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PROGRAMME & ABSTRACT BOOK

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OP – 5: Study of tumour developing nature (tumorigenesis) of *Semecarpus anacardium* extract in some vital organs of albino rat: A histological approach.

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Semecarpus anacardium is a popular medicine used in Ayurveda as 'Rasayana'. It is used in various part of India for treatment of asthma and various disorders. *S. anacardium* is known for its anti-inflammatory, anti-microbial & anti-cancer activity. It is a digestive and nervine stimulant and also used as a cardiac tonic. In present study, albino rats were treated with different doses of *S. anacardium* pericarp oil extract prepared in groundnut oil (50% w/v). The LD₅₀ was 1gm/kgbw/day after 4 days. Three sub-lethal doses [a) 0.5ml/day (250mg/kgbw) b) 1ml/day (500mg/kgbw) and c) 1.5ml/day (750 mg/kgbw)] were orally treated for 1, 4 and 7 days. Two sub-sub-lethal doses [a) 0.17ml/day (83.33 mg/kgbw) and b) 0.33ml/day (166.66mg/kgbw) for 1, 4, 7, 14 and 21 days] were orally administered to different groups of albino rats, six animals in each group. After desired period of exposure, animals were dissected. Stomach, duodenum, liver and kidney were isolated and preserved in Bouin's fluid. Histological slides were prepared by standard techniques. Histological structure was compared with control group animals, showed sign of karyomegaly, karyogenesis, multiple division of nuclei, development of tumour like growth in treated animals. Observations revealed that *Semecarpus anacardium* showed adverse effects on histological structure of liver, kidney, stomach and duodenum in albino rats, appears to have tumorigenic activity.

OP – 6: Biological activity studies of *Artocarpus heterophyllus* Lam. leaves

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Diabetes mellitus is a syndrome of chronic hyperglycaemia due to relative insulin deficiency, resistance, or both. The leaves of *Artocarpus heterophyllus* are used ethnomedically in Sri Lanka for the control of diabetes mellitus. It has been previously reported that the hypoglycaemic activity lies in the ethyl acetate fraction of the water extract (EA/W) of leaves of *Artocarpus heterophyllus*. The purpose of this study was to identify hypoglycaemic fractions/compounds from the EA/W fraction. The EA/W was fractionated by chromatography on sephadex LH-20 to produce five fractions; dichloromethane/ hexane (4:1) (Fraction 1) dichloromethane/acetone (3:2) (Fraction 2), dichloromethane/acetone (1:4) (Fraction 3), dichloromethane/ methanol (1:1) (Fraction 4) and methanol (Fraction 5). The EA/W and the 5 fractions of EA/W were screened for in vitro antioxidant, antiglycation, α -glucosidase inhibitory and anti-inflammatory assays.

Fraction 4 was found to be the most active fraction in all the in vitro assays. It exhibited IC₅₀ values of 21.69 \pm 0.31 mg/mL, 0.40 \pm 0.01 mg/mL, 0.44 \pm 0.01 mg/mL and 16.9 \pm 0.1 mg/mL for antioxidant (DPPH), antiglycation, α -glucosidase inhibitory and anti-inflammatory assays respectively while their respective standards exhibited IC₅₀ values of 23.46 \pm 0.43 mg/mL (gallic acid), 0.54 \pm 0.01 mg/mL (acarbose), 0.18 \pm 0.02 mg/mL (rutin) and 11.8 \pm 1.91 mg/mL (rutin) respectively. As the thin layer chromatography analysis of fractions 3 and 4 indicated that they had several compounds in common, they were combined and subjected to chromatographic analysis. The new compound, 1,3,4-

trihydroxy-7-ene-megastigman-9-one isolated was characterized by NMR, MS, IR and UV-Visible spectroscopy.

These results may be of potential use for the development of a modern anti diabetic drug from leaves of *Artocarpus heterophyllus*.

OP – 7: Acute toxicity study on hot water extract of *Tragia involucrata* Linn. in rats

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Tragia involucrata L. commonly known as Wel kahambiliya (Sinhala) and Indian stinging nettle (English) is a widely used indigenous medicinal plant. Experimentally it show anti-inflammatory, wound healing, anti-cancer, analgesic, psychopharmacological activity, anti-diabetic, hypolipidaemic, diuretic and antioxidant activities. The present study investigates the acute toxicity of the plant extract in order to assess its possible toxicological effect. Acute toxic potential was evaluated of the hot water extract (HWE) of *T. involucrata* whole plant at an upper fixed dose of 5000 mg/kg on adult male Wistar rats. HWE at a dose of 5000 mg/kg was administered for 14 consecutive days and rats were observed daily for general toxic effects such as overt signs of toxicity and moribund status or mortality. At the end of 14 days, effects on hematological parameters, serum enzyme levels, and external morphology and histopathology of selected organs were determined. HWE of *T. involucrata* did not result in acute toxic effects in terms of (a) hepatotoxicity (as judged by SGOT, SGPT, GGT, ALP concentration and protein, albumin, globulin, total bilirubin levels), (b) renotoxicity (as judged by blood urea and serum creatinine) or (c) hemotoxicity (as judged by WBC, RBC counts and Hb concentration, PCV, MCV, MCH and MCHC values, platelet count), (d) gross morphology and weights of organs, (e) stress and aversive behaviors. In conclusion, the result of the acute toxicity study revealed that HWE at an upper fixed dose of 5000 mg/kg do not produce any serious acute toxic side effects on adult male Wistar rats.

OP – 8: A phase I study of the safety and possible toxicity of a novel ayurvedic preparation - Sudarshana Suspension

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Introduction: Sudarshana powder (SP) is a very effective anti-pyretic Ayurveda preparation. The extreme bitterness of this powder reduces the patient compliance and administration to children is very difficult. Therefore this powder was developed into a user-friendly standard Ayurveda suspension.

Objective: The aim of this present study was to evaluate the safety/possible toxicity of the novel formulation, Sudarshana suspension (SS) in a group of healthy adult volunteers.

Methodology: The study protocol was approved by the institutional ethics review committees and registered in Sri Lanka Clinical Trials Registry. Study was carried out in Department of Biochemistry, Faculty of Medical Sciences, University of Sri Jayewardenepura. Healthy adult volunteers (n=35) of