

## **MEDICATION RECONCILIATION FOR PATIENT SAFETY - ROLE AHEAD FOR CLINICAL PHARMACISTS IN INDIA**

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**INTRODUCTION:** Most medication errors stem from a lack of effective communication between health care providers during transitions of care. Part of successful communication and correct patient hand off is completing accurate medication reconciliation. Medication reconciliation is defined as the comprehensive evaluation of patient's medication regimen, any time there is a change in therapy, in an effort to avoid medication errors such as omissions, duplications, dosing errors or drug interactions as well as to observe compliance and adherence of patients. In simple words medication reconciliation is the process of creating the most accurate and complete list of medication information.

## IDENTIFICATION OF ACTIVE PHYTOCONSTITUENT IN *MORINDA CITRIFOLIA* FOR ANTI-CANCER ACTIVITY THROUGH DOCKING STUDIES

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**ABSTRACT:** *Morinda citrifolia* commonly known as NONI has been traditionally used for the treatment of cancer and wide range of ailments. Identification of novel drug targets is essential for improvising the drug efficacy of *Morinda citrifolia*. Hence, the ability to predict the drug target by an *insilico* method is an initiation towards the drug discovery pipeline. Phytoconstituents of *Morinda citrifolia* were identified and prepared for docking using LigPrep. LigPrep is a utility of Schrödinger software that generates 3D structures from 2D representation. All docking calculations were performed using the “Extra precision” (XP) mode of Glide program. Aurora kinase, Estrogen receptor- $\alpha$ , fibroblast growth factor and C-kit are the proteins targeted with different phytoconstituents like Rutin, Scopoletin, Monotropin and Methyl 3-(2, 4-dihydroxy-5-methoxyphenyl) propionate. c-kit is the main target of Rutin and the Glide energy (-64.904 kJ/ mol) was higher in the case of Rutin among the other compounds. This study concludes that natural products with interesting biological properties and structural diversity may serve as valuable lead drug candidates for the treatment of human diseases including cancer of different types in close proximity to future.

**Key words:** *Morinda citrifolia*, *insilico*, Phytoconstituents, Glide energy, Rutin.

## **STUDY OF PHARMACY STUDENTS' PERCEPTION ON EDUCATION, TEACHING AND FUTURE OPTIONS**

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**ABSTRACT:** Pharmacy as a profession in India plays an inevitable role in the health care team, yet the need for quality pharmacists in the country still remains a matter of concern. There is a need to bridge the gap between education and practice of pharmacy. The relevance of topics taught in the undergraduate pharmacy course in India with respect to the international standards is an aspect that needs to be worked on in order to ameliorate the present scenario. A study was conducted on second year B.Pharm students to analyze their perspective on the teaching styles of present system, curriculum contents and their relevance. Feedback to questions were analyzed based on the categories viz. questions related to teaching methodologies, curriculum related questions and questions related to future goals of students. It was observed that the present didactic teaching-learning system was well suited to about 50% of the respondents. 31.03% disagreed and 25.86% had no opinion on whether the curriculum matches the present scenario of pharmacy. 67.2% respondents felt that team based learning approach would be more beneficial in studying the present curriculum. Majority of the students were clear about their future roles and many were undecided about higher education.

## CAN AN EDUCATIONAL INTERVENTION HAVE AN IMPACT ON KNOWLEDGE AND AWARENESS LEVELS OF PHARMACOVIGILANCE? – A QUESTIONNAIRE BASED SURVEY

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**ABSTRACT:** Adverse drug reaction (ADR) is one of the major causes of hospitalization and patient non-compliance. It also leads to significant morbidity and mortality. The main solution for this could be the timely and proper reporting of ADR, which is lagging (under reporting) in the current scenario. It can be improved by increasing the awareness and knowledge among the different stakeholders by various methods including educational intervention. A questionnaire-based survey was conducted in a reputed pharmacy college in South India, in which 166 students participated. Pre-intervention questionnaire (PIQ) was given to the participants to fill after appropriate instructions. After completion of PIQ, an educational programme was conducted for a duration of around 1 hour. Then the participants were given a post-interventional questionnaire (PoIQ) and were asked to complete the same. The results of the study showed that there was an improvement in the awareness and knowledge of the participants regarding pharmacovigilance. Also, the results of the study helped to find the preferable modes of reporting ADR and suggestions regarding the methods to create the awareness of reporting ADR from the participants who are future healthcare professionals. The results of the study concluded that the educational intervention definitely increased the awareness and knowledge of participants regarding pharmacovigilance.

**Key words:** ADR reporting, questionnaire

## DRUG RELATED PROBLEMS IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE AND ASTHMA PATIENTS: A RETROSPECTIVE STUDY

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**Abstract :** Lung diseases like asthma and chronic obstructive pulmonary disease (COPD) are accompanied by major burden of symptoms and health care utilization. The study aimed to identify drug related problems (DRP) in a population suffering from COPD and Asthma. Patients admitted under General medicine department with age  $\geq 18$  years diagnosed with either Asthma or COPD from August 2013 to August 2014 were randomly recruited for this single centre, retrospective study. Patient's demographic details and other pertinent data were collected by reviewing electronic medical records and cross checked with manually maintained medical records wherever necessary. Drug therapy of the patients was critically reviewed and analyzed for drug related problems. Among 100 study sample, 53 were asthmatic and 47 diagnosed with COPD. Approximately 70% of asthmatics were females and 75% of COPD patients were males. Major DRPs identified were drug-drug interactions (51) and adverse drug reactions (17). Among (51) interactions identified 29 were risk rating category C and 22 risk rating D based on Lexicomp drug interaction checker where close monitoring is warranted. Other DRPs include inappropriate drug selection, inappropriate dose, inappropriate frequency and therapeutic duplication. This study shows that a significant number of the drug related problems in a population suffering from either Asthma or COPD exists. Hence, introduction of a clinical pharmacist can play an ideal role in detection, evaluation and resolution of medication related problems in association with other healthcare providers at the time of prescribing or during treatment with the ultimate aim of better therapeutic outcome.

**Keywords:** COPD, Asthma, drug related problems

## EFFECT OF ETHANOLIC EXTRACT OF *ARGYREIA NERVOSA* ON ATHEROGENIC DIET AND TRITON-X100 INDUCED OBESITY IN RATS

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**ABSTRACT:** The plant *Argyrea nervosa*(AN) of family convolvulaceae is a medicinal plant contains Saponins which is used in the treatment of hyperlipidaemia. The main objective of the study is to evaluate the antihyperlipidaemic activity of ethanolic extract of *Argyrea nervosa*(EEAN) against Atherogenic diet & Triton-x100 induced hyperlipidaemia in rats for controlling hyperlipidemia. In order to assess hypolipidaemic effect, *Argyrea nervosa* extract was tested against two models such as Atherogenic diet or high fat diet induced hyperlipidaemia and Triton x-100 induced hyperlipidaemia. After the completion of the treatment, they were evaluated for serum total cholesterol (TC), triglycerides (TGS), high density lipoprotein (HDL), low density lipoprotein (LDL), very low density lipoprotein (VLDL) and atherogenic index (AI) were compared with the rats treated with Atorvastatin (10 mg/kg) of the body weight. The lipid profile status of Atherogenic diet induced model was found to be better than Test 1 concentration 200mg/kg and the positive control and the values are TC  $155.3 \pm 0.97$ , TGS  $97.9 \pm 1.75$ , HDL  $55.3 \pm 1.89$ , LDL  $75.6 \pm 1.519$ , VLDL  $23.11 \pm 1.888$  which reveals that EEAN in a concentration of 400mg/kg was more effective in lipid control and the values are TC  $162.5 \pm 0.91$ , TGS  $111.6 \pm 0.93$ , HDL  $50.8 \pm 0.583$ , LDL  $85.1 \pm 1.315$ , VLDL  $25.66 \pm 0.78$  ( $p < 0.0001$ ). Supplementation of EEAN in a concentration of 400mg/kg in model 2 shows a further reduction in the level of TC  $174.6 \pm 0.94$ , TGS  $92.5 \pm 0.9914$ , LDL  $111.6 \pm 1.67$ , VLDL  $26 \pm 0.579$  and an increased level of HDL  $33.6 \pm 0.846$  when compared to positive control (Atorvastatin 10mg/kg) TC  $160 \pm 1.29$ , TGS  $84 \pm 2.29$ , HDL  $42 \pm 1.02$ , LDL  $97.16 \pm 0.875$  and VLDL  $29.2 \pm 1.85$ . From the result it was revealed that *Argyrea nervosa* has hypolipidaemic activity by reducing the LDL, VLDL, Cholesterol, Triglycerides and increases HDL levels in the blood.

**Key words:** Saponin, ethanolic extract, phytochemical screening and acute toxicity studies.

## EFFECT OF HYBANTHUS ENNEASPERMUS IN STREPTOZOTOCIN NICOTINAMIDE INDUCED TYPE-II DIABETES IN MALE ALBINO WISTAR RATS

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**ABSTRACT :** The effect of methanolic extract of hybanthus enneaspermus (HE) was examined in streptozotocin-nicotinamide induced type-II diabetes in male albino wistar rats. Diabetes was induced in overnight fasted rats by a single intramuscular injection of 60 mg/kg streptozotocin (STZ) and after 5 min. 120 mg/kg nicotinamide was injected intramuscularly. Those rats with fasting glucose level greater than 250mg/dl were served as diabetic rat and used in study. Two dose level of HE 250mg/kg & 500mg/kg were used for the treatment. Diabetic rats treated with HE shows significant ( $P<0.001$ ) reduction in blood glucose level and when compared to initial blood glucose level. Glycosylated hemoglobin and cholesterol level in HE treated group was significantly ( $P<0.001$ ) decreased when compared to diabetic control group. HE 500mg/kg treated group showed significant ( $P<0.001$ ) increase in triglyceride level when compared to diabetic control group.

**Key terms:** Hybanthus enneaspermus (HE), Streptozotocin (STZ), Nicotinamide, Glycosylated hemoglobin.