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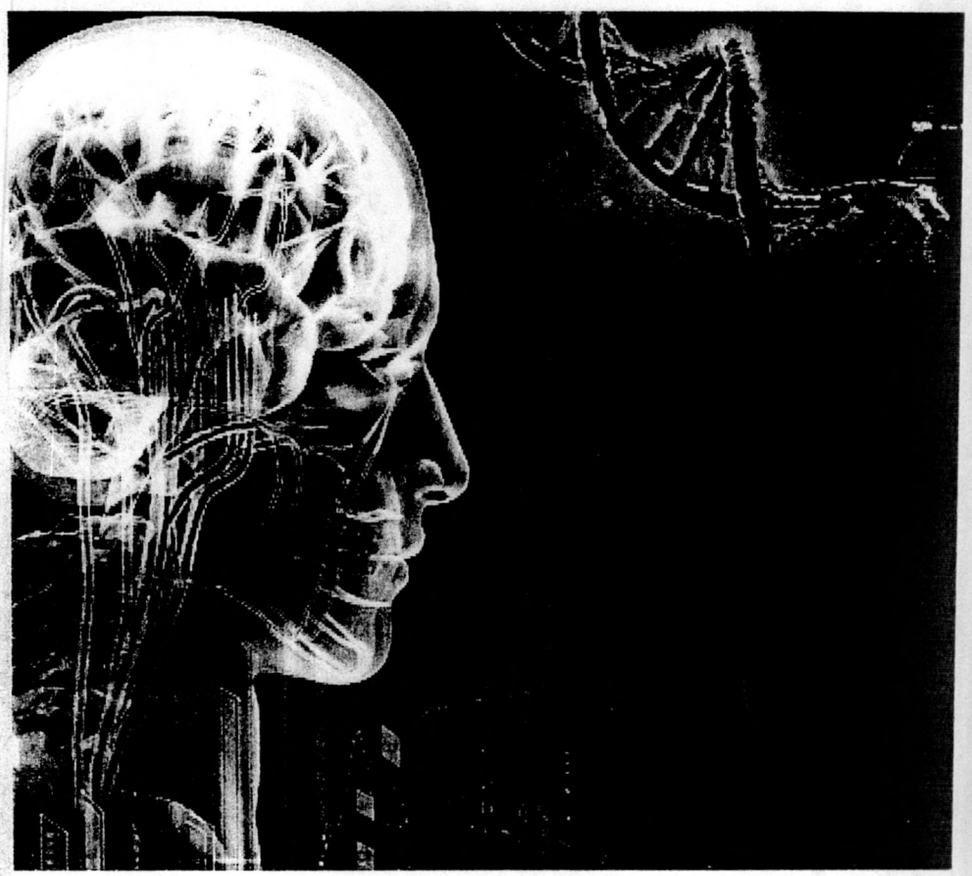

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significant in healthcare positioned at the center

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The author had reservations about two aspects of the popular periodic tables, those published by the IUPAC and the Royal Society of Chemistry, UK. These included the vacant central valley shaped upper margin and the fact that most reactive elements lying at the two extremes of the table. It was contemplated for a long time to overcome this with a new design. This was encouraged by the fact that a pharmacy professional J. W. Dobereneir of the 'Triads fame' also contributed during the early 1800 in the formation of the periodic table.

The popular table was sliced in to two sections consisting of groups 1- 12 and 13- 18 so that the s, p, d and f blocks are not fragmented. The first group was moved to the right side of the second so that the groups 18 and 1 lie adjacent to each other. This resulted in the disruption of the sequence of the atomic numbers but was finally corrected by lowering section 13-18 one period down.

Following the new layout a surprising number of hitherto unrealized properties and concepts came in to view which are listed here. The first prominent change was that the valley shaped upper margin of the table assuming a peak form. Apart from bringing the most reactive elements closer together it was found that all the significant elements in chemistry, pharmaceutical and health sciences were lumped together in a V shaped area lined with C to I through Ca around the peak of the new table. Group 18 assumed a significant central position with elements having broadly different properties lying on either side. It was also identified that the periodic table represents a replica of the earths' crust and that the higher animal and plant forms show a primordial relationship to the periodic table. Health science and other professionals may be able to see new interpretation to their work on this account. An undisputed position was identified for the long awaited atomic number zero assigned with the symbol ^{0}Ec. Many elements and their simple compounds of pharmaceutical significance are discussed.

PP 12

Screening of antibacterial activity and phytochemical analysis of selected marine macroalgae from Hikkaduwa coast, Sri Lanka

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Seaweeds are considered as a source of bioactive compounds as they are able to produce a great variety of secondary metabolites characterized by a broad spectrum of biological activities including antiviral, antibacterial, antifungal and anticancer properties. The potentials of Sri Lankan seaweeds for the development of novel therapeutic agents remain unexploited.

In this context, antibacterial susceptibility testing (ABST) of methanolic extracts of *Padina antillarum*, *Caulerpa lentillifera*, *Sargassum* sp. and *Gracilaria corticata* were conducted against two gram-positive (*Staphylococcus aureus*-ATCC 2593, *Bacillus* sp.) and two gram-negative (*Escherichia coli*-ATCC 25922, *Pseudomonas aeruginosa*-ATCC 2785) pathogenic bacteria by agar disc diffusion method. The extracts were subjected to qualitative phytochemical analysis.

The crude methanolic extracts of *P. antillarum* showed an antibacterial activity against three out of four bacterial strains namely *S. aureus* (21.33±1.53mm), *Bacillus* sp. (21.33±0.58mm), *P.aeruginosa* (17.33±1.15mm) within 24 hours. The extract of *C. lentillifera* was found to be effective only

against *S. aureus* (17.67±0.58mm) within 24 hours. There were no inhibitory effects detected for any of the tested bacteria with the extracts of *Sargassum* sp. and *G. corticata* within 24 hours. The phytochemical analysis of the extracts revealed the presence of at least two phytochemicals among Alkaloids, Terpenoids, Flavonoids, Saponins, Tannins, Cardiac glycosides and Anthraquinones.
The results of the present study showed the potential of seaweeds as a source of antibacterial compounds. Further studies are needed to carry out for the isolation and identification of the active compounds which can be chemical leads for the development of novel antibacterial agents.

PP 13

Development and validation of a HPLC method to determine carbamazepine in human serum

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Carbamazepine is a first line anti-epileptic drug. The recommended carbamazepine concentration in human plasma for an optimum therapy is in the range 4 - 12 mg L^{-1}. Immunoturbidometry is the prevailing technique that is used to quantify the drug in human serum at Sri Lankan hospitals. This research was conducted to introduce High Performance Liquid Chromatography as an alternative technique to quantify carbamazepine.

A C_{18} column and a mobile phase consisting of methanol and water in the ratio of 70:30 were used for the separation. The analysis was performed at 40 °C using the flow rate 0.8 $mLmin^{-1}$. A UV detector was used to detect the analytes at 285 nm. Diazepam was used as the internal standard. The duration of analysis for a sample was 10 minutes and under the conditions employed the retention times of carbamazepine and diazepam were 5.116 min and 8.217 min respectively.
A calibration curve of carbamazepine was developed in human plasma covering the range 0.5 - 16.0 mgL^{-1}. All samples were prepared by protein precipitation. The developed method showed a good linearity (R^2 = 0.9996). Quality control samples of carbamazepine made in plasma were used for method validation. At the lower limit of quantification the method demonstrated a 100% accuracy and a percentage coefficient of variance of 2%. At the upper limit of quantification a 107% accuracy and a percentage coefficient of variance of 3.95% were demonstrated.

The results indicate that the new method is an accurate and precise method of carbamazepine quantification.

PP 14

Employing clinic-based pharmacists to manage drug related problems among patients with diabetes; data from an urban hospital in Sri Lanka

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Employing clinical pharmacists is proven to be beneficial in detecting and resolving drug related problems (DRPs). The aim of this study is to assess the impact of pharmacist interventions in managing DRPs in patients with diabetes attending an outpatient clinic.
The prospective study was conducted in medical clinics of Colombo North teaching hospital and included 400 outpatients with diabetes. The identified DRPs, interventions and outcomes were classified according to Pharmaceutical Care Network Europe tool (PCNE V6.2).