizing time-variables.

Conclusions : Higher levels of stress, hostility and depressive symptoms are associated with significantly increased risk of incident stroke or TIA in middle-aged and older adults. Associations are not explained by known stroke risk factors.

**Keywords:** stress, emotions, stroke

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**A PROSPECTIVE STUDY ON DRUG UTILIZATION EVALUATION OF ANTIBIOTICS FOR SURGICAL PROPHYLAXIS**

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**Abstract:** BACKGROUND: Surgical prophylaxis is essential for all surgeries; suture insertion of devices etc. Rational use of these antibiotics can minimize the post-operative nosocomial infections. The selection of these antibiotics should clearly be different from regular usage including time of administration. METHODOLOGY: All inpatients subjected for surgery is the surgery ward is included in the study. Patient details such as patient demographics (age, sex, diagnosis), nature of surgery, timing, antibiotics, type and class of antibiotic were noted. The study was conducted after obtaining informed consent from the patient. RESULTS: There is more use of Gentamycin in patients subjected for surgery. Appropriateness has been evaluated in correction with ASHP guidelines for management of antimicrobials for surgical prophylaxis and almost 90% appropriateness is seen with the therapy. CONCLUSION: Surgical prophylaxis is an essential part of surgery with this study, we can help is designing apart of surgical kit necessary antibiotic for prevention the related nosocomial infection.

**Keywords:** Surgical Prophylaxis, Antibiotics, Nosocomial Infections.

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**LOW TOTAL CHOLESTEROL LEVELS ASSOCIATED WITH SUICIDE ATTEMPT IN DEPRESSIVE PATIENTS**

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**Abstract:** Background: Patients with major depressive disorder (MDD) have a high risk of suicide. Many pathophysiological factors involved in MDD and suicide such as a low cholesterol levels have been associated with MDD and increased vulnerability to suicide. In this study, we investigate the relation between lipid parameters and suicide risk in patients with MDD. Methods: Plasma levels of total cholesterol, triglycerides, and high-density lipoprotein cholesterol (HDL-c) and low-density lipoprotein cholesterol (LDL-c) were determined in 160 patients meeting the DSM-IV-TR criteria for MDD (110 patients without suicidal behavior and 52 suicidal attempters) and 151 healthy controls. Results: A significant decrease in plasma cholesterol levels was observed in the group of suicidal depressive patients compared to those without suicidal behavior (p < 0.001). For the other lipid levels (triglycerides, HDL cholesterol, and LDL cholesterol), there were no significant differences between suicidal and non-suicidal patients. Conclusions: Our study showed a significant decrease in plasma cholesterol levels in suicidal patients. This result support the hypothesis of the association of low plasma cholesterol level and suicidal behavior in patients with major depressive disorder.

**Keywords:** depression, suicide, cholesterol, biological marker

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**TARGETING BRAIN TUMOUR USING NANOTECHNOLOGY**

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**Abstract:** Drug Delivery Systems are systems which deliver optimal amount of drugs to target site, enhancing drug efficacy and reducing adverse effects. "Glioblastoma multiforme" is tumour of the glial cells. This ‘type of cancer is very difficult to cure and life expectancy is found to be short. Cancer therapies now being used are surgery, radiation, chemotherapy. These methods increase risk to normal tissues or incomplete eradication of tumour is observed. Nanotechnology targets cancer cells directly and eradicate them. Nanoparticles used may be liposomes, microspheres, microcapsules, dextrane, starch etc. However, liposomes are mostly preferred because of their structure, capacity to deliver drug, low toxicity, biocompatibility. These particles, which carry two different drugs, are designed so that they can easily cross the blood-brain barrier and bind directly to tumor cells. One drug damages tumor cells' DNA, while the other interferes with the systems cells normally use to repair such damage. If liposomes are coated with a protein called transferrin, the particles could pass through the blood-brain barrier with little difficulty. Furthermore, transferrin also binds to proteins found on the surface of tumor cells, allowing the particles to accumulate directly at the tumor site while avoiding healthy brain cells.
Chemotherapeutic drug temozolomide is packed into the inner core of the liposomes, and in the outer shell an experimental drug called a bromodomain inhibitor is packed. Bromodomain inhibitors are believed to interfere with cells’ ability to repair DNA damage. However there may be some side effects but this technique helps for the maximum drug delivery.

**Keywords:** Nanoparticle,Glioblastoma,Liposomes,Transferrin,Temozolomide,tumour, bromodomain inhibitor.

**INVITRO BIO-EQUIVALENCE STUDIES ON MARKATED TABLETS CONTAINING METFORMIN HYDROCHLORIDE**

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**Abstract:** The aim of this work was to carry out the In-vitro bio-equivalence studies on marketed tablets containing Metformin hydrochloride. Bioequivalence is a term refers to the drug substance in two or more identical dosage forms, reaches systemic circulation at the same rate and to the same relative extent. i.e., their plasma concentration-time profiles will be identical without significant statistical differences. Oral bioavailability of drug is determined by extent of drug solubility and permeability. Metformin hydrochloride is class III drug according to BCS classification. In order to enhance solubility and permeability different techniques and different excipient materials are used. Thus the In-vitro dissolution rate may vary from one brand to another brand. So there is a need to conduct In-vitro bioequivalence studies for these formulations in order to identify the differences if any/among the formulations and to select better one. Four different brands of Metformin HCl (strength 500mg) were selected that are available in local market. Those are Glycomet, Glyciphage, Walaphage and Bigomet. The tablets within these brands were subjected to quality control tests and the results were evaluated statistically. Results indicated that although all the four brands passes the official tests asper U.S.P. GLYcomet and walaphage were bio-inequivalent with bigomet. So the patients has to take compulsory the prescribed brand only. It is not possible to replace from one brand to another brand. In case of third formulation i.e Glyciphage, we observed no significant statistical difference with superior brand (Bigomet). Hence in these two brands the patients have enough switchability. i.e the two brands GlyciphageanBigomet were bioequivalent.

**RESEARCH PAPER: PREPARATION AND CHARACTERIZATION OF LETROZOLE LOADED ETHYL CELLULOSE NANOPARTICLES BY SOLVENT EVAPORATION TECHNIQUE**

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**Abstract:** The aim of the study was to prepare and characterize Letrozole loaded Ethyl Cellulose (EC) nanoparticles by Solvent Evaporation technique. Breast cancer has been ranked first as the most prevalent type of cancer and the leading cause of cancer-related mortality among women worldwide. Letrozole (LTZ), an aromatase inhibitor, has been shown to be an effective and relatively safe agent for the treatment of hormonally-positive breast cancer in postmenopausal women. Polymer-based nanoparticles (NPs) have been reported to be effective drug delivery systems as integrating drugs into these carriers have presented improvements in drug–tissue distribution and tissue selectivity with superior pharmacokinetic profiles. Therefore, this study was designed to incorporate LTZ in polymeric nanoparticles to improve the bioavailability and minimize the adverse effects. LTZ loaded EC nanoparticles were formulated product yield, drug content, Entrapment efficiency, Loading capacity and drug release studies using various drug polymer ratios and the formulations were evaluated for their.

**Keywords:** Letrozole, Nanoparticles, Ethyl Cellulose, Breast Cancer, Solvent Evaporation

**CLINICAL ASSOCIATION OF SERUM MAGNESIUM AND SERUM FIBRINOGEN LEVELS WITH ACUTE EXACERBATION OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE – A PROSPECTIVE OBSERVATIONAL STUDY**

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**Abstract:** Aim and objective: The aim of the study was to determine the clinical association of serum magnesium and serum fibrinogen levels with acute exacerbation of chronic obstructive pulmonary disease. Methodology: The sample was found to be 140. Patients were divided in two groups Stable and exacerbation. Blood sample was withdrawn from the patient. The serum magnesium and serum fibrinogen levels were analyzed at time of admission and discharge. Results: Association of both serum magnesium and serum fibrinogen levels with Acute Exacerbation-Chronic Obstructive Pulmonary Disease. The serum magnesium levels on Discharge
in stable type was found to be 2.3 ± 0.27 and in Exacerbation it was found to be 1.56 ± 0.37. And on Discharge serum fibrinogen levels in stable type was found to be 1.64 ± 0.32 and in Exacerbation it was found to be 2.18 ± 0.40. Conclusion: The study reveals that there is a definite relationship between Serum Fibrinogen and serum Magnesium levels with the Acute exacerbation of Chronic Obstructive pulmonary disease. Low serum magnesium levels may be a risk factor for acute exacerbation of COPD. High Serum fibrinogen levels may be a risk factor for acute exacerbation off COPD. Regular screening of serum magnesium and serum fibrinogen levels may help in predict and prevent acute exacerbation in COPD patients.

Keywords: Chronic Obstructive Pulmonary Disease (COPD), Acute Exacerbation (AE), Serum Magnesium, Serum Fibrinogen.

**REGENEXX TECHNOLOGY**
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**Abstract:** Stem Cells are in all of us and they are responsible for healing injured bone, ligaments, tendons and tissues. As we get older or injured, we sometimes cannot get enough of these cells into the area in need. The Regenexx Procedures helps in solving the problem by precisely delivering a high concentration of stem cells into the injured area and aiding our body’s ability to heal naturally. Patients experience very little down time and they typically avoid the long, painful rehabilitation periods that often follow surgery to restore joint strength and mobility. Mesenchymal stem cells are pluripotent cells found in bone marrow, synovial tissues, and adipose tissues. They differentiate into bone, cartilage, muscle, and adipose tissue. The Regenexx Procedures are a family of non-surgical adult stem cell and blood platelet procedures for treating common injuries and degenerative joint conditions, such as osteoarthritis and avascular necrosis. The procedures utilize a patient’s own stem cells and/or blood platelets to help heal damaged tissues, tendons, ligaments, cartilage, spinal disc, or bone, treated with Platelet Rich Plasma or Platelet Lysate Procedures. Improve patient outcomes. Application of cultured stem cells in joints appears to be safe. Effective in many orthopaedic injuries. High success rate.

**FORMULATION AND EVALUATION OF ROPINIROLE HYDROCHLORIDE BUCCAL TABLETS**
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**Abstract:** AIM: To Formulate and Evaluate buccal tablets of Ropinirole hydrochloride. MATERIALS AND METHODOLOGY: Ropinirole hydrochloride, badam gum, carbapol 934p,HPMC K15M, Lactose, Talc and Magnesium stearate. Buccal tablets Formulated by using direct compression method. RESULTS AND DISCUSSION: Tablets were prepared using badam gum and HPMC K15M 1:1 Ratio was used. Ropinirole buccal tablets were shows 98% drug release and it was found to have good Mucoadhesive strength, swelling index 106.00 after 6hr. Mucoadhesive Residence time was found to be more than 6 hours. CONCLUSION: Development of Mucoadhesive buccal drug delivery of Ropinirole hydrochloride tablets was one of the alternative routes of administration to avoid first pass effect. From the results the formulation was showing good mucoadhesion strength and better drug release.

**PREPARATION AND CHARACTERISATION OF NAPROXEN NANOPARTICLES BY DESOLVATION TECHNIQUE**
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**Abstract:** AIM: The aim of the present investigation is to develop & characterize naproxen nanoparticles by Desolvation technique using Butanol as desolvating agent. MATERIALS AND METHODOLOGY: In the present study, Naproxen sodium loaded BSA nanoparticles were prepared by desolvation technique. In desolvation technique two methodologies i.e., continuous addition and intermittent addition method were adapted for the preparation of naproxen nanoparticles. RESULT: Formulation was prepared using 1:1 drug to polymer ratio of naproxen and Bovine Serum Albumin. The obtained formulation was evaluated, drug content was found to be (95.03%) for continuous addition and (86.98%) for intermittent addition. Entrapment efficiency found to be (76.01%) for continuous addition and (86.93%) for intermittent addition. CONCLUSION: From the result it was observed that butanol were considered as the best desolvating agent for the preparation of Naproxen sodium nanoparticles. It was observed that the formulation was showing good entrapment efficiency and better drug release.

Keywords: Desolvation, Bovine Serum Albumin, cross linking agent, Butanol.
Simvastatin is used as an anti-ty. It belongs to a group of medications called statins. Statins are medications that help lower cholesterol levels by inhibiting a substance called HMG-CoA reductase. It has poor solubility and 5% bioavailability. It belongs to BCS Class II. In the present work attempts were made to prepare polymeric nanoparticles of simvastatin with 12hrs drug release rates. The nanoparticles were prepared by employing sodium alginate as polymer. Sodium alginate is a naturally occurring polysaccharide that is used as a hydrophilic matrix. Different formulations were prepared at different ratios of polymer and surfactant. The prepared formulations were coded as S1-S6. All the prepared formulations were analyzed for entrapment efficiency, drug content, microscopic examination, and drug release behaviors. By comparing the results of all formulations, S5 was found to have 75.04% entrapment efficiency and better drug release.

**Abstract:**

**AIM:** To formulate Nanoparticle drug delivery system for Cassia senna. **MATERIALS AND METHODOLOGY:** Cassia senna leaves have been taken and extracted by process of percolation. Phytochemical screening of the extract revealed the presence of alkaloids, tannins, tannic acid, flavonoids and anthraquinones. It was further confirmed by TLC. Now Nanoparticle drug delivery system designed for the obtained senna extract using Nanoprecipitation technique. Ethyl cellulose was chosen as polymer. **RESULTS AND DISCUSSION:** Formulation was prepared using 1:1 drug to polymer ratio of senna extract and EC. The obtained formulation was evaluated for product yield, drug content, entrapment efficiency and drug release studies. The results obtained were product yield (0.235mg), drug content (61.75%), Entrapment efficiency (94.512%) and drug release (39.63%). **CONCLUSION:** Nanoparticle drug delivery system has been developed for cassia senna using Nanoprecipitation technique. From the results, it was observed that the formulation was showing good entrapment efficiency and better drug release.

**KEYWORDS:** Nanoprecipitation, percolation, senna extract, ethyl cellulose.

**DEVELOPMENT OF NANOPARTICLE DRUG DELIVERY SYSTEM FOR CASSIA SENNA EXTRACT:**

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2Associate professor and Head, RBVRR Women’s college of pharmacy, Osmania university, Hyderabad, India

**Abstract:**

**AIM:** To formulate Nanoparticle drug delivery system for Cassia senna. **MATERIALS AND METHODOLOGY:** Cassia senna leaves have been taken and extracted by process of percolation. Phytochemical screening of the extract revealed the presence of alkaloids, tannins, tannic acid, flavonoids and anthraquinones. It was further confirmed by TLC. Now Nanoparticle drug delivery system designed for the obtained senna extract using Nanoprecipitation technique. Ethyl cellulose was chosen as polymer. **RESULTS AND DISCUSSION:** Formulation was prepared using 1:1 drug to polymer ratio of senna extract and EC. The obtained formulation was evaluated for product yield, drug content, entrapment efficiency and drug release studies. The results obtained were product yield (0.235mg), drug content (61.75%), Entrapment efficiency (94.512%) and drug release (39.63%). **CONCLUSION:** Nanoparticle drug delivery system has been developed for cassia senna using Nanoprecipitation technique. From the results, it was observed that the formulation was showing good entrapment efficiency and better drug release.

**KEYWORDS:** Nanoprecipitation, percolation, senna extract, ethyl cellulose.

**FORMATION AND EVALUATION OF SIMVASTATIN LOADED POLYMERIC NANOPARTICLES**

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**Abstract:**

**AIM:** To formulate and evaluate polymeric nanoparticles of simvastatin. Simvastatin is used as Anti-Hyperlipidemic agent. It is chemically 3-hydroxy-3-methylglutaryl (HMG) coenzyme A reductase. It has poor solubility and 5% bioavailability. It belongs to BCS Class II. In the present work attempts were made to prepare polymeric nanoparticles of simvastatin with 12hrs drug release rates. The nanoparticles were prepared by employing sodium alginate as polymer. Sodium alginate is naturally occurring polymer. Tween-80 and span-80 were used as hydrophilic and lipophilic surfactant respectively. Different formulations were prepared at different ratios of polymer and surfactant. The prepared at different ratios of polymer and surfactant. The prepared formulations were coded as S1-S6. All the prepared formulations were analyzed for entrapment efficiency, drug content, microscopic examination and drug release behaviors. By comparing the results of all formulations, S5 was found to have 75.04% entrapment efficiency,92.89% drug content and 57.69% drug release in 12hrs.

**Keywords:** Simvastatin, Anti-hyperlipidemic agent, Polymeric nanoparticles, sodium alginate, surfactants.

**MICRO ELECTRICAL THERAPY**

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**Abstract:** Clinical appearance with a new electrical stimulation of chronic wounds by transferring current with trodes placing around the wound. The current supplied should be slightly more than the current that is produced by the nerve cells in the body. It potentiate the cells to divide, and produce amino acids etc., faster than the normal. It was first introduced by Joseph M. Mercola and Daniel L. Krisch(placed the term met) to treat small pox scars. Till date many equipment’s came into existence. All the equipment’s have frequency of 0.5 hertz and 100 microamperes. There are no side effect till date but contraindicated in pregnant woman and on patients with demand type cardiac pacemaker. Ideally it is a perfect method to heal wounds some ulcers and some cancers without surgery. Important words: micro electric therapy, faster wound healing, safe, contraindicated in pregnant women.