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A Deep Dive into Whipple's Disease : A Rare Multisystemic Disorder

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ABSTRACT

Whipple's disease (WD) is a rare systemic infectious disorder caused by the actinomycete Tropheryma whipplei. This chronic disease, first described by Whipple as 'intestinal lipodystrophy', affects preferentially middle-aged white men who may present with weight loss, diarrhea, abdominal pain and arthralgia. Thus, it represents an important differential diagnosis of chronic diarrhea. A variety of other clinical patterns, such as involvement of the heart, lung, or central nervous system (CNS), are also seen. 100 years after its first description by George H Whipple, the diagnosis and treatment of WD is still a subject of controversy. Because of its broad spectrum of symptoms, WD mimics many other chronic inflammatory diseases. The combination of the disease's non-specific clinical features and its rarity often leads to delayed diagnosis. Whipple's disease was fatal before the first successful use of antibiotics in 1952. Tetracycline was the drug of choice for many years, but relapse rate of 35% is seen among tetracyclinetreated patients. Later Co-trimoxazole, combination of penicillin and streptomycin, doxycycline, sulfamethoxazole, Trimethoprim, third-generation cephalosporins, and carbapenems are used. The cultivation of T. whipplei, along with the complete sequencing of its genome will provide new opportunities for investigating, understanding, and treating Whipple's disease. Development of an assay for detection of specific antibodies in the serum may help with diagnosis of the disease.

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Pharmacological Activities of Bacopa Monnieri – A Systematic Review

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ABSTRACT

WResearch on traditional herbal plants leads to the discovery of novel treatments for the several dreadful diseases. The treatment of herbal therapy nowadays massively improved in treating various disorders, particularly in Western and Asian countries. Bacopa monnieri is a herb which plays a vital role in treating neurological diseases such as Alzheimer and Parkinsons. Bacopa is promoted widely for memory disorders, anxiety, and thyroid health. The present review focusses on the various pharmacological activities and highlights the several health potentials of Bacopa monnieri.

KEYWORDS *:* QSAR, Coumarin, chalcone imine derivatives, Molecular descriptors, Anti-cancer activity.

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Knowledge, Attitude and Practice of Pharmacy Professionals Towards PvPI Programme

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ABSTRACT

Pharmacovigilance is the pharmacological science relating to the detection, assessment, understanding and prevention of adverse effects, particularly long term and short term side effects of medicines. By giving importance for patient safety, India setup a surveillance system "Pharmacovigilance Programme of India" (PvPI). This work was done mainly to highlight the role of pharmacist in detecting, assessing and documenting adverse drug reactions and also to assess the knowledge, attitude and practice of working pharmacist towards pharmacovigilance programme. A survey was done among 20 working pharmacists and found that 90% of pharmacists were aware of pharmacovigilance and 55% had knowledge about the procedures for reporting ADR. Moreover 95% of them felt that ADR reporting is the responsibility of pharmacist. There are many discouraging factor for ADR reporting, the major barrier was lack of time (40%) and the lack of knowledge about the procedure for reporting (20%). So it is the high time to provide sufficient training and conduct workshop on pharmacovigilance for those working in community or hospital pharmacy in order to uplift the profession of pharmacy into great heights.

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3D - QSAR Validation of Coumarin Sulphonamide Derivatives for The Prediction of Anti-Cancer Potency of Coumarin Chalcone Imine Conjugates

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ABSTRACT

A series of coumarin chalcone imine analogs have been designed for the possible "LEAD"s as anti-cancer potency through an in-silico study. The increasing cancer burden together with population growth as well as the changing prevalence of certain causes of cancer linked to social and economic development, the presence of drug resistance, etc. leads to the search for newer therapeutic agents. To further explore the potency of the designed coumarin chalcone imine analogs, a quantitative structure-activity relationship study is carried out. To develop a new pharmacophoric model for the inhibition of cancer cell proliferation, a QSAR approach of reported coumarin sulphonamide derivatives against HeLa cell has been studied. Multiple linear regression analysis was performed to derive the QSAR models which were further evaluated internally as well as externally for the prediction of activity. The accurate MIC values (µg/ml) were collected for 20 coumarin sulphonamide derivatives, and other descriptor parameters, such as log p (o/w), MR, apol, ASA+, ASA-, and TPSA were compared with these analogs. A training set of 20 analogs, all having a common coumarin sulphonamide moieties, provided a cross-validated correlation coefficient (r2) value of 0.47526 and root mean square error (RMSE) value of 0.33069. Moreover, based on this QSAR study we have hypothetically estimated the predicted pIC50 by using trainpred.fit file from MOE 2009.10 suite, for the newly designed test set i.e. six coumarin chalcone imine analogs. The resulting QSAR model generated from the present study may be useful in the design of a similar group of analogs as anti-cancer agents.

KEYWORDS*:* QSAR, Coumarin, chalcone imine derivatives, Molecular descriptors, Anti-cancer activity.

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Study on Risk Factors and Post Stroke Outcomes in The Management of Stroke

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ABSTRACT

Stroke is the second leading cause of death worldwide and is the major cause of morbidity, particularly in the middle aged and elderly population. Anemia is relatively common among stroke patients and has a prevalence ranging from 15-30%.There are reports that one-third of all acute stroke inpatients may have diabetes and as high as 20% of patients with acute ischemic stroke had previously unrecognized diabetes mellitus. Post-stroke fatigue (PSF) is a frequent and distressing consequence of stroke, and can be both acute and long lasting. There are studies which revealed that renal dysfunction increases the risk of stroke. If e-GFR declines a higher chance for recurrent strokes is still a matter of debate. Insulin resistance (IR) may be another risk factor for stroke. The purpose of this study is to help physicians to reduce the recurrence of stroke by assessing the risk factors, and also to improve the post stroke outcomes. A total of 34 patients with stroke were enrolled in the study. The patients with the history of stroke were assessed using the modified rankin scale (mRs). Of 34 patients 24 were male (71%) and 10 were female (29%).The most prevalent age group for stroke was 51-65 (15 patients, 44%). Hypertension was the main risk factor found 26(76.4%) followed by dyslipidemia 21(61.7%)and diabetes 9(26.4%). Citicolin 22patients (64.7%),Piracetam in 18 patients(52.9%) and the combination of aspirin+clopidogrel in 21patients(61.7%) were the major drugs prescribed for the management of stroke. Outcome was measured using mRs where 12 patients (35.29%) have got score 1 and 10 (29.41%) with score 2. Only 1 patient had score 4(2.94%).

KEYWORDS : Stroke, post stroke fatigue, insulin resistance, post stroke outcome, Modified Rankin Scale

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Anti-Proliferation Activity of Nanoencapsulated Bioadhesive Vaginal Gel of Curcumin Against Human Cancer Cervix Hela Cells

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ABSTRACT

The present study concerned with the development and characterization of Curcumin Nanoparticles prepared by Ionic gelation method using different ratios of drug and chitosan (1:1, 1:2, 1:3, 1:4 and 1:5). From these 5 formulations, the ideal formulation was selected and made 5 more formulations by adding TPP solution, in different ratio of 0.25, 0.5, 0.75, 1 and 1.25w/v. The obtained nanoparticles were discrete, spherical with free flowing properties and evaluated for particle size, zeta potential, drug content, drug entrapment efficiency and in-vitro release performance. The drug carrier interactions were investigated in solid state by FT-IR spectroscopy and DSC. The selected nanoparticle formulations FC-4 (drug: polymer ratio 1:4) and FT 4 were employed for vaginal gel preparation using stirring method in order to develop a sustained release Nanoencapsulated curcumin containing bio-adhesive gel. The prepared bio-adhesive gels were evaluated for pH, spreadability, extrudability, viscosity, vaginal irritation, in-vitro drug release, bio-adhesion, accelerated stability. The in-vitro experiments indicated a sustained release over 24 h and an acceptable bio-adhesion quality for formulation FVG3. The anti-proliferative effects of Curcumin nanoparticles and CNBVG were tested against HeLa cells compared with curcumin un-formulated. The result showed that this formula had less anti-proliferation effect against cervical cancer of HeLa cells. Hence, it can be concluded that the formulation FVG3 has potential to deliver curcumin in a controlled and constant manner for prolong period over other formulations and can be adopted for a successful delivery of curcumin for vaginal use.

KEYWORDS*:* Curcumin, Nanoencapsulated, Anti-Proliferation; Hela Cells