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# Acute and sub- chronic toxicity of antihyperglycaemic leaf extract of *Coccinia grandis*

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Cycle (CCC). Based on multiple regression analysis, results indicated that negative relationship between CCC and ITD with NPM and ROA. Moreover ARD has a significant positive effect on ROA. Hence the study recommends plantation companies to manage their working capital by implementing liberal credit term policy, reducing inventory turnover days and the cash conversion cycle to improve their financial performance and survive in the undetermined business environment.

**Keywords:** working capital management, financial performance, plantation companies, Colombo stock exchange

### P 30 Neonatal screening information system database

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Neonatal screening is the process of identifying infants with treatable metabolic diseases. Congenital Hypothyroidism is a treatable when identified within few days of birth before becoming symptomatic. Nuclear Medicine Unit (NMU) of the Faculty of Medicine, performed a test (named TSH) to find out affected infants when they between 24 hours and 7 days old. The NMU collect and analyze 1000-1500 bloodspots of newly born babies weekly from hospitals in Southern Province. The results sheets of samples analyzed have been prepared by manually and delivered to the Medical Officer of Health (MOH), through the Regional Director of Health Services by post in the end of each month. The MOH then informs each Public Health Midwife (PHM) to note down the results of the babies, whose mothers are under her care. This process takes at least 6 weeks to deliver the result to the infant's mother. This article describes an accumulation of Neonatal Screening Information System Database (NSISD) for the NMU as a solution to overcome obstructions of record keeping and dissemination of results. The system introduced was developed as a web based database using Scripting languages PHP, java script, CSS and database query language MySQL and codeigniter the free and open source PHP framework. Intention of this project was to facilitate to rapid disseminate, preserve, generate reports and manage results and data to provide fast, flexible and accurate searching with good security. The NSISD was facilitated to view TSH result of infant's to their mother with enter bead head ticket (BHT) and hospital via internet and send SMS to them automatically. Doctors, MOH, PHM, Directors and researchers can access data, reports and graphs according to their privileges. The rapid transfer of results to the infant's parents will ensure the confidence and acceptance of the screening program.

**Keywords:** newborn screening, data base, information system, PHP, MySQL

### P 31 Acute and subchronic toxicity of antihyperglycaemic leaf extract of *Cocciniagrundis*

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Medicinal plants are of great concern as a re-emerging health aid globally. The *in vivo*

acute antihyperglycaemic effect of aqueous leaf extract of *Cocciniagrandsis* (Ivy gourd, Cucurbitaceae) has been scientifically proven by our group but safety data of the aqueous leaf extract of *C. grandis* were limited. Aim of this study was to investigate acute and subchronic toxicological effects of an aqueous extract of *C. grandis* on biochemical, haematological and histopathological parameters in male Wistar rats. An aqueous extract of *C. grandis* was administered orally at graded doses (0.25-2.00 g/kg) to Wistar rats (n=6 in each group) and the general behavior of the animals was observed for three days in the acute toxicity test. Subchronic toxicity was evaluated by daily administration of the extract at 0.75 g/kg (optimum effective antihyperglycaemic dose in diabetic rats) orally to Wistar rats (n=6 in each group) for 28 days. Signs of toxicity, body weight, consumption of food and water were monitored. The effects of the extract on biochemical (including lipid profile, activities of liver enzymes) and haematological parameters (full blood count) were also assessed on day 28. Further, histopathological effects were assessed in heart, lung, small intestine, liver, kidney, spleen and pancreas. Results of test rats were compared with those of untreated Wistar rats. All animals were physically active and no death was observed up to the dose of 2.00 g/kg in the acute toxicity study. The extract neither produced significant changes in any of the parameters ( $p < 0.05$ ). No treatment related cellular changes were observed in the vital organs of *C. grandis* treated rats on light microscopic examination. The aqueous extract of *C. grandis* is safe in healthy rats up to a dose of 2.00 g/kg. Further the extract at a dose of 0.75 g/kg was toxicologically safe and merit further investigations.

**Keywords:** *Coccinia grandis*, Wistar rats, toxicological assessment, antidiabetic agent

### P 32 Anatomical evaluation of the common carotid artery bifurcation and the branching pattern: A preliminary study.

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Department of Anatomy, Faculty of Medicine

Bifurcation of the common carotid artery (CCA) and the branching pattern of the carotid arteries in the neck show great anatomical variations. Better knowledge of these variations is clinically important for surgical procedures and radiological investigations. Variant Anatomy of carotid arteries has been reported but there is no data in Sri Lankan population. This study aimed to evaluate the variations in the level of bifurcation of the CCA; the origin of the external carotid artery (ECA) in relation to the internal carotid artery (ICA) and the variations in the origin of the superior thyroid artery (STA). Twenty eight common carotid arteries of 14 cadavers were used for the study. CCA bifurcation was classified into three groups, with reference to the level of the upper border of the thyroid cartilage (TC). They were standard bifurcation, high bifurcation and low bifurcation. Standard bifurcation was observed in 5 (17.9%), high bifurcation in 19 (67.9%) and low bifurcation in 4 (14.3%). The origin of ECA was anterior to the ICA in 16 (57.1%), and anteromedial in 6 (21.4%). While 19 (67.9%) of STA originated from ECA at the level of carotid bifurcation or just above the carotid bifurcation 7 (25%) of STA arose from CCA. In one cadaver there was no STA in both sides. In conclusion, the level of bifurcation CCA varied from above the level of hyoid bone to the lower border of the TC. Bifurcation above the upper border of the TC was the most frequent bifurcation level of

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