# 4th World Summit on Pharmaceutics And Drug Designs

**Dubai, United Arab Emirates**

**21st-22ndSeptember, 2018**

Organized by:

**BioLEAGUES Worldwide**

# Preface

This book reports the Proceedings of the ***4th World Summit on Pharmaceuticals Drug Designs (PhrmaSummit 2k18)*** held at ***Flora Creek Deluxe Hotel Apartments, Dubai UAE*** on the 21st&22nd ofSeptember – 2018, Organized by ***BioLEAGUES Worldwide***.

The publishing department has accepted more than 120 abstracts. After an initial review of the submitted abstracts,45 papers were presented at the conference and were accepted for publication in the Conference Proceedings. The topics that are covered in the conference include Medicinal Chemistry and Drug Discovery, Nanotechnology in Drug Delivery, Advances in Drug Delivery, Drug Delivery Devices, Cancer Studies: Drug Delivery Chemistry, Chemical Biology & Biochemistry, Pharmaceutical Engineering, Pharmaceutical Biotechnology: Concepts and Applications, Molecular Pharmacology and Experimental Therapeutics, Pharmaceutical Chemistry, Neuropharmacology and Psychopharmacology, Nanotechnology in Biopharmaceuticals. We would like to thank all the participants for their contributions to the conference and the proceedings.

Reviewing papers of the ***Pharma Summit 2k18***was a challenging process that relies on the goodwill of those people involved in the field. We invited more than 25 researchers from related fields to review papers for the presentation and the publication in the ***Pharma Summit 2k18***Conference Proceeding. We would like to thank all the reviewers for their time and effort in reviewing the documents.

Finally, we would like to thank all the proceeding team members who with much dedication have given their constant support and priceless time to bring out the proceedings in a grand and successful manner. I am sure this ***Pharma Summit 2k18***proceeding will be a credit to a large group of people, and each one of us should be proud of its successful outcome…

**Pharma Summit 2k18**

# ORGANIZING COMMITTEE

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Head Of Pharmaceutics Department In Dubai Pharmacy College,UAE

**Dr. Muhammad Ovais Omer,**
Professor,University Of Veterinary And Animal Sciences,Pakistan.

**Dr. Abdullah Ijaz Hussain,**
Director Hi-Tech/Associate Professor,
(University Sains Malaysia, Malaysia),
Pakistan.

# Keynote Speakers

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4th World Summit on Pharmaceutics and Drug Designs

21st- 22nd, September 2018, Dubai

# Targeted Drug Delivery System and Theranostics Application

Prof. Heyam Saad Ali
Dubai Pharmacy College, Dubai, UAE.

## Abstract

Targeted drug delivery system is a special form of drug delivery where the medicament is selectively targeted to specific diseased tissues/cells in the body, without causing toxicity to normal ones.
In order to overcome the limitations of the conventional therapy and to enhance the therapeutic efficiency, various approaches and strategies are needed.
Numerous targeting strategies have been investigated such as:
1. Surface functionalization and bio-conjugation of ligands, proteins, DNA with the biological molecules/organs.
2. Exploiting relevant surface engineering techniques in resolving challenges based on microenvironment, bio-distribution, controlling of drug release by external or internal stimuli.
Further advanced application of targeted drug delivery in nanomedicine is the development of theranostics, where the therapeutics are combined with diagnostic modalities.
In addition to that, theranostics provide deep of insight understanding at molecular and cellular level, which offer therapeutic potential properties in examining the bio-distribution off-target (adverse) effects of drug, monitor the drug response during various stages of disease developments along with the accompanied micro- environmental alterations.

## Biography

Prof. Heyam Saad Ali, M. Pharm., Ph-D. She is working as a head of pharmaceutics department in Dubai Pharmacy College, UAE. Prof. contributed more than 70 articles to reputed international scientific journals and conferences, in different conventional, controlled and targeted drug delivery systems in pharmaceutical product development. She has been invited as speaker to numerous International conferences .Reviewer and member of editorial board of many international journals.

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# Emerging Trends and Future Prospective Status of Novel Drug Delivery System for Phytopharmaceuticals.

Dr. Rupali Tasgaonkar
Yadavrao Tasgaonkar Institute of Pharmacy, Mumbai, India

## Abstract

In recent decades, interest of phytopharmaceuticals is increasing amongst Physician & Patients, evident from global market of herbal medicines & is forecasted to be $ 107 billion by 2020, strong growth unaffected by economic recession.

Phytopharmaceuticals have an edge over allopathic formulations due to the advantage of having less adverse effects as compared to allopathic moieties.Inspite of having enormous therapeutic potential, the physicochemical properties like poor solubility, permeation & non-targeting of the active site creates a barrier in therapeutic efficacy of phytoconstituents.

There is great potiential in develpoment of novel drug delivery systems (NDDS) for plant actives & extracts. NDDS for herbals like polymeric nanoparticles, nanoemulsion, microspheres and liposomes are reported. Combination of NDDS and herbal medicines help in delivering active constituent in sustained manner to increase patient compliance, therapeutic value and bioavailability with reduced toxicity.
Encapsulation systems like Phytosomes are at an exploring stage and are reported to be promising for Silybum marinum, Theasinensis, flavonoids, polyphenols etc. Phytosomes enhance rate and extent of drug absorption through lipoidal-biomembrane. have better stability profile than liposomes. NDDS technology for phytopharmaceuticals provides great platform to conquer various challenges coupled with herbal formulations and will definitely provide better & effective therapy in due course.

## Biography

Dr. Rupali Tasgaonkar, currently Principal and Head, Dept. of Pharmaceutics, Yadavrao Tasgaonkar Institute of Pharmacy, Mumbai, She pursued her PhD in Pharmaceutics from S.N.D.T Women's University, Mumbai . She has 15 years of research experience in design and formulation of Novel Drug Delivery Systems. She has won Best paper awards in Pharmaceutical Technology Session and education Session at 55th IPC and 10th national Convention of APTI. She has several national and international papers and presentations. She is a Life member of APTI and IPA. She is a member of Scrutiny committee, Approval Committee for Approval Process in Mumbai University.

# New Drug Delivery Systems and Herbal Extracts

## Saleemulla Khan
PA College of Pharmacy, Mangalore

## Tejaswini A Kalkundri
Manipal college of Pharmaceutical Sciences, MAHE

## Abstract
Technology involved in the delivery of herbal extracts is an essential aspect that needs to be addressed to ensure drug bioavailability and efficacy. Not all herbal extracts are able to make way into the systemic circulation or reach the site of action because of the lipohilicity of the membranes in the body. Hence, this review focuses on the plant polysaccharides which are ampiphillic in nature and serve as prodrugs for the said purpose, and the possible novel drug delivery systems like liposomes, Phytosomes, ethosomes etc. that can be incorporated with the drug to enhance the bioavailability of the desired herbal extracts.The article also includes the various methods of formulation and evaluator parameters for novel drug delivery systems.

## Biography
Dr. Saleemulla Khan, Professor and Principal P.A. College of Pharmacy, Mangalore has served as Associate Professor in the Department of Pharmcognosy, Manipal College of Pharmaceutical Sciences, Published 40 research and review articles in various reputed journals and presented papers in several conference in India and abroad. Contributed chapters in several books on dietary supplements, Osteoporosis, Herbaldrug standardization etc. Received a grant under RPS scheme of AICTE for the development of herbal dietary supplements.

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# Antibiotics- Toxicity, Misuse and Resistance - A Review

Dr Kiron R Jathar

Associate professor, R D & S H National College & S W A Science College, Bandra (West), Mumbai

## Abstract

The management of microbial infections in the modern era of antibiotics started with the discovery of penicillin by Sir Alexander Fleming in 1928. Penicillin was considered as a wonder drug as it was successful in controlling bacterial infections among World War II soldiers. Antibiotics transformed modern medicine and saved millions of lives. They were prescribed to treat serious bacterial infections during the 1940s. During the 1950s penicillin's were extensively used.

However, shortly thereafter penicillin resistance became a substantial clinical problem. This threatened many of the advances of the prior decade. New beta-lactam antibiotics were discovered, developed, and deployed.But the first case of methicillin-resistant Staphylococcus aureus (MRSA) was identified during that same decade. Unfortunately, resistance has eventually been seen to nearly all antibiotics that have been developed. Vancomycin was introduced into clinical practice in1972 for the treatment of methicillin resistance in bothS. aureus and coagulase-negative staphylococci. Cases of Vancomycin resistance were reported in coagulase-negative staphylococci in about 8years. From the late 1960s to the early 1980s, a number of new antibiotics were introduced to solve the resistance problem, butafter that there has been a decline in the introduction of new antibiotics and fewer new drugs have been introduced. As a result,many decades after the discovery of the wonder drug,bacterial infections have again become a threat. The main reason being the misuse of the drug therapy.

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# Fagonia Arabica Polyphenols: Dietary Bioactive Compounds In Relation To Their Physiological Functions

Abdullah Ijaz Hussain

Director, Central Hi-Tech Lab, Government College University, Faisalabad, Pakistan.

## Abstract

**Background and objective:** The aim of the present study was to quantify phenolic acids and flavonoids from Fagonia rabica (FA) extracts and to investigate their antioxidant, hepatoprotective and antihypertensive potentials.

**Methods:**Polyphenols were isolated from the aerial parts of the FA using different solvent systems. Rp-HPLC method was developed and validated for the simultaneous quantification of phenolic acids and flavonoids from FA extracts. The antioxidant activity of polyphenol rich fractions (PRFA) was investigated using reported assays. The potent fraction of extracts was fed to Wistar Kyoto (WKY) rats, followed by carbon tetrachloride (CCl4), and the levels of superoxide dismutase (SOD), nitric oxide (NO), reduced glutathione (GSH), lipid peroxidation and total antioxidant capacity (T-AOC) were studied. The potent PRFA was administrated to different groups of SHR and WKY rats to investigate the antihypertensive potential, blood pressures, mean arterial pressure and pulse wave velocity.

**Results:** The RP-HPLC analysis of PRFA revealed the presence of ferulic acid, vanillic acid, p-coumeric acid, gallic acid, p-hydroxy benzoic acid, chlorogenic acid quercetin, myricetin and catechin being the major polyphenolic compounds. Results showed that PRFA showed excellent antioxidant activity. PRFA successfully prevent the alterations in TBARS, GSH, SOD, GR, GPX and GST levels of experimental animals. Histopathological studies reveal the hepatoprotection property of PRFA in a dose dependent manner. The results also showed that PRFA significantly lower the systolic blood pressure and pulse wave velocity of SHR rats.

**Conclusion:** These results showed that the antioxidant and antihypertensive activities of FA may be responsible for its therapeutic effect.

## Keywords

Quercetin, Flavonoids, Spontaneous hypertensive rat

## Biography

In 2009, I managed to obtain my doctoral degree in Analytical Chemistry from the University of Agriculture Faisalabad and the University of Ulster Coleraine, UK (Split Program). Availing TWAS-USM Postdoc Fellowship, I completed my one year Post-doctorate research at the School of Pharmaceutical Sciences, University Sains Malaysia, Penang, Malaysia in 2012. Currently I am working as Director, Central Hi-Tech Lab and Associate Professor of Chemistry. I have so far supervising eighteen PhD/MPhil and 22 master students and I am PI of some research projects. I have published more than 80 research papers and secured > 86 IF.

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# ABSTRACTS

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4th World Summit on Pharmaceutics and Drug Designs

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# Diseases Causes Treatment and Prevention

Dr Mira Bajirova

Associate Professor, Consultant Ob-Gyn, IVF (Paris)

## Abstract

There are two causes of the diseases: Decreased Oxygen Utilization and Jinn. Decreased Oxygen Utilization is caused by Positive Ions from man-made activities. Positive ions induce the acidity and inflammation, the main cause of almost all diseases. The best treatment is the use of Negative Ions against Positive ions, while Medicine is powerless in many cases. The diseases caused by Jinn (Jinn possession, Black Magic, Evil Eye) can be done by experienced practitioner but also by using Negative Ions as theyare disliked by the hidden Jinn. The treatment of the diseases caused by the Evil Jinnis only Ruqya and when associated to the Negative Ions the results are better and quicker.

## Key words

Causes of the diseases, Positive Ions, Decreased Oxygen Utilization, Acidity, Inflammation, Negative Ions, Jinn, Ruqya

# Advanced Trends inGastroretentive System for Controlled Drug Delivery

Dr. Bazigha K. Abdul Rasool
Dubai Pharmacy College, Dubai, UAE

## Abstract

Gastroretentive drug delivery systems (GRDDSs) obtained a high interest in the pharmaceutical field recently due to their immense therapeutic advantages. These systems are designed to extend the drug release in the upper part of gastro intestinal tract, enhance the bioavailability of drugs that have narrow therapeutic window, in addition reduce drug dosing frequency and dose size and thus improve patient compliance. Various approaches in the formulation of GRDDSs were developed including bioadhesive systems, low density floating systems, non-floating systems, magnetic systems, swelling systems, unfoldable and expandable systems, raft forming systems superporous systems and biodegradable hydrogel systems. Despite of the significant benefits of GRDDSs, however there are some limitations affecting their performance and availability in the pharma market such as the effect of food and high individual variations in gastrointestinal physiological condition and gastric emptying time. Efforts to develop GRDDSs formulation are required to overcome these challenges in the near future.

## Biography

Prof. Dr. Bazigha K. Abdulrasool is currently working as a Professor in the Department of Pharmaceutics, Dubai Pharmacy College and Head, of Research and Faculty Development as well as Laboratories and Safety Units of the college.

Dr. Bazigha has supervised MPharmstudents for their graduation theses. She published more than 40 research articles and abstracts in indexed peer reviewed journalsin the fields ofPharmaceutics and Pharmacy Practice as well as in Pharmaceutical education.

Her research qualifications have established her as a member of the editorial board and a reviewer for several international peer reviewed scientific pharmaceutical journals.

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# Analysis of Toll-like Receptors-9 (TLR9) genepolymorphism(rs5743836) in Pakistani patients with viral Hepatitis C.

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Health Center, Government College University, Faisalabad, Pakistan
Farzana Batool
Department of Biochemistry, Government College University, Faisalabad, Pakistan.
Muhammad Sarfaraz Iqbal
Department of Bioinformatics & Biotechnology, Government College University, Faisalabad, Pakistan.

## Abstract

TToll-like receptors (TLRs) are innate immune receptors that mediate the inflammatory response during HCV infections. The aim of this study was to evaluate the association of TLR9 gene polymorphism in Pakistani patients infected with genotype 3a of HCV. The 500 subjects were recruited and divided into group I (400 patients with HCV), group II (100 individuals no evidence of HCV and another disease, or normal control subjects). Polymorphism (-1237T/C, rs5743836) in the TLR9 gene was genotyped in 400 HCV infected individuals(including 323 interferon responders and 77 interferon nonresponder).SNP genotyping of TLR9 (-1237T/C) in HCV infection was carried out by applying High resolution melting (HRM) assay with temperature range from 65-95 °C. There was no statistically significant difference in the distribution of TLR9-1237 T/C genotypes between HCV and control (P<.029) as were observed.We observed an high frequency of the mutant genotype CT (61%) and minor allele "T" (64.21%) in PakistaniHCVinfecteedpopulation.No remarkable differences in distribution of genotype between HCV-infected persons (*P*< 0.0001; OR= 3.21, 95%CI= (2.51 – 4.12) and healthy control (*P*< 0.0001; OR= 0.092, 95%CI= (0.058-0.14) wereobserved.Calculated risk estimation revealed that TLR9-1237 polymorphism conferred high risk of HCV disorders in interferon nonresponders($x^2$ = 0.489; OR= 0.82, 95%CI= (0.47-1.43), P = 0.488917) as compare to interferon responders. There were no statistical differences in the distribution of TLR9-1237T/C genotypes between the 3 groups. In conclusion TLR9-1237T/C gene polymorphism may not be considered as a molecular risk for patients with HCV in Pakistan.

## Keywords:

High resolution Melting (HRM), gene polymorphism, Toll-Like Receptors(TLR), TLR9-1237T/C, rs5743836, OR (odds ratio)

# Drug Development on Chemical Therapeutics/Antidote for Chemicalweapons Knownas Sodasulphanecoblamin.

Salako N. Olatunji

Medicinal, Physical and Analytical Research Chemist, Federal Institute of Industrial Research Oshodi

## Abstract

SodaSulphanecobalamin ($Na_4S_5\,CoC_{69}N_{15}H_{89}O_{26}$) is an antidote for Chemical weapons, which detoxify and decentralized the toxic substances in any chemical based threat mainly, classical chemical agent threat categories include vesicant or blister agents (e.g., sulfur mustard), blood agents (e.g., cyanide), respiratory agents (e.g., phosgene), and nerve agents (e.g., GA or Tabun, GB or Sarin, GD or Soman, and VX) as well as lung damaging agents (Chlorine, diphosgene). It dissociate the toxic components in each chemical weapons, either nerves agent, blister agent or mustard gas to a nontoxic substance when administered and doesn't have any adverse effects unlike Atropine (which has little effect on nicotinic effect, such as muscle twitching, flaccidity) and other antidotes been tested for neutralizing or countermeasures for a particular chemical based threat. It displaces the Cyanides to a free toxic compound, thiocyanocobalamin .It removes the burns when the sulfur mustard is been contacted through skin, and eye The antidote (SodaSulphanecobalamin) which is sulfur drug group (H-S) bends the mustard makes the anditodal removes mustard from the body, of which can be used as treatment for Organic Arsenical. It also added the amide group of protein when used. However, recent studies shows that this antidote can serve as a replacement for the antidote of Orange agent (2, 3, 4, 7-tetra chlorobenzodioxin) which displaced millions of Vietnam Citizens during the World War II and displaces chlorobenzo to sodium benzoate and saline. Though Mercury (I) Oxalate is been used for this antidote for the orange agent, but we all know that Mercury is highly toxic and poisonous to the human .Nerve agents developed in the 1930s and 1940s were stockpiled during the Cold War. More recently, nerve agents have been used in the Iran–Iraq War in the 1980s, the Japanese terrorist attacks by the Aum Shinrikyo cult in 1995 and attacks in Syria in 2017.

Recently, the Salisbury Nerve attack on March 4th 2018,when SodaSulphanecobalamin is been used for nerves agent antidotal , it dissociates organophosphate to phosphoric acid which helps in metabolism of the body.

($Na_4S_5\,CoC_{69}N_{15}H_{89}O_{26}$) is produce by dissolution of hydroxocobalamin with the decomposition of Sodium nitrite and Sodium thiosulfate, then treated with the acidified Sodium bicarbonate, which led to a faster return to baseline mean arterial pressure compared with sodium nitrite with sodium thiosulfate; however, there was no difference between the antidote combinations in mortality, serum acidosis, or serum lactate (TERTSodium1,2-diithiosulphite-3,4diiintroso Co-α(α-5,6 diimethlybenzylmizazonly)co-ß-hydroxocobalamin)

$NO + HOcbl + 2NaoH + NO_2 + 3Na_2SO_4 + Na_2S_5 \;\; 2Na_2S_2O_3 + 2NaNO_2 + \;\; 4NaOH + HOSCb1 + SO_{2\,(g)}$ ---------- $Na_4\,(S_2O_3)_2\,(NO_2)_2\,C_{62}H_{87}SCoN_{13}O_{16}P$

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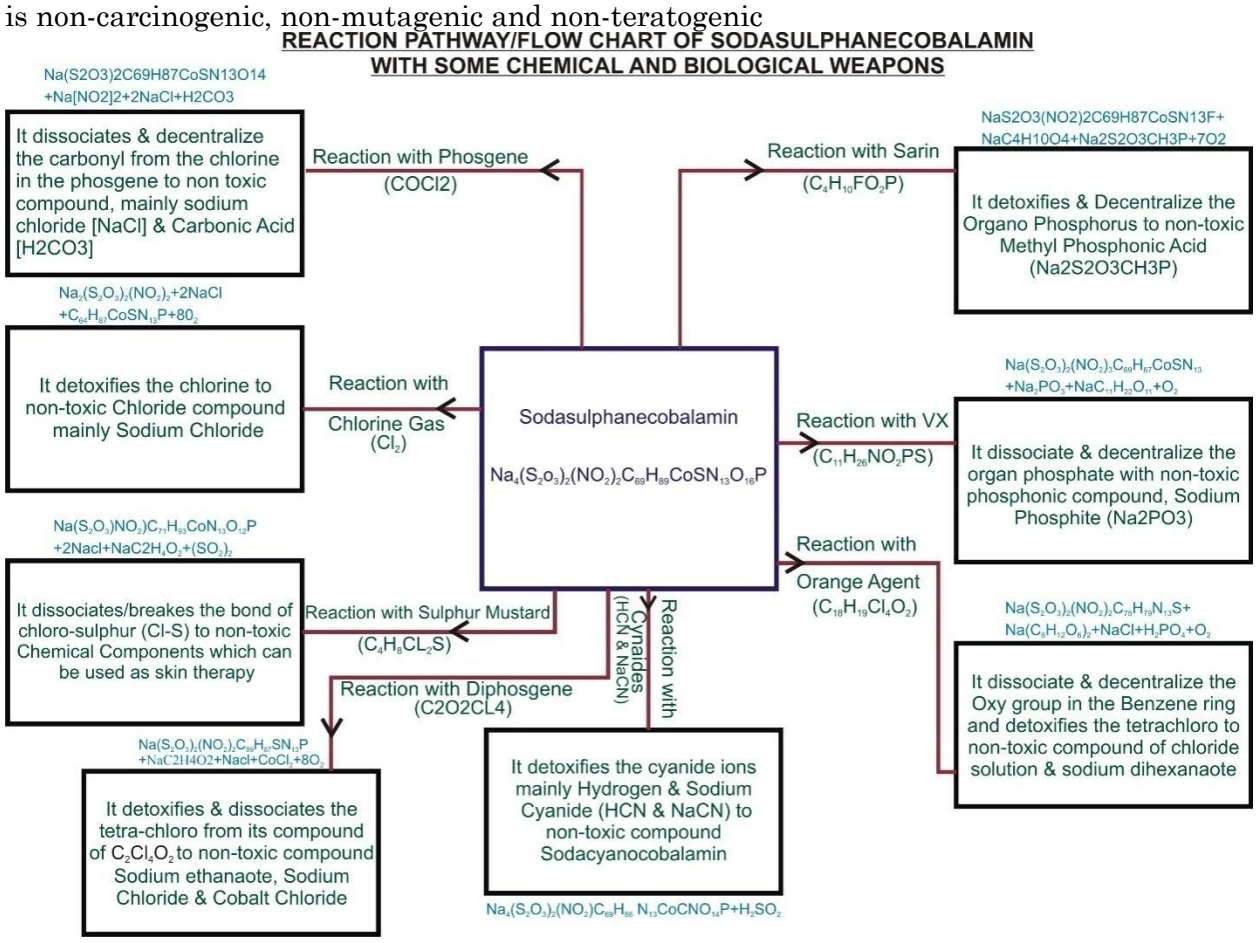
This Research helps to develop the concepts, therapeutic regimens and procedures for the management of chemical warfare agent casualties; developing diagnostic and prognostic indicators for chemical warfare agent casualties; and developing life-support equipment for definitive care of chemical warfare agent casualties.

The most efficient and reliable way to treat chemical weapons is by using SodaSulphanecobalamin. It is non-carcinogenic, non-mutagenic and non-teratogenic




## Biography

Expertise in quantum physics, also on determination of numerical value of dimension on physical quantities. Root mean square velocity and molecule velocity of all chemical elements which is never done before. stoichiometry and periodic properties table that shows the" INTRINSIVE AND EXTRINSIVE PROPERTIES" of all chemical elements. Determination of Molecular Mass and Formula for Air. Computational Mathematics and Application of Small organic Molecules. Antidote of chemical mass weapon (2, 3, 7, 8 - Tetrachlorobenzo-p-dioxin). Critical cGMP and ICH regulations for Pharmaceutical Laboratory. Pollution or environmental remediation studies, anthropogenic effect on petroleum. Synthetic of compound for biological evaluation. Synthetic of helium compound, which is another source of sun. Research on Oil Dispersant. Production of antidote of Cyanide Poisoning.

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# Proximate Composition, Mineral Profile and B-Carotene Contents of New Cultivars Daucuscarota Indigenous to Pakistan

Shahzad Ali Shahid Chatha
Natural Product and Synthetic Chemistry Lab, Department of Chemistry, Government College University Faisalabad, Pakistan

Nadeem Abbas Faisal
Natural Product and Synthetic Chemistry Lab, Department of Chemistry, Government College University Faisalabad, Pakistan

Abdullah Ijaz Hussain
Natural Product and Synthetic Chemistry Lab, Department of Chemistry, Government College University Faisalabad, Pakistan

## Abstract

CRoot vegetables traditionally prepared and eaten with starchy bread are recognized for their adequate nutritive potential. The aim of present study was to explore the nutritive potential of newly invented cultivars of Daucuscarotaon commercial scales. The physicochemical and nutritive attributesof selected cultivars were investigated and the significant results($\rho > 0.05$)obtained viz. moisture (86.6 – 92.89%), proteins (0.56 – 1.68%), crude fibers (1.55 – 3.28%), ash (0.40 – 1.20%), carbohydrates (6.44 – 8.13%), fats (0.27 – 0.46%) and Calorific energy(26.38 – 38.42 kcal/100g).The mineral contents determined by atomic absorption spectrophotometer (AAS)viz. Co (0.19 – 0.48µg/g), Cu (1.20–1.99µg/g), Fe (4.01 – 5.90µg/g), Sr (2.94 – 4.17µg/g) and Zn (2.0–3.15µg/g). Spectrophotometric analysis presented the appreciablelevel of ß-carotene (6.12–14.87 mg/100g) proving the medicated properties of newly invented cultivars of D. carota. All these results proved that the selected cultivars of D. Carotaif consume in adequatequantity, would contribute significantly to the nutritional requisites for human health.

## Keywords

Calorific energy, ß-carotene, Proteins, Carbohydrates

## Biography

Dr Chatha was born in a village (Chak 194/M) of city Hasilpur, Pakistan, in 1980. After getting his basic education, he joined Government College Faisalabad and earned his B.Sc degree with chemistry as a major subject. He received the M.Sc., M.Phil and PhD degrees in Analytical Chemistry from the University of Agriculture Faisalabad, Pakistan, in 2004, 2006 and 2011, respectively. He completed his Post Doctorate from The University of Western Ontario, Canada in 2016.

In 2006, he joined the Department of Chemistry, Government College University Faisalabad, Pakistan, as a Lecturer and he was promoted as Assistant Professor in 2011. He joined University of Western Ontario Canada as Postdoc Researcher in 2015 and After successful completion of Postdoc he was promoted as Associate Professor of Chemistry at Government College University Faisalabad, Pakistan in 2017. During his stay at Government College University Faisalabad, he has proved his abilities on different administrative position (Student Advisor 2008-2014, Additional Senior Tutor 2012-2015, Deputy Chief Security Officer 2014-2015, Chairman Estate Care 2017 to date) in addition to his responsibilities of teaching and research. He has about 60 National/International research publications and more than 20 professional talks at different national/International scientific forums to his credit. Dr. Chatha is Member Executive Council, The Chemical Society of Pakistan; Member, American Oil Chemist Society and Affiliated Member, International Union of Pure and Applied Chemistry.

He has organized more than 13 Scientific Conferences as conveners and member of organizing committees. He has many awards and certificates of honors in the field of Research, Sports and Singing competitions to his credits. He was the recipient of award for Productive Scientist of Pakistan in 2009 to 2014 for his contributions to the field of research innovation by Pakistan Council for Science and Technology. He has supervised more than 50 research students His current research interests include Natural Products Chemistry, Food Chemistry and Textile/Environmental Chemistry.

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# Synthesis Characterization &Biological Application of Some Quinoline Derivatives

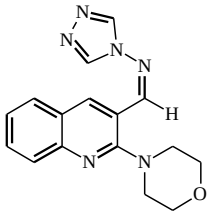
Jalindar Jaware

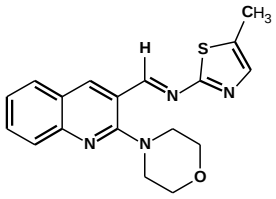
Department of Chemistry SavitribaiPhule Pune University, Pune India

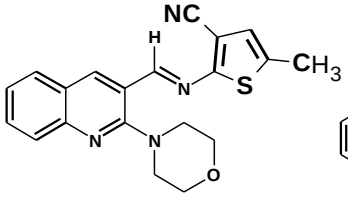
## Abstract

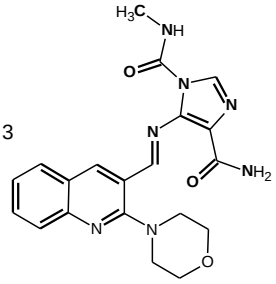
Synthesis of different substituted quinoline imines & corresponding amine derivative from reaction of 2-(morpholin-4-yl) quinoline-3-carbaldehyde and heterocyclic amines in alcoholic solvents at reflux condition. Imines are condensation product of primary amine and aldehyde. This bond has first reported by scientist Schiff in 1864. The lone pair present on nitrogen is SP2 hybridized. Imines containing compounds shows excellent biological and chemical importance. The C=N bond having good synthetic flexibility, easy for preparation, having good potential chelating agents in presence of hydroxyl or thiol group in molecule. Imines are versatile in industrial uses and it is prime area for investigation now a day.

Imines & corresponding amine derivatives of quinoline were synthesized from below key heterocyclic amine as staring material available commercially.









## Key words

Imine, Heterocyclic, Quinolineetc

## Biography

JalindarJawarewas born in Ahmednagar districts of Maharashtra India in 1979. After getting his basic education, He joined University of Pune and earned his B.Sc degree in Chemistry with runner up rank. He received the M.Sc. in Organic Chemistry from same university with first rank in department of chemistry and recorded highest rank over 19 yrs of department establishments. He is pursuing PhD degrees in Synthetic organic chemistry from JJTU in collaboration with University of Pune. His core area of research is Synthetic Organic Chemistry, drug discovery & API process research.

In 2002, he joined Lupin Research Centre Pune as Research Executive in Generic API division. Later on we worked with reputed pharmaceuticals companies in India like Teva API India Ltd, Torrent

Research Centre, Sun Pharmaceutical Industries Limited, IPCA laboratories engaged in high potent & anticancer API- Process research and development. He earned more than 15 yrs of industrial R&D experience during his professional career. He also has an expertise in Process development, Operation management, Technology transfer & Production management etc.

During his academic he received different certification for his excellence performance and special award from University of Pune. During his industrial career he received award for laboratory safety, making organization great place to work by creating gift like culture and he has several patents and publications in his research area.

# Effect of SAHA and 5-Aza-2-Deoxycytidine on GIP Receptors and Insulin Secretion in Cultured Human Pancreatic Cells.

MS.Ronda

Bachelor of Medicine & Bachelor of Surgery, University of Sharjah.

## Abstract

**Objectives**: Examine the effect of SAHA and 5-Aza-2-deoxycytidine on GIPRs expression and insulin levels in human pancreatic cells. Explore the possibility of overexpressing GIPRs as a therapeutic target for Diabetes Mellitus.

**Background:** The incretin action mediated by glucose-dependent insulinotropic polypeptide (GIP) is impaired in diabetic patients which leads to a decrease in insulin level. It has been shown that this functional impairment is mainly due to marked down-regulation of the GIP receptors (GIPRs) rather than a reduction in the GIP levels in those patients.
SAHAis a histone deacetylase inhibitor, while 5-Aza-2-deoxycytidine inhibits DNA methylation and both have been used as gene expression modifiers.

**Methods:** human pancreatic cells (1.1B4 human) were cultured in hyperglycemic condition and divided into 4 groups: control, a DMSO, an AZA and a SAHA groups. Those 4 groups were duplicated, once were treated with GIP and another without GIP. Following 72hrs the cells were harvested to measure the GIPR, GLPR and insulin expression by PCR while the cell culture media was used to measure insulin concentration by ELISA. The values reported here is our preliminary results as means ± SE of at least 3 replicates from each group. After completing the experiments, statistical analysis among groups will be performed using ANOVA and Student's t-test. $P < 0.05$ will be considered significant.

**Results:**
The hyperglycemic state reduced the expression of GIPR to unmeasurable levels in control and DMSO groups with or without GIP addition, AZA and SAHA significantly increased the expression of GIPR, AZA with GIP group had increased expression for up to five folds higher than SAHA with GIP group. Despite this increase in GIPR expression, insulin secretion was decreased with the addition of AZA and SAHA with a more significant decrease associated with SAHA

**Conclusions:**
From our preliminary data, it seems that AZA and SAHA could overexpress GIPRs and thus may improve the endogenous insulin level in Diabetic Mellitus. These experiments need to be repeated to confirm our findings, optimize its conditions, and determine its mechanism. Further studies are needed to explore the potential of gene expression modifiers on GIPRs and insulin signaling pathway.

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# Formulation of Therapeutics Loaded Matrix Tablet using Okra Gum

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## Abstract

Hydrophilic matrices have always been point of interest during the development of an oral sustained-release formulation. Such polymeric system particularly from the natural origin can be used for controlled release of both water-soluble and water-insoluble drugs. So in the present study, it was planned to use the okra gum for the development of thiocolchicoside loaded matrix tablet. For obtaining better sustained release formulation, drug and polymer ratio was optimized and it was found that 1:2 ratio of drug polymer shows better matrixing ability with optimum release behaviour. Lactose was used as channelling agent for imparting the modification in drug release. During the evaluation of optimized batch, it was found that the prepared batch comply with all the compendial test. During the release study and mathematical treatment of the data, it was observed that it follows to fickian diffusion with complete release of about 92.07% of therapeutics.In the present study, it can be concluded that okra gum alone or in combination with other polymers may be used for the formulation matrix based system for thiocolchicoside and others drug too. It can also be used for the formulation of other delivery system where matrix formation is required.

## Key words

Matrix tablet, okra gum, channelling agent, thiocolchicoside, drug release

# Microencapsulation of Selected Essential Oil Components for Mosquito Repellent Finishing of Textile

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## Abstract

Microcapsules containing camphor,1-octanol,limonene, cineole and menthol wereprepared by emulsion extrusion method and applied to cotton textiles in order to study the mosquito repellent efficacy of the fabrics. Essential oils components from microcapsules were confirmed by Gas chromatography at different time intervals. Insect repellent activity was assessed by exposure of treated fabric to mosquitoes and comparison of treated and untreated fabric. Insect repellent finish was prepared using microencapsulated slurry and applied on PC fabric (76 x 68/30 x 30) by padding using a conventional pad-dry cure method. Fabrics treated with microencapsulated essential oil components presented a higher and longer lasting protection from insects as compared to untreated fabrics. Treated fabric was analyzed by FT-IR and GC-MS for the presence of essential oil components at different time intervals. This methodology required no additional investment for textile finishing industries, which is a desirable factor in developing countries.

## Biography

I did my BS(H)-Chemistry with specialization in Analytical Chemistry in 2016 from Government College University, Faisalabad,Pakistan and now it's going my last semester of MPhil-Analytical Chemistry. I am highly desirous of having good research experience. In future I plan to get my PhD degree with complete dedication towards applied research.

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# Effect of Heavy Backpack Weight on Physical and Mental Health Among Primary School Going Children: A Study Conducted in Some Private Schools in Hojai District of Assam

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## Abstract

Aim: In this competitive era, even our primary school going children suffer a lot of physical and mental strain from heavy backpack weight. The present study was conducted to determine the heavy backpack weight in correlation with body weight and its effect on physical and mental health among primary school going children. Material & Methods: A cross-sectional study was conducted in 10 private primary Schools in the Hojai District of Assam, among randomly selected 1200 students, 120 students from each school and 20 students in each class from Nursery to 5th standard during 16 August 2016 to 15 December 2016. The study was done by measuring the weight of Bag and body weight of the students and by asking different standard questionaries' to students, their teachers and guardian wherever applicable. Results: In result, we found that the bag packs weight in nursery & KG (4.91±0.487 Kg), Class One (5.27±0.594 Kg), Class Two (5.18±0.451Kg), Class Three (5.64±0.341 Kg), Class Four (5.75±0.285Kg) and Class Five (6.45±0.176Kg) expressed in mean± S.D, which are 34.47%, 31.60%, 29.01%, 25.09%, 24.65% and 23.91% of their own body weights respectably. According to American Chiropractic Association, weight of elementary students' bags should be less than 10 percent of their body weight but in our study all results were found much higher. Students used to suffer from back pain, shoulder pain, neck pain, spine pain, muscle strain, headache, concentration deficit and even insomnia. Conclusion: In conclusion, we recommend the backpack should weigh less than 10 per cent of your child's body weight. Teachers and parents should work together to achieve this goal. Correct lifting and carrying techniques, installation of lockers at schools is often raised as a solution to carrying heavy school bags, making all in one type of books and note copy for students which will minimize the students back pack weight.

## Keywords

backpack, weight, school children, back pain

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# Placental Extract Loaded Liposomal Drug Delivery System & Their Evaluation

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## Abstract

For the drug development, there are various drug delivery systems, which are highly potent and have very low therapeutic indication, which can be targeted to the desired diseased site by using the liposomal DDS. The drug loaded in liposomes may have significantly altered pharmacokinetics. The efficacy of the liposomal formulation depends on its ability to deliver the drug molecule to the targeted site over a prolonged period of time, simultaneously reducing drugs toxic effects. The drug are encapsulated within the phospholipids bilayer and which expected to diffuse out from the bilayer slowly. The placental extract can be incorporated in the liposomal drug delivery system. On the other hand, the placenta is an organ that helps in synthesizing cell growth factor, i.e., a substance that controls the growth and replication of cells. Placenta has very effective analgesic and anti-inflammatory effect, it has very quick wound healing properties in case of very severe accidental condition. The prime concern of liposomal loaded placental extract is to enhance half life of drug because it has very short half life, with the help of this novel formulation of liposomal drug delivery system we have achieved the formulation at controlled release manner with suitable bioavailability. The drug content was measured in the range of 98.34% w/w to 99.79% w/w for the liposome formulations. The encapsulation efficiency was found to be 47.01% to 52.01%. the result indicated that the formulation f-3 i.e. liposomes prepared by Lipid film Hydration method showed highest drug content (%w/w) of 99.79 and highest encapsulation efficiency (%w/w) of 52.01. Liposomes prepared by Ethanol Injection Method i.e., F1showed lowest drug content (% w/w) of 98.34 and lowest encapsulation efficiency (%w/w) of 47.01. Particle size of the drug was determined by transmission electron microscopy in the range of 200 nm to 3µm. Largeuni-lamellar vesicles were prepared by ether injection method and small uni-lamellar vesicles were prepared by ethanol injection method. The drug stability study was carried out at 25 degree centigrade for 3 months.

## Keywords

Liposome and Phospholipids, Application of Liposome, Placenta Extract and it's Applications.

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# Standardization of Nalpamaradi Choorna, an Ayurvedic Formulation used as Antiseptic for Wound Healing in Southern India

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## Abstract

The importance of medicinal plants and traditional health systems in solving the health care problems of the world exist from time immemorial. Man explored his immediate natural surroundings for eternal health and longevity and for remedies to relieve pain and discomfort. Wound healing is the process of repair that follows injury to the skin and other soft tissues. The barks of four Ficus species, referred to as 'Nalpamaram' in Southern part of India, namely, F. benghalensis, F. racemosa, F. religiosa, and F. microcarpa, are considered to be very effective as anti-septic, antioxidant, astringent, and anti-inflammatory agents.

In the present study we have developed a method for standardization of the formulation 'NalpamaradiChoorna', containing the barks of these four species, using HPTLC, a modern analytical technique. The herbal formulation was standardized using Caffeic acid and Alpha lupeol as marker compounds for the first time. The method is found to be simple, precise, reproducible and linear in the range of 100-800 ng for Caffeic acid and 50-200 ng for Lupeol.

## Keywords

Ficus sp., Nalpamaradichoorna, Standardization, HPTLC, Caffeic acid, alpha lupeol .

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# Targeted Drug Delivery Using Herbal Nano-Phytosomes for the Management of Oral Sub-Mucosal Fibrosis

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## Abstract

Oral sub-mucosal fibrosis (OSF), a premalignant state characterized by inflammation, lack of blood supply, dryness and rigidity of the mouth. Presently available synthetic medication Pentoxifylline (extended release tablets) has been reported to have a lot of drug-drug adverse interaction. It is also well know that allopathic medications especially extended or sustained release doses cause toxicity in patients undergoing prolonged medication. Aim of the study was to investigate a targeted drug delivery system to manage OSF by developing herbal nano-phytosomes of Azadirachita indica incorporated in a mucoadhesive buccal film. The Phytosomes prepared were evaluated for drug entrapment efficiency by UV spectroscopy (98%), complex formation by FTIR and NMR and stability for 3,6 and 9 months. The formulated buccal film was studied Ex vivo to determine permeation using porcine buccal mucosa, and was reported to be 33-37%.

## Biography

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# Synthesis and Biological Evaluation of Novel 1-(3-methyl -1-phenyl-1H-pyrazole-5-yl) Piperazine Amide and Sulfonamide Derivatives.

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## Abstract

A series of twenty novel 1-(3-methyl -1-phenyl-1H-pyrazole-5-yl)piperazine amide and sulfonamide derivatives (II a – II t) were synthesized in multistep reaction from commercially available Piperazine-1-carboxylic acid tert-butyl ester, 3-Oxo-butyric acid tert-butyl ester and phenyl hydrazine as a starting material. The chemical structures of the synthesized compounds were confirmed by means of 1HNMR, 13C, and mass spectral data. High yield and high purity indicates lack of side reaction and by product formation. The synthesized compounds were then examined for their antibacterial and antifungal activities. Some of them were found to possess good antibacterial and antifungal activity.

## Key words

Synthesis, piperazine, substituted phenyl pyrazole amide, sulfonamide, antibacterial, antifungal activity.

## Biography

Mr. Umesh N Bhise is born in small village of Maharashtra province of India, in 1979.After getting his basic education he completed his graduation and post graduation in Organic Chemistry from Post Graduate School for Biological Studies, Ahmednagar College Ahmednagar affiliated to Savitribai Phule Pune University", one of the premier universities in India, in 1999 and 2001 respectively.

In 2001, He was selected in Campus arranged by Zydus Cadila, one of the top pharma companies from Ahmedabad, India. After that he worked for the Pharma companies like Glenmark pharma, Altana Pharma (German group), Wockhardt Ltd. At present He is working with Laxmi Organic Industries Ltd. as a Manager- R&D and also perusing his PhD degree from Dr. BAM University, Aurangabad, India.

He has four international publications on his name and one US patent during his carrier. He was awarded "Eklavya Scholarship" during his Masters program by Maharashtra Govt. IndiaHe has attended different National conferences held in different parts of India.

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# Pharmacovigilance and Novel Drug Delivery System for Herbal Drugs! A Challenge

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## Abstract

Alternative treatment modalities, herbal drugs, formulations and practices are widely accepted and used all over the world. Herbal agents are generally regarded as safe, though there are no scientific evidences for such claims. Severe limitation exists in bioavailability of herbal drugs when administered orally or topically.Although, by using novel drug delivery system the active constituent remains potent, if the safety profile remains unchanged is still a challenge.Several problems relate to the ways in which Herbal medicines are named, perceived, sourced, and utilised. The myth that nature is safe and can be safely consumed without even a physician's prescription has led to large-scale self medication all over the world, often leading to side-effects, or unwanted after-effects. The current model of pharmacovigilance and its associated tools have been developed in relation to synthetic medicines, applying these methods to monitor the safety of herbal medicines presents unique challenge. The purpose of pharmacovigilance is to detect, assess, and understand and to prevent adverse effects or any other possible problems related toherbal, traditional, and complementary medicines. Systematic pharmacovigilance is essential for reliable information on the safety of herbal medicines for the development of appropriate guidelines for effective use.

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# Formulation, Development and Characterization of Mouth Dissolving Films Containing Rizatriptan

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## Abstract

SIn the present study wasto formulate and develop a mouth dissolving films of rizatriptanfor the treatment of migraine.The orally fast dissolving films is a new drug delivery system to designed for the oral drug delivery system and develop on the basis of trandermalpatch.Mouth dissolving film (MDF) is a better alternate to oral disintegrating tablets having a rapid onset of action due to its novelty,and the consequent to improved patient complaience.HenceRizatriptan can be conveniently administered orally in the form of films. Fast dissolving films using hydroxyl propyl methyl cellulose E5,glycerin,sodium sachrine and citric acid were formulated using solvent casting technique.The film weight was found to be ranges from (35-45)mg which ensured uniform distribution of drug in all the formulations. The optimized formulations were evaluated for their surface pH,swelling properties,weight variation, disintegration time ,thickness and invitro drug release.All the formulation containing HPMC E5 combine with xanthan gum as a thicking agent has shown excellent in vitro disintegration time and in vitro cumulative percent dissolution compared to other formulations.

## Keywords

Fast dissolving films, Solvent casting,Rizatriptan,Xanthan gum.

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# Synthesis and Molecular Docking Studies of Schiff's Bases of Biphenyl Scaffold against C. Albicans

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## Abstract

Schiff's base constitutes a significant class of compounds for new drug development. They are widely used for industrial purposes and also exhibit a broad range of biological activities. In the present work, a series of Schiff's bases based on biphenyl scaffold have been synthesized to target Candida albicans, one of the leading infectious fungi. These molecules were purified and characterized by IR and 1H NMR spectroscopic techniques. The biphenyl derivatives showed enhanced log-P values and increased tropical polar surface area (TPSA) of the molecule, acting as hydrophobic carriers across biological membrane, thus, increasing the bioavailability of compounds. These compounds exhibited a prominent fungicidal action at lower concentration compared to Fluconazole, which was used as standard.

The in-silico analysis (Molecular Docking & ADMET) provides an analysis of the possible antagonism of the target enzyme 14-α-demethylase which plays a moot role in cell wall synthesis, correlating in-vitro fungicidal activity.

## Keywords

Biphenyl, anti-fungal activity, docking and ADMET studies.

# Mathematical Models in Pharmacokinetics

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## Abstract

In the problem an attempt has been made to study the ways in which the human body deals with drugs or tracers administered into it, by means of compartmental modeling.
Compartment modeling is very convenient for biochemical transformations, but can also be applied to various problems. Most of the models discussed are deterministic in nature. The linear deterministic models discussed are
1. The metabolism of Glucose,
2. Repeated application of penicillin,
3. Diagnostic testing of liver, and
4. Action of beta-blockers
The model for the diagnostic testing of liver was identified using experimental data and the liver of the person concerned was found to be not functioning properly.

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# Synthesis, Characterisation and Biological Evaluation of Some Novel Substituted Pyrazine and Quinoxaline

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## Abstract

An efficient environmentally benign condensation of 1,2-diketones and 1,2-diamines for a facile synthesis of pyrazines&quinoxalines was carried out in eco-friendly solvent in the presence of an inexpensive, non-toxic and metal ion free catalyst at ambient temperature. Short reaction time ,environmentally benign condition , easy workup and high yield are the special features of this method

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# Computer Aided Drug Design: Application in nanocarrier and Drug Discovery

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## Abstract

Computer-Aided Drug Design (CADD) is a growing effort to apply computational power to the combined chemical and biological space in order to streamline drug discovery design, formulation development and optimization. But this tool can act as a virtual shortcut, assisting in the expedition of this long process and potentially reducing the cost of research and development. Now the researchers are focusing on modification of carrier system, as the possibilities to modify polymeric or hybrid structures that could influence the activity, bioavailability, and drug safety.This application has been widely used in the optimization of the pharmacokinetic profile, toxicity profile and avoid safety issues. It will give the long-term safety of the new nanocarrier formulations. The high complexity and ability to interact strongly with cells on a molecular level and give enormous improvement in therapeutic efficiency. It will be helpful for the patients and can fully benefit from new, more efficient and safe drug delivery systems.

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# Global Sceneraio and Opportunities/Challenges in Designing Targeted Delivery

## Prof. Dr. Harvinder Popli

Dean, School of Pharmaceutical Sciences, Delhi Pharmaceutical Sciences and Research University

## Abstract

Pharmaceutical companies are struggling to innovate new molecules and the focus of developed as well as developing countries is to provide affordable healthcare solution. In the era of revolutionary technologies and emergence of biologicals to treat critical diseases challenges are manifold to design effective drug delivery.

Targetted drug delivery is gaining importance for designing of delivery of biological molecules besides development of integrated nanomaterials and nanocomposite materials for innovation in drug delivery.

In the global market for advanced drug delivery products contribute to 17 per cent amounting to $104 billion and estimated to be valued at nearly $212.8 billion by 2021

Global market for nanotechnologies is projected to US$ 136 billion in 2021 in the ratio of 60:40 for nanocarriers which include nanoengineered materials and liposome to nanocrystal based nanomedicine. Over 1000 clinical trials were found for 30 devices and 142 nanomedicinein the chronic and infectious diseases.

From novel delivery to marketed nanoformulations, Nano technology is the most promising platform and the future of drug delivery is targetting biologicals which includes Monoclonal antibodies, biosimilars, protein /peptide delivery. Innovation is the need of an hour as its estimated that nearly 50 % of the new drugs cannot be delivered orally. There is demand towards predictive , preventive and personalized healthcare .

The keynote address will comprise these novel delivey systems including conjugating peptides/antbodies to surface of nanoparticulate system and emphasise needs to focus in field of bio nanoengineering , scaffolds for administration of various proteins, peptides, gene therapy , plasmids using novel delivery system besides futuristic approaches of Personalized medicines.

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# Microwave Assisted Synthesis of Tetrahydrobenzo [B] Pyranvia Multicomponent Reactions Using [Et3NH][HSO4] as Ionic Liquid Catalyst

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## Abstract

A vast number of chromenesheterocycles have been isolated from natural sources having significant pharmaceutical potential. Some of them are currently in use as potent drugs and more are in clinical trials.The dihydropyran type natural product crolibulinand the pharmaceutical HA14-1showed anticancer properties [1].Ionic liquids (ILs) have created interest as an environmentally benign media for the catalytic applications due to their unique chemical and physical properties, such as low vapor pressure, high thermal and chemical stability, ease of recyclability and controlled miscibility . In view of this, we have described a highly efficient, safer protocol by using microwave assisted synthesis of tetrahydrobenzo[b]pyran conjugates catalyzed by Bronsted acidic ionic liquid [Et3NH][HSO4] in excellent yields. The protocol offers cost effective, environmentally benign, solvent-free conditions and recycle-reuse of the catalyst.

## Keywords

Tetrahydrobenzo [b] pyran, ionic liquid [Et3NH][HSO4], Microwave irradiation, Green protocol, anticancer properties.

# Silk-fibroin: A targeted drug delivery for the treatment of breast cancer

## Dr. Mohammed Gulzar Ahmed

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## Abstract

Cancer is a multi-gene, multi-step disease originating from a single abnormalcellthere are several types of cancer, such as; Bladder, Breast, Colorectal, Kidney, Lung,Lymphoma, Melanoma, Oral & Oropharyngeal, Pancreatic, Prostate, Thyroid, Uterinecancerand many more.Now days, breast cancer is the most frequently diagnosed life-threatening cancer in women and the leading cause of cancer death among women. Nanotechnology-based approaches used to endorse clinical improvement from a disease also help to understand the interaction of malignant cells with their microenvironment. Receptor-based targeting is another approach for drug delivery which is undergoing clinical trials. Silk fibroin, a natural fibrous protein, is a more biocompatible biomaterial than some commonly used biological polymers such as collagen and poly(l-lactic acid) (PLA), The silk fibroin is partly crystalline and partly amorphous with fibroin core (72-81%) and a surrounding glue protein sericine (19 –28%) it is considered as one of the promising biomaterial used to target and deliver the drugs in cancer therapy because of their slow biodegradability, self-assembling property, biocompatibility, controllable structure and morphology when compared to traditional chemotherapeutic drugs. The goal of thispresent research is to formulate a silk fibroin based targeted nanoparticles to overcome the hurdles of conventional drug therapy approach for the treatment of breast cancer.

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# Processing of Vegetable Oil Refinery Deodoriser Distillates for Regeneration of Value Added Nutraceuticals and Specialty Chemicals

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## Abstract

The deodoriser distillates (DOD) a byproduct of vegetable oil refinery are obtained by distillation of edible oil plant feedstocks, either chemically modified or physically, during the refining process of these oils. Deodorizer distillates usually consist of complex mixture of glycerides, free fatty acids (FFA) and unsaponifiable matter (sterols, such as tocopherols, a group of major natural antioxidants) in variable quantities which have several industrial applications. The global need of these important components has been surpassed than their availability. Hence, these DOD have great deal of interest in the field of oil technology to develop new and improved value added products for different applications in cosmetics and pharmaceuticals.The DOD of five different vegetable oils was considered to be a rich source of several valuable components. In our work, the DOD of five Indian soybean, sunflower, palm, ricebran, corn oil obtained from five different industries processing edible oil was studied for its physico-chemical characteristics, its fatty acid composition along with tocopherols, phytosterols, fatty acids and recovery of phytosterols for use in nutraceutical products. These valuable components may find use in foodstuffs, pharmaceutical medications, cosmetics formulations and associated industries possibly as a nutraceuticals. Isolation and purification of valuable components obtained from DOD with cost efficient processes and commercial applications, the work in this direction has been initiated.

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# Evaluation of Ophelic Acid Isolated From Aqueous Extract of Leaves of Swertia Chirayita for Antihyperglycemic Activity and B-Cells Regenerative Effect in Stz Induced Diabetic Rats

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## Abstract

**Backgrounds:** Diabetes mellitus is a common health problem worldwide, and the prevalence of this disease is rapidlyincreasing. Despite the availability of synthetic drugs, herbal formulations are desirable, and hence they are investigated with renewed interest all over the world. The number of adults affected by diabetes in the world is expected to increase from 135 million in 1995 to 300 million in the year 2025. Chirayata, also known as Indian gentian contains two bitter principles are Ophelic acid and Chiratin, the former being in largest amount and found to be having anti hyperglycemic effect.

**Aims:** The aim of this study was to examine the antidiabetic potential of Ophelic acid in a diabetic rat model and find out the whether it is due to increasing insulin release or not.

**Methods:** Acute oral toxicity studies, Induction of Diabetes and experiment is designed as follows
Group I: Normal control rats received sterile water.
Group II: STZ treated diabetic control rats received sterile water.
Group III: STZ treated diabetic rats received 200 mg/kg of Ophelic acid
Group IV: STZ treated diabetic rats received 400 mg/kg of Ophelic acid.
Group V: STZ treated diabetic rats received 2.5 mg/kg of Glibenclamide.
All the solutions were given once daily using an intragastric tube for 30 days. After 30 days Assessment of oral glucose tolerance, analysis biochemical parameters like glucose, insulin,AST, ALP and ALTand Histopathological studies were done.

**Results:** Ophelic acid treated rats were found to shown decreased glucose levels and increased insulin levels. From the immunological studies and histopathological studies, it was found that the ß-cells were increased.Significant reductions in the activities of theAST, ALP and ALT enzymes in treated diabetic rats withOphelic acid indicated the hepatoprotective role in preventing diabeticcomplications.

**Summary/Conclusion:** In the present study, the hypoglycemic action depended on insulin secretion. This could be dueto the insulin secretagogue effect of antihyperglycemic constituents. The results of this study also demonstrated that Ophelic acid had regenerative potential with increased insulin-immunoreactive ß-cells in STZ-induced diabetic rats.

**Keywords:** Ophelic acid, STZ-induced diabetic rats and Swertia Chirayita

## Biography

"My self Dr. Vinay Kumar is currently working as Post-Doctoral fellow atNirmala college of Pharmacy, Guntur, 522503.I had received his Doctoral degree or PhD in 2014 from the Andhra University. Dr. Vinay Kumar completed his Masters M.Pharm from the SRM University, Chennai, India. I had authored several publications in various journals and books. My publications reflect my research interests in Phytopharmacology and Diabetes mellitus.

Research Interest:

Clinical Research and development, Drug regulatory affairs, Pharmacovigilance, Screening methods for Anti Diabetic activity and other animal models. Handling of animals and equipment related to Pharmacology lab.

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# Antioxidant, Antibacterial, Antimalarial Activities and Cytotoxicity ofEssential Oils from Two Origanum Species from Pakistan

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## Abstract

The present work examines the antimalarial, antibacterial, antioxidant potentials and cytotoxicity of the essential oil of two Origanumspecies i.e. Origanumvulgareand O. majorana, native to Pakistan. GC and GC–MS analysis of O. vulgareand O. majorana essential oils showed the identification of 43 and 39 components representing 92.9 and 96.4% of the total oil. The major constituents of O. vulgareessential oil were thymol (21.6%), carvacrol (18.8%), o-cymene (13.5%) and α-terpineol (8.57%). Whereas, the main constituents of O. majoranaessential oil were terpinene-4-ol (20.9%), linalool (15.7%), linalyl acetate (13.9%), limonene (13.4%) and α-terpineol (8.57%). The haem polymerization inhibition test was proposed as a possible assay for the detection of antimalarial activity of essential oils. The disc diffusion and modified resazurinmicrotitre-plate assay was used to evaluate the antimicrobial activity of the essential oils. The antioxidant activities were determined by using complementary tests, namely, DPPH radical-scavenging, percent inhibition of peroxidation in linoleic acid system and bleaching ß-carotene assays. The cytotoxicity was tested against human breast cancer and human prostate cancer cell lines using the MTT assay. Both tested essential oils exhibited notable antibacterial, antioxidant and cytotoxic activities, whereas, only O. vulgare essential oil exhibited extraordinary antimalarial activity.The results suggest that the tested essential oils are rich sources of phenolic antioxidant and could be used as natural preservative ingredients in the food industry.

## Keywords

Anticancer, Antimalarial, Origanum, Lamiaceae, Functional Food

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# Efficacy of Cr Nanoparticles Supplementation on Growth Performance, Nutrient Digestibility and Hematological Parameters of Catla Catla Fingerlings

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## Abstract

The research work was conducted to estimate the effects of Cr nanoparticles on growth performance, nutrient digestibility and hematological parameters of Catla catla fingerlings fed Nano- Cr particles supplemented sunflower meal based diets. The experiment was consisted of seven test diets formulated by using Cr nano particles at graded levels (0, 0.5, 1.0, 1.5, 2, 2.5 and 3.0 mg $kg^{-1}$). Chromic oxide was used as an inert marker. Fingerlings were fed at the rate of 5% of their live wet weight. Maximum improvement in growth performance (weight gain 197%, FCR 1.49, SGR 1.21 and survival 100%), nutrient digestibility (crude protein 71% and gross energy 69%) and hematological parameters (WBCs 7.87 ×103$mm^{-3}$, RBCs 3.04 ×106$mm^{-3}$ and Platelets 67) was observed in the fingerlings fed on test diet supplemented with 2 mg $kg^{-1}$ of nano Cr while crude fat digestibility (79%) was found highest with test diet supplemented with 1.5 mg $kg^{-1}$ of nano Cr. These values were significantly different from fish fed on control and other test diets. It was concluded that the supplementation of Nano- Cr particles at the rate of 2 Nano-Se (mg $kg^{-1}$) is best to improve growth performance, nutrient digestibility and hematological parameters of C. catla fingerlings fed sunflower meal based diets.

## Keywords

Nano- Cr particles, growth, nutrient digestibility, hematology, C. catla

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# Transition Metal Complexes/Organometallic Compounds as Anticancer/Anti HIV Drugs or in Pharmaceutical Industry

Prakash Kinthada

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## Abstract

Cancer is a dreadful disease and any practical solution in combating this disease is of paramount importance to public health. Cancer patients have burdened by drug induced toxic side effects, and no turned to seek help from the complementary and alternative medicine hoping for a better cure. Research on Platinum based drugs and Non Platinum based drugs is a Multi-Million Dollar Industry in USA and there is every need to produce safe drugs for the cure of this monstrous disease. Flavonoids have a long history of use in traditional medicines in many cultures. The phytochemical, curcumin is one of the major dietary flavonoid, belonging to a group of flavonol, Curcumin is a natural polyphenol. It is highly potential molecule capable of preventing and treating various cancers. Various dietary chemo preventive agents, turmeric powder or its extract are broadly used as therapeutic preparations in Indian System of medicine. We provide a summarized synthesis and structural determination of CurcuminOxime, CurcuminThiosemicarbazone derivative of Gold (III) complex. The use of these analogs for prevention of cancer tumor progression and treatments of human malignancies.A pharmacologic agent for treating and/or preventing cancer, among other diseases and conditions, and particularly breast, prostate, and pancreatic cancer, in humans and animals. The novel pharmacologic agent is an isoflavonoid or isoflavonoid mimetic covalently attached to a cytotoxic pharmacophore that, preferably has the ability to conjugate with a metal salt to form a more potent metal complex, particularly a Au (III) complex and other complexes of Platinum, Palladium, Ruthenium, Copper etc.
My talk would mainly encompass different Transition Metal Complexes/Organometallic Compounds that are presently used as drugs, especially Anticancer and Anti-HIV drugs, apart from Anti-inflammatory, Antimicrobial, Antibacterial and diseases like Arthritis and Parkinson's Disease etc. The talk would mainly focus on the use of Medicinal Chemistry and it's application to Drug Design and Development in Pharmaceutical Industry , especially Transition Metal Complexes and Organometallic Compounds viz. Gold, Platinum, Palladium And Ruthenium apart from Copper, Cobalt, Iron, Nickel, Zinc, Cadmium etc.

The main emphasis of my talk would be on Different class of Ligands, their Schiff's Bases and Transition Metal Complexes especially Au, Pt, Pd and Ru, with the main aim of designing, developing very novel small molecules, as possible and extremely potential candidates as Anti-cancer and Anti-HIV drugs. The talk would provide an overview of current programs being undertaken in our laboratories, especially focused on the development of potent ligands capable of recognizing Binding sites and diverse strategies employed by my group for elucidation of Anti-Cancer and Anti-HIV drug Leads to Circumvent the problem caused by Cis-Platin.

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We have synthesized and characterized several phytochemicals from Traditional Medicinal Plants and isolated some phytochemicals and made the corresponding Oximes, Thiosemicarbazones and Substituted thiosemicarbazones as ligands and synthesized, characterized, structurally elucidated their Transition Metal Complexes especially with Gold, Platinum, Palladium, Ruthenium, Copper etc. and Studied their Anticancer Activity, Nuclease activity etc. and tested their potential as Anticancer Drugs.

The main aim of our extensive/preclinical Pharmaceutical development program is to investigate the use of these extremely novel small molecules-metal complexes/compounds of phytochemicals, flavanoids etc., which have very interesting structural features and properties and hence are excellent candidates as Anti-Cancer and Anti-HIV drugs .The main aim of our research is Design ,Development and Synthesis of Transition Metal Complexes/ Organometallic Compounds that would certainly help to bring this force of nature from BENCH to BEDSIDE and enhance Cancer Killing with less toxic effects and would certainly lead to initiation of clinical trials.

## Biography

Prof.Dr.Prakash. M.M.SKinthada, a Professor in the Department Of Chemistry at Sri Vidyanikethan Engineering college,JawaharLal Technological University, Anantapur, A.RangamPeta, Tirupathi, INDIA. Earlier I was an Associate Professor in Chemistry ,GIT,GITAM University, Visakhapatnam, INDIA. Ihave recently returned from USA, where I was a NIH visiting fellow at KARMONAS CANCER RESEARCHINSTITUTE, Wayne State University School OfMedicine. Earlier I was a Royal Society Visiting Scientist in theInorganic chemistry laboratories at the University of Oxford,UK, working on" Transition metal complexes as Anticancer Drugs".Earlier I was a visiting fellow at the Department of Chemical Engineering and Applied Chemistry at Aston University, Birmingham.Prior to that I was a Nehru Centenary British Council Fellow in theorganometallic laboratories at Imperial college of Science, Technologyand Medicine, London, UK. Prior to that I was a CSIR Researchassociate in the Organometallic laboratories, Department of chemistry,INDIAN INSTITUTE OF TECHNOLOGY,NEWDELHI,INDIA. I have published allmy research in high impact international journals and Presented papersin International Conferences including American Chemical societyConferences.I have published 33 International publications and 31international conference presentations including American ChemicalSociety conferences.

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# Risk Based Monitoring Defined in Clinical Development of Drug

Dr. Ujwala V. Salvi

Nucleon Therapeutics, University of Mumbai. India

## Abstract

Risk Based Monitoring Defined

ICH E6:1.38: The act of overseeing the process of a clinical trial, and of ensuring that it is conducted, recorded, and reported in accordance with the protocol, Standard operating procedures (SOPs), GCP, and the applicable regulatory requirement.

Monitoring is not solely the job of site Monitoring and is Cross-functional quality management.

Risk Based Monitoring is about evaluating risk before study starts and planning for how to mitigate potential risk.

Guidance from the US Food and Drug Administration (FDA) outlines three steps in a risk-based approach to monitoring:

Identify critical data and processes. To accurately monitor the quality of a study and the safety of its participants, the sponsor must know which elements are most important for each particular study – from informed consent to eligibility screening and tracking of adverse events.

Perform a risk assessment. A risk assessment involves determining specific sources of risk and the effect of study errors on those risks.

Develop a monitoring plan. According to FDA's guidance, a monitoring plan should "describe the monitoring methods, responsibilities, and requirements of the trial." The plan is responsible for communicating risks and monitoring procedures to everyone involved in monitoring the trial.

## Biography

Dr. Ujwala V. Salvi, Founder, Chief Executive Officer & Principal Consultant has over 15 years of experience across the global and local Pharmaceutical/CRO, Tier I Medical Devices and BPO industry.

A MBA from Indian Institute of Management, Kolkata, Doctorate in Applied biology, trained Six Sigma Black Belt and various Project management tools, with core Experience in a wide range of Therapeutic Areas, and worked at all stages of Clinical Development from Phase II to production of clinical documentation necessary for product license applications. She has worked in large global operations, managed strategic relationships, and played a key role in winning new business, setting up off-shored partnerships and in identifying new BU service lines and growing existing ones.

Her areas of expertise include Clinical Trial operations, Risk Based Monitoring, Medical Writing and data publication, PVG, and feasibilities of new drug development and Analytics.

She is an industry expert, has been involved in key global industry forums such as the DIA, SCDM, CII and CPHI

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# Revolutionary Medical Treatment- Personalized Medicine

Mr. Keshari Roshan
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Prof. HarvinderPopli
Delhi Pharmaceutical Sciences and Research University ( DPSRU), Govt . of NCT Delhi

## Abstract

Personalized prescription alluded to as exactness or individualized drug is a developing field of medication that utilizations indicative instruments to distinguish particular organic markers, regularly hereditary, to help survey which restorative medicines and methods will be best for every patient. It is prescient, preventive, and participatory prescription. The ideal treatments in view of the setting of a patient's hereditary substance or other sub-atomic or cell examination. It is utilized as a part of the treatment of countless Medical condition like hematology, gastroenterology, neurology, endocrinology, cardiology, irresistible ailment, psychiatry and all the more particularly tumor. In the previous 10 years, tumor patients have seen a four-crease increment in their customized pharmaceutical treatment alternatives. Furthermore, finished half (5 out of 9) of recognized personalized pharmaceuticals endorsed by the FDA were for growth signs. It likewise guarantees to upgrade medicinal item advancement by enhancing the likelihood of accomplishment. It Improves clinical results and consistency, Reduces reactions, Increases personal satisfaction, urges tolerant consistency because of better outcomes, streamlines the utilization of human services assets. Be that as it may, by Realizing the guarantees of customized prescription will require a change in outlook on numerous levels. It incorporates modernizing malady arrangement, altering the lead of clinical preliminaries, founding a fitting system for information security and assurance, putting resources into bioinformatics foundation and skill including e-wellbeing records, building up a framework for sidekick indicative tests, adjusting administrative procedures for customized medication, instructing medicinal services experts and patients and guaranteeing that evaluating and repayment structures. It likewise requires a more community-oriented approach between industry, the scholarly world, patients, prescribers, controllers, payers and human services frameworks.

## Biography

Mr. Roshan Keshari was conceived in Nepal and examining his higher examinations in India. He has distributed in excess of 12 papers in various national and worldwide Journals. He has likewise introduced in excess of 12 posters in various national and global course and gatherings. What's more, Mr. Keshari has been awarded in a considerable lot of these meetings too. He has additionally distributed one book in Germany on the theme of Persoanlized pharmaceutical. By and by he is an analyst of five Journals.

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# Fractionation and characterization of Cinnamomumverumessential oil

Huma Riaz

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## Abstract

In this work essential oil extraction from Cinnamomumverum (cinnamon) completed by using hydro-distillation. For isolation of different compounds, the extracted essential oil was fractionated by using different fractionation techniques like vacuum fractionation and freeze drying. These fractions were collected. The antioxidant was collected from Cinnamomumverum. Total flavonoids, total phenolic contents, DPPH and free radical scavenging activity were determined. Physical attributes e.g. analysis of refracted index and color were used for the evaluation of extracted essential oil of Cinnamomumverum. For chemical analysis ofessential oil of Cinnamomumverum (cinnamon) the Gas Chromatographic-mass Spectrometric (GC/MS) analysis was performed. By means of antioxidant,and antimicrobial assays the biological activities of cinnamon oil were determined. Antifungal activities were performed by disk diffusion method. For statistical analysis Tukey's test was used.

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# Effect of Post and Pre Induced Treatment with Hesperidin in N-Methyl N-Nitrosourea (Mnu) Induced Mammary Gland Cancer in Female Sprague-Dawley Rats

T. Vinay Kumar

Nirmala College of Pharmacy, Mangalagiri, Andhra Pradesh, INDIA

## Abstract

The main objective of the study is to evaluate the effectiveness of hesperidin in the treatment of breast cancer and causing less (or) no bone marrow depression which is the major side effect of the present anticancer drugs treating breast cancer, also to evaluate the mechanisms through which these compounds are exerting their effect. Breast cancer is induced by administering N-methyl N-Nitrosourea (MNU) at a dose of 50mg/kg body weight. Upon the termination of the experiment, the animals were sacrificed by the method of cervical dislocation. The animals were dissected along the ventral midline and were grossly examined for the presence of tumors. Then the tumours were removed along with the stroma. Vascular endothelial growth factor (VEGF) levels were estimated by using ELISA method. The first occurrence of palpable tumors was 8 weeks after carcinogen treatment and the final tumour incidence was 100% in the MNU alone and topical treated rats. Whereas in rats of other treatment groups there is decreased tumour incidence which might be due to their anti-tumour activity. Hesperidin therapy inhibited angiogenesis which can be evident from the significant reduction in serum as well as tumour VEGF concentrations in comparison to the untreated mammary carcinoma bearing rats. Hesperidin is promising agents that exert direct antitumor and also antiangiogenic, antiproliferative and anti-inflammatory activities. Even though the potency is little lesser than standard drug vincristine, it has been proved to be safe without effecting haematological count.

## Key words

Hesperidin, VEGF, COX 2 and N-methyl N-Nitrosourea

# Cost Effective and Economically Viable Reduction of Nitro to Amine

Ganesh Darade

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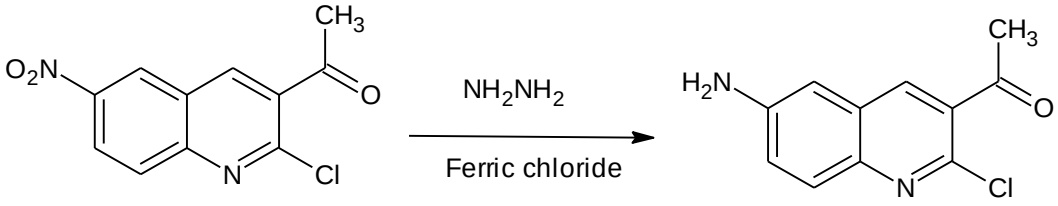
## Abstract

Reduction of different positional nitro groupby hydrazine hydrate and ferric chloride as a catalyst with carbon for surface phenomenon. Reaction condition is very easy to conduct, commercially feasible and cost effective for reduction of nitro to amine.Varieties of compounds existing and novel compounds were synthesized by this way and characterized by NMR, Mass and IR spectroscopy. This method is efficiently working for complex compounds too.Typical reaction scheme for nitro to amine as follow,




## Biography

Ganesh Daradewas born in Nashik – Maharashtra in India in 1990.After getting his basic education, He joined University of Pune and earned his B.Sc degree in Chemistry from University of Pune.He received the M.Sc. in Organic Chemistry from same University. His core area of research is Synthetic Organic Chemistry & drug discovery &Process research of active molecules.

In 2014, he joined Blue circle Research Centre Mumbai aschemist in API/Intermediate division. Later on we worked with reputed pharmaceuticals companies in India like Enaltec lab Pvt Ltd, He earned more than 5 yrs of industrial R&D experience during his professional career. He also has an expertise in Process development, Technology transfer etc. His contribution in research was recognized and rewarded by management.

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# Transfersomes: Magic Bullets for Skin Carcinoma Therapy

Sirvi Kiran

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## Abstract

Transfersomes are a form of flexible, adaptableor ultradeformale vesicle, the concept were introduced in 1991 by GregorCevc. Flexibility is produced by incorporation of an edge activator in the lipid bilayer structure. The original composition of these vesicles is soya phosphatidyl choline incorporating sodium cholate and a small concentration of ethanol. It has been claimed by Idea AG that intact transfersomes penetrate through the pores of stratum corneum which are smaller than its size and get into the underlying viable skin into the blood circulation.Transfersomes vesicles are reported to improve in vitro skin delivery of a range of drugs and in vivo penetration to achieve therapeutic amount that are comparable with subcutaneous injection.They can act as a carrier of drugs in anticancer, analgesic, anesthetic, corticosteroids,sex hormones insulin, gap junction protein and albumin. The review highlight information like Transfersomes, regulatory aspects, method of preparation, mechanism of action, marketed preparation available.

## Key words

Transfersomes, Elastic Vesicles, Deformable Vesicles.

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# Development and Validation of High Performance Liquid Chromatographic Method for Determination of Lamivudine from Pharmaceutical Preparation.

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Dr. P S Raghu
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## Abstract

A new , simple ,specific, accurate and precise RP-HPLC method was developed for determination of Lamivudine in pure and tablet formulation .A thermo BDS C 18 column in isocratic mode, with a mobile phase consisting of 0.01M ammonium dihydrogen orthophosphate buffer adjusted to pH 2.48 by using formic acid and methanol in the ratio of 50:50 was used.

The flow rate was set at 0.6 ml/min and UV detection was carried out at 264nm. The retention time of lamivudine and nevirapine were 2.828 min and 4.958 min respectively. The method was validated for linearity for Lamivudine was found in the range of 50-175 ug/ml.

Hence , it can be applied for routine quality control of Lamivudine in buil and Pharmaceutical Formulation .

## Keywords

RP-HPLC, Lamivudine , Nevirapine , Tablet formulation.

# Crystal Engineering: Novel Approach for Enhancement of Solubility of Poorly Aqueous Soluble Drug

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## Abstract

Over the last ten years, the number of poorly aqueous soluble drugs has been steadily increased. Progress, in a high throughput screening method lead to discovery of highly potent drug but an even greater amount of newly discovered drugs possess poor water solubility. The increasing prevalence of poorly soluble drugs in development provides notable risk of new products demonstrating low bioavailability with consequences for safety and efficacy, particularly for drugs delivered by the oral route of administration. Crystal engineering offers a number of routes to improved solubility and dissolution rate, which can be adopted through an in-depth knowledge of crystallisation processes and the molecular properties of active pharmaceutical ingredients.

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# Synthesis & Characterization of Isoquinoline Derivatives by Condensation of Benzofuran Carboxylic Acid with Isoquinoline Analogs

Revannath Dange

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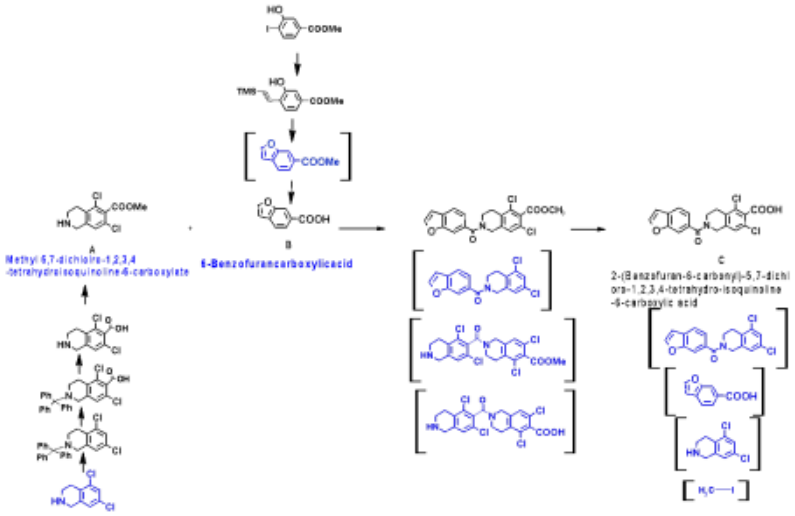
## Abstract

Synthesis & characterization of isoquinoline derivatives by condensation of benzofuran carboxylic acid and isoquinoline structural analogs at reflux temperature. Progress of reaction is found encouraging and then further treated with chiraly pure amine. Isolated final product with novel polymorphic form with higher yield.




## Biography

Revannath Dange was born in Ahmednagar district of MaharashtraIndia in 1991. After getting his basic education, He joined University of Pune and earned his B.sc degree in Chemistry.He received the M.sc in Organic chemistry from same university with first class.

In 2013 he joined United Envirotech PVT Limited; Later on we worked with Enaltec labs PVT. Limited. in API synthesis department. Now he is working with first ranked prestigious Indian Pharma Company Sun pharmaceutical Industries Limited. He has expertise in developing processes for high potent APIs. He earned 5.0 yrs of industrial R&D experience during his professional career.

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# Analytical Method Development and Validation of Nabumetone in Bulk Drug and Dosage Form

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## Abstract

Nabumetone is a Non –Steroidal Anti-inflammatory drug which has good analgesic and antirheumatic properties. A new , simple and precise RP-HPLC method was developed and validated for the estimation of Nabumetone in bulk and tablet dosage forms using a hypersil C18,4.6mm×150mm,5µmcolumn from waters with a mobile phase consisting of methanol:water(65:35)at a flow rate of 1.0ml/min.The retention time was 5.01min.Linearity for Nabumetone was in the range of 20-120 µg/ml and the calibration curve was linear(r2=0.999),the recovery was in the range of 99.942-100.15%.The proposed method found to be simple precise ,accurate and economical.

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# Recent Trends in Impurity Profile Using Differential Scanning Calorimetry (DSC)

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## Abstract

Impurity profiling is a compulsory requirement in pharmaceutical industry. Now days, impurity in pharmaceuticals is given more attention. Impurity is unwanted chemicals in active pharmaceutical ingredient or it may occur during formulation due to changes in physical and chemical properties. The ICH guideline shows all aspect of impurity and different limit of threshold of impurity. The various pharmacopoeias like IP, BP and USP have given the limit of impurity in drug. Impurities can be of different types i.e. identified and unidentified. They can be analysed by different technique like UV, HPLC, IR, and NMR. Now the hyphenated techniques are LC-MS, HPLC-DAD, MS-MS, HPLC-NMR, GS-MS are also used for impurity profiling. It is well known that Differential scanning calorimetry is a useful technique to determine the purity of drugs, similarly DSC can also be helpful in detecting impurities.

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# Top Five Fatal Diseases in India and Their Preventive Measures

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## Abstract

In the recent years, the advancement in medical and healthcare industry, a lot has changed in India, but about 37.6 million people dies every year due to fatal diseases, it is sad but true that 5.3% of population in India die without knowing the reason or undiagnosed. Here, we summarized top 5 killer diseases ie. Cardiovascular diseases, Respiratory Diseases, Tuberculosis, Malignant & Other Tumours and Others. We all know that "Prevention is better than cure".To prevent diseases one must be aware of pathophysiology and causes of diseases. The main aim our poster presentation is to make people more aware and alert regarding these diseases. To improve the status of health system in India.

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# Antidiabetic and Anti-Hyperlipidemic Study of Ethanolic Extract of Oryzasativa Var. Joha Rice and Citrus Macroptera Var. Annamensis; Two Indigenous Medicinal Plants of Assam

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## Dr. M. Chinna Eswaraiah

Principal, Anurag Pharmacy College, Kodad, Telangana, India

## Prof. Dr. A. M. Dutta

HOD, Dept. of Chemistry, Assam down Town University, Guwahati, Assam, India

## Abstract

Assam, a state in North-East India, the richest biodiversity zones of the world having thousands of natural herbs and medicinal plants but a few are explored yet. The present study is aimed to explore two indigenous medicinal plants of Assam Oryzasativa var. Joha Rice and Citrus macroptera var. Annamensis for its antidiabetic and anti-hyperlipidemic activity. Ethanolic extract of Citrus macroptera Var. annamensis(250mg/kg and 500 mg/kg)andOryzasativavar. Joha Rice (250mg/kg and 500 mg/kg) were made a suspension with 1% Tween 80 and anti-diabetic activity was studied in rats using streptozocin (60 mg/kg i.p) induced diabetic methods. The Biochemical parameters-Blood glucose levels, Triglycerides, Total cholesterol, HDL-cholesterol, LDL-cholesterol, VLDL-cholesterol, serum creatinine levels, blood urea levels, protein levels, hepatic enzyme levels, SGOT levels, SGPT levels and ALP levels were estimated on day 0, day 1, day 3, day 10, day 17 and day 25. The maximum action was observed on 17th day of treatment and also they did not showed withdrawal rebound effect like standard Glipizide (5mg/kg, oral). Both extracts dose dependent way improved lipid profiles and serum hepatic enzyme levels but EEJR showed better activity than EECM. Finally, it can conclude that this type of research can lead interest among researchers for study of herbal wealth of Assam may be source of thousands of yet unexplored medicinal plants. Assam can become globally recognized as like tea in the field of Herbal Medicine.

## Keywords

Assam, Herbal Medicine, Joha Rice, antidiabetic activity, anti-hyperlipidemic activity, treptozocin

# Carbohydrates in Drug Discovery

Dr Kamlesh M Soni
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## Abstract

Carbohydrates play a central role in various crucial biological functions. The most important amongst them are, Cell-Cell recognition, Sialic acid and its role in inflammation, polysialic acid in the neural cell development. Thus, making carbohydrates a prominent candidate in drug discovery. Carbohydrate based drugs are gaining widespreadattention in recent years. There are some wonderful drug candidates originated from carbohydrates, to name a few of them: Acarbose (Diabetes), Streptomycin (Antibiotic), GloboH Antigen (Anticancer vaccine) and so on. These positive outcome from carbohydrate chemistry has prompted world researchers to work on this largely untouched and unexplored chemical entity having profound impact on drug development.

I will be discussing about synthetic carbohydrate-based molecules having potential to be a drug candidate. While discussing about the potential candidates I will share some of the insight of synthetic carbohydrate chemistry and problems encountered while working with these polyhydroxylated molecules.

## Biography

A PhD Graduate from Indians top most drug research institute, Central Drug Research Institute (CDRI-CSIR, Lucknow). A postgraduate in Pharmaceutical Chemistry from one of the best Chemical Technology Institute of India, Institute of Chemical Technology (ICT, Mumbai). Currently working as HOD& Associate Professor of Pharmaceutical Chemistry in VIVA Institute of Pharmacy, Mumbai. Having more than a decade's experience in Teaching Pharmacy graduates and postgraduates of Mumbai University. Published several research papers in peer reviewed international journals. More than 150 citations for published work. Recipient of several academic awards for Higher studies. Actively engaged in Research, chiefly in drug discovery domain with carbohydrate chemistry as central theme.

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# Efficacy and Safety of Herbal Formulations Used For Management of Hiv/Aids in Mombasa County

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## Abstract

**Background:** Traditional medicines are not understood globally and hence are not fully exploited. Pwani herbs clinic in Mombasa dispenses herbal medicines to manage HIV and AIDS. There was need to subject these herbs to formal clinical research to ascertain their efficacy and safety.

**Objectives:** To isolate the components of the herbal formulations Antiretroviral herbal formulation (VIRAD) and immune boosting herbal formulation (IMB) and determine their efficacy and safety.

**Design:** A longitudinal study for People Living with HIV/AIDS (PLWHA) attending Pwaniherbsclinic and measure physiological, immunological and Viral Load parameters. Period of study was one year; patients were screened at every two months. Every sample was its own control from baseline.
Settings: Pwani herbs Clinic Mombasa and Laboratory analysis done at Bomu Medical clinic in Mombasa.

**Study participants:** Adult male and female patients confirmed HIV positivethat use herbal treatments for management of HIV/AIDS disease/status.

**Results:** Phytochemical components (mg/100g); Virad; Phenols 84.4mg, Saponins 531mg, Tannins 324mg, Alkaloids 2304mg, Flavonoids 2173mg, Protein 442mg and Lipids 2444.2mg. Trace elements µg/g) K 12922±103Na 475±4 Ca8861±71 Mg547±1 Fe361±4 Cu 98.6±1.5 Zn43.7±0.9.IMB; Phenols 75.1mg, Saponins564mg, Tannins 51mg, Alkaloids 1531mg, Flavonoids 2533mg, Proteins 544mg, Lipids 2553.8mg.Trace elements (µg/g) K 12085±87 Na 598±11 Ca 6047±46 Mg 545±1 Fe348±4 Cu 5.9±0.4 Zn25.3±0.6.At months 2, 4, 6, 8 and month 10, 23/188 discontinued. Out of these 3 died while 20 developed other complications such as tuberculosis and cancers were discontinued from study.At

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completion of study weight gained by average 17kg, BMI increase 4.85, CD4 raise 126, CD8 declined 15, CD4/CD8 raise 0.19, Viral load drop 864, Hemoglobin Hb raise 3g/dl, RBC raise 1.3, WBC raise 1.6, ESR drop 21. Toxicity on kidney Urea drop 0.1g/dl, Liver GGT, AST, ALT drop0.3g/dl. Virad and IMB; Flavonoids, Alkaloids and lipids were of highest concentrations in these formulations have antioxidant molecules that positively affect physiological and immunological factors, boost immunity, raise CD4 count and raise CD4/CD8 ration and decrease viral load. Not harmful on Endocrine organs Liver & kidney. Virad and IMB have virastatic effects and could be considered for development and subsequent inclusion in management of HIV/AIDS. Conclusions: Virad and IMB were effective and safe with virastatic potentials to use on people living with HIV/AIDS. More study is needed for long term treatments.

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