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Abstract Book

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extracted with aqueous and absolute ethanol; freeze dried at the National energy commission centre, University of Benin. Phytochemical and antioxidant studies was conducted based on already extablished methods and principles.Results: DPPH radical scavenging activity yielded aqueous and ethanol extracts IC50 values of 3.2144 and 4.9100 ×g/ml respectively. Reducing power activity yielded (aqueous and ethanol extracts) EC50 of values 60.3233 and 60.1000 ×g/ml respectively. Total antioxidant activity yielded (ethanol and aqueous extracts) IC50 values of 52.4320 and 68.8201 ×g/ml respectively. Hydroxyl radical activity yielded (ethanol and aqueous extracts) IC50 values of 49.3130 and 50.2341 ×g/ml respectively. Trolox equivalent antioxidant activity yielded (ethanol and aqueous extracts) IC50 values of 45.2015 and 52.0721 ×g/ml respectively. Nitric oxide scavenging activity yielded aqueous IC50 value of 14.2102 ×g/ml but ethanol extract yielded no inhibition concentration at 50 percent. Conclusion: The study showed that aqueous and ethanol leaf extracts of S. glauca demonstrated substantial amount of biochemically valuable phytochemicals and antioxidant potential capable of scavenging reactive oxygen species.

PP01.05

Molecular Characterization of Some Equine Exotic Viruses in Saudi Arabia

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Abstract: Equine Exotic viruses (Equine Influenza (EIV), West Nile (WNV), Equine Arteritis (EAV), and African Horse sickness (AHSV)) continue to pose great risks to Equine Industry worldwide. Despite vaccine application of some of these viruses, many outbreaks still report globally. Little is known about the molecular characterization of these viruses in Saudi. The major goals of the current study were to detect the presence of nucleic acids (NAs) of these viruses, to evaluate the immune status of different horses population across the kingdom. To achieve our goals, nasal swabs, rectal, swabs and sera were collected from 250 animals across the kingdom. Detection of the viral NAs was done by commercial Real Time PCR kits while detection of the antibodies against these viruses by the commercial ELISA kits. Our data clearly showing detection of EIV (19.2%), WNV (22.8), and EAV (19.9%) in several horses population in Saudi Arabia using Real Time PCR technique. Furthermore, the high seroprevalence of EIV, WNV, and EAV in the tested sera was reported. Meanwhile, we failed to detect both the viral NAs and antibodies in swabs and sera of tested animals against AHSV. In conclusion, this study will pave the way for further molecular characterization of these exotic viruses in the Kingdome. To the best of our knowledge, this is the first study dealing with molecular based prevalence of EIV, WNV, EAV and AHSV across the Kingdom. This work has been funded by the King Abdul Aziz City of Science and Technology grant No (ARP-34- 117).

PP01.06

PPAR/NF-kB – Dependent Mechanism of N-Stearoylethanolamine Anti-Inflammatory Action

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Abstract: N-stearoylethanolamine (NSE) – is saturated minor compound of natural origin that represents the large family of signaling lipids N-acylethanolamines, which belong to endocannabinoid system. Considering the crosstalk between low-grade chronic inflammation to most spreading metabolic diseases, particularly diabetes, our studies are aimed to investigate the mechanism of anti-inflammatory action of NSE. Earlier we found that NSE reduces serum level of main pro-inflammatory cytokines in rats with obesity-induced insulin resistance. Further *in vitro* investigations showed that administration of NSE to the culture medium at concentration of 10^{-7} M reduces by 60-80% the NF-κB translocation to the nucleus of LPS-activated peritoneal macrophages, which were obtained from normal rats. This finding correlated with the downregulation of IL-1β production (r = 0.87). Moreover, the results of flow cytometry analysis showed the prevention of reactive oxygen species (superoxide radical and hydrogen peroxide) formation under NSE action in LPS-activated peritoneal macrophages. We proposed that this NSE effect may be realized via activation of nuclear receptors – PPARs. *In vitro* studies, using synthetic selective activator of PPARα/γ receptors LY-171,883, selective inhibitors of PPARγ – GW9662 and PPARα – GW6471, confirmed that NSE implements its biological action primarily via PPARγ. In addition, the molecular docking analysis revealed that the highest affinity of NSE is to PPARγ. Importantly, the comparative docking of stearic acid and NSE evaluated that the main role in NSE binding to PPAR ligand-binding domain played the ethanolamine residue. Therefore, the present studies indicate previously unknown PPAR/NF-κB – dependent pathway of anti-inflammatory action of NSE.

PP01.07

An Alcoholic Fatty Liver Disease Model in Zebrafish (Danio Rerio) Optimized by Using Ccd-Rsm Method

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Abstract: Context: Pathological mechanism of alcoholic fatty liver disease (AFLD) caused by excessive alcohol consumption is still unclear. Currently, there are no optimized AFLD models on zebrafish. Objective: The present study seeks to develop a zebrafish model of AFLD by using central composite design-response surface methodology (CCD-RSM) method. Materials and method: AFLD was induced in zebrafish by repeated immersing zebrafish in normal and alcoholic solution alternately, various parameters such as alcohol concentration, exposure hours and exposure days were optimized by using CCD-RSM method. Histopathological inspection was used to detect the liver injury. Results: The optimized conditions for the AFLD model were as