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Review Article **Published Date:-2018-10-30 00:00:00**

Application of the Pyphagor's Theorem for Correction of Ki and Ka constants of enzyme inhibition and activation

The analysis of dependence of the length projection of Li vectors of biparametrical inhibited and activated (La) enzymatic reactions from the length projection of vectors of monoparametrical inhibited and activated enzymatic reactions on the basic ?0 plane in three-dimensional coordinate system, allows to deduct the quadratic forms of equations for the correction of the constants of inhibition (ki) and activation (Ka) of enzymes. Examples of correction of constants are given.

Research Article **Published Date:-2018-10-29 00:00:00**

Preclinical studies for a cationic liposome formulation containing Il-2 Intended for the treatment of Human Tumors

Human cervical cancer tumours expressing the IL-2 receptor (IL-2R) were induced in the peritoneal cavity of nude mice. The tumours were significantly reduced by the i.p. administration of either free IL-2 or liposomes containing this growth factor. No toxicity was observed in the mice even at the highest doses of IL-2 in liposomes. We did not detect any IL-2 in the blood plasma pointing to a strong retention of the liposomes on the cavity. We concluded that this preclinical study for the treatment of tumours expressing IL-2R in the peritoneal cavity is effective and safe. The liposomes were stable and their IL-2 active for up to one year when kept at -14oC in a cryopreservation media approved by the FDA for human use.

Research Article **Published Date:-2018-09-03 00:00:00**

Some Aspects of medicine distribution in Sudan

The strategy of price liberalisation and privatisation had been implemented in Sudan over the last decade, and has had a positive result on government deficit. The investment law approved recently has good statements and rules on the above strategy in particular to pharmacy regulations. Under the pressure of the new privatisation policy, the government introduced radical changes in the pharmacy regulations. To improve the effectiveness of the public pharmacy, resources should be switched towards areas of need, reducing inequalities and promoting better health conditions. Medicines are financed either through cost sharing or full private. The role of the private services is significant. A review of reform of financing medicines in Sudan is given in this study. Also, it highlights the current drug supply system in the public sector, which is currently responsibility of the Central Medical Supplies Public Corporation (CMS). In Sudan, the researchers did not identify any rigorous evaluations or quantitative studies about the impact of drug regulations on the quality of medicines and how to protect public health against counterfeit or low quality medicines, although it is practically possible. However, the regulations must be continually evaluated to ensure the public health is protected against by marketing high quality medicines rather than commercial interests, and the drug companies are held accountable for their conduct.

Case Report **Published Date:-2018-07-19 00:00:00**

Biologic therapy-Related demyelinating peripheral neuropathy in a child with Juvenile Idiopathic Arthritis

Demyelinating peripheral neuropathy has been described in association with tumor necrosis factor (TNF) inhibitors. It is rarely developed after treatment discontinuation. We present the case of a child with juvenile idiopathic arthritis who developed peripheral neuropathy few months after TNF inhibitor withdrawal with clinical worsening of the neurological sequelae while undergoing treatment with abatacept.

Research Article **Published Date:-2018-06-26 00:00:00**

Preparation, solid state characterization and evaluation of ketoprofen-glucosamine HCl solid dispersions

In this investigation, solid dispersions were prepared and characterized to improve the solubility and dissolution of poorly water soluble drug Ketoprofen, using glucosamine HCl as a carrier. For the improvement of the solubility and dissolution rate of poorly water soluble drugs different techniques are used such as solubilization, salt formation, particle size reduction and solid dispersion etc, but in the present study, solid dispersions (SDs) of poorly water soluble NSAID Ketoprofen were prepared to improve its solubility and dissolution rate, using solvent evaporation method with drug-carrier ratio of 1:1, 1:2 and 1:3. Our results indicate that all solid dispersions of Ketoprofen and Glucosamine HCl exhibited more enhancements in solubility and dissolution rates than corresponding physical mixtures. The DSC thermograms and X-ray diffraction patterns showed a slight reduction in crystallinity in solid dispersions which were further verified by FT-IR and SEM. It is concluded that solid dispersion is an effective technique for enhancing the solubility and dissolution rate of poorly water-soluble drug Ketoprofen using Glucosamine HCl as a carrier. This amino sugar (Glucosamine HCl) could be used as a novel potential carrier for preparation and formulation of SDs and would have potential commercial benefits.

Research Article **Published Date:-2018-01-08 00:00:00**

Diazepam Withdrawal Expression is related to Hippocampal NOS-1 Upregulation

Background: Benzodiazepines are usually prescribed for anxiety and sleep disorders in a long-term fashion that may cause drug dependence. Discontinuation after prolonged administration may lead to withdrawal expression, being anxiety the most predominant sign. It has been described that a context-dependent associative learning process underlies diazepam dependence. Nitric oxide is a crucial player in learning and memory processes, hippocampal transmission, as well as in benzodiazepines withdrawal. Considering that previous results from our laboratory showed an increase in hippocampal functional plasticity only in diazepam dependent rats, the aim of the present investigation is to determine whether diazepam dependence could alter neuronal nitric oxide synthase enzyme (NOS-1) expression within the hippocampus, by using western blot.

Results: chronic diazepam-treated animals that developed dependence showed increase in NOS-1 expression in dorsal, but not in ventral hippocampus, while no-dependent or control animals presented similar NOS-1 protein levels.

Conclusion: withdrawal from long-term diazepam exposure could be associated to increased nitric oxide neurotransmission within dorsal hippocampus induced by NOS-1 over-expression. This mechanism could underlie the improved hippocampal synaptic transmission previously observed in diazepam withdrawn animals. Confirmatory experiments need to be addressed to determine the mechanisms by which nitric oxide participates in benzodiazepines withdrawal in order find new molecular targets to develop pharmacological tools to prevent the withdrawal syndrome

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