Model abstracts – Oral/Poster

Instructions:

1. Title of paper: Times New Roman, 12 font size, bold, single space and centered.

1. Authors: Times New Roman, 11 font size, normal, single space and centered, full name followed by surname. In case of more than one author, presenting author's name must be underlined. Corresponding author should be identified with an asterisk.

1. Authors affiliation: Times New Roman, 10font size, italics, centered; address of the department where work was carried out, institution, city and country.

1. Text: Times New Roman, 11 font size, normal, single space **encompassing introduction, materials and methods, results and conclusions in continuous text format**. Sub headings in the text should be avoided.

Model for Experimental Study

PATHOMORPHOLOGICAL AND BIOCHEMICAL EVALUATION OF METHOTREXATE INDUCED HEPATOTOXICITY AND ITS AMELIORATION BY *EUGENIA JAMBOLANA* IN RATS

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The present study was conducted to evaluate the pathomorphological and biochemical changes in methotrexate induced hepatotoxicity and its amelioration by aqueous seed extract of *Eugenia jambolana* in rats for 45 days. The various groups in this study included normal control (Group I), methotrexate control (Group II), *Eugenia jambolana* control (Group III), rats pre-treated with *Eugenia jambolana* ten days prior to administration of methotrexate (Group-IV) and rats treated with *Eugenia jambolana* concurrently with administration of methotrexate (Group V). Hepatotoxicity was induced in rats by administration of methotrexate at the dose of 5 mg/kg body weight intraperitoneally for three consecutive days and *Eugenia jambolana* seed extract was supplemented orally at a dose rate of 400 mg/kg body weight. Pathomorphological and biochemical changes following methotrexate administration and *Eugenia jambolana* treatment in different groups were assessed by the measurement ofvarious biochemical enzymes, antioxidants and lipid peroxidation assay, histopathology and immunohistochemical evaluation of p53 expression in liver. Methotrexate induced hepatotoxicity was characterized by both hepatocellular necrosis and apoptosis. The pre-treatment with *Eugenia jambolana* alleviated the methotrexate induced hepatotoxicity and the concurrent treatment of *Eugenia jambolana* in comparison with pre-treatment was less effective. The pre-treatment of *Eugenia jambolana* showed a prophylactic effect. In addition the study also showed increased expression of p53 gene in methotrexate group as compared to *Eugenia jambolana* pre-treatment and concurrent treatment groups. Pre treatment of *Eugenia jambolana* reduced the expression of p53 gene protein compared to concurrent treatment. The results of the study suggested that *Eugenia jambolona* also has antiapoptotic effect and alleviate the methotrexate induced apoptosis.

Model for Field Case Report-Detailed study

PATHOLOGY AND MOLECULAR CHARACTERIZATION OF JAAGSIEKTE RETRO VIRUS (JSRV) IN NATURALLY INFECTED SMALL RUMINANTS

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In order to find out the occurrence of Jaagsiekte and nature of virus, the present study was conducted to investigate pathology, molecular identification and characterization of JSRV in small ruminants. Out of 1,10,000 sheep (1,05,000) and goats(5,000) inspected in Perambur Slaughter House of Chennai, 247 affected lung tissues were collected. The prevalence of Jaagsiekte was 9.77% (21/215) in sheep and 6.25% (2/32) in goats. Grossly, 23 cases of JSRV (Jaagsiekte Sheep Retro Virus) infected lungs showed grayish white lesions in the cranio-ventral region or entire both lung lobes. Cytopathology revealed high epithelial cellularity seen as individual, acinar or papillary arrangements. Histopathologically, papillary adenocarcinoma of alveoli was seen. Immunohistochemistry showed expression of *env* antigen in the cytoplasm of neoplastic epithelium by specific *env* oncogene monoclonal antibody. Cytokeratin identified epithelial component and vimentin fibroblasts of neoplasm by cytoplasmic expression. Heminested PCR of U3 LTR region (129 bp) and conventional

PCR of *env* oncogene (382 bp) confirmed JSRV. Sequencing and BLAST analyses showed nearest phylogenetic neighbour isolate for LTR from India (AB914802/Sheep) with 100% similarity and *env*from China (JQ837489) with 98% similarity. Phylogenetic tree constructed using these genes differentiated exogenous and endogenous JSRV and within exogenous clades differentiated subclades. All the JSRV isolates formed a separate subclade within the exogenous JSRV major clade. Two new U3 LTR (Accession No. KJ628497, KJ628498) and 10 *env* (Accession No. KM262786-95) genomic sequences were identified and deposited in GenBank. The sequence analyses of their SNPs showed that the nucleotides are highly conserved indicating no polymorphism. To the best of our knowledge, this is the first detailed molecular investigation of Jaagsiekte in small ruminants in India.

Model for Case Report

DYSGERMINOMA IN A SCARLET MACAW (*Ara macao*)

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Tumour is one of the causes of death in birds and one such case is presented. A female scarlet Macaw aged 23 years was presented for necropsy with a history of sudden death. The bird was primarily fed on nuts and reared in separate cage in an organised aviary with a stock strength of about 2000 different varieties of psittacines. The carcass was fair in condition. Mucous membranes were pale. Other lesions observed were serosal congestion of the duodenum with diffuse haemorrhage in the mucosa, while other parts of the intestine revealed thick slimy catarrhal inflammatory exudates. Lungs were congested with red hepatisation and kidneys were congested. Liver showed yellowish area and was enlarged and flabby. An encapsulated, roughly spherical mass of 7.5 cm was observed in the abdominal cavity adhering medially to the peritoneum. It was firm and on incision yellowish patches with reddish to dirty grey brown necrotic areas were noticed. Mild dirty brown fluid oozed out. Histopathological examination revealed congested liver with multifocal necrohemorrhagic areas, red hepatisation of the lung with multifocal areas of carbon particle deposition around the parabronchi and focal lymphocytic collection. Proventricular mucosa showed multifocal necrotic areas and proventricular glands showed congestion and focal haemorrhage. Intestines revealed necrosis of the mucosa and the crypt epithelial cells showed catarrhal changes. Pancreas showed congestion and acinar cell degeneration. The mass revealed variable sized lobular structures consisting of solid sheets and/or chords of polyhedral cells. Cytoplasmic vacuolation was found in a few cells and areas of cystic spaces. Moderate eosinophilic cytoplasm was seen. Anisokaryosis, vesicular nuclei and solitary basophilic/ eosinophilic nucleoli were observed. Lobules were surrounded by thin fibrous stroma. A few foci showed cartilaginous metaplastic changes and calcified areas. Focal to extensive areas of necrosis was also evident. These changes indicated that the mass is due to dysgerminoma of ovary.