Results: The table presents quantitative screening results of the active substances.

Tested substance	MES			scPTZ			6Hz		
	TPE (h)	ED50 (mg/kg)	PI	TPE (h)	ED50 (mg/kg)	PI	TPE (h)	ED50 (mg/kg)	PI
4a	0.5	99.71	> 3.01	0.5	-	-	-	-	-
4b	0.5	68.66	> 4.37	0.5	-	-	0.5	137.3	> 2.18
4c	0.5	81.29	> 3.69	0.5	-	-	0.5	94.37	> 3.18
8a	0.5	87.63	> 3.42	0.5	218.50	> 1.37	-	-	-
8b	0.5	12.51	> 23.98	0.5	127.10	> 2.36	-	-	-
8c	-	-	-	0.5	-	-	0.5	1.08	> 1.51

Conclusions: Several compounds showed promising results from prescreening antiseizure tests. Further evaluations are needed for determining their values as a possible new AED.

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THE PROTECTIVE PROPERTIES OF THE EXTRACT OF POLYPHENOLS FROM GRAPES OF CABERNET SAUVIGNON VARIETIES IN THE MODEL OF ACUTE RADIATION SICKNESS IN RATS

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Background: To investigate possible protective effect of the polyphenol concentrate from Cabernet Sauvignon collection of grapes in rat model of acute radiation sickness (ARS).

Methods: To initiate the condition (ARS) 34 white outbred male rats weighing 160±20 g were exposed to the total acute gamma-irradiation of 8.0 Gy. The progress of radiation sickness was monitored by hematological blood tests one week after irradiation. Animals were divided into 4 groups: group 1, animals received the polyphenol concentrate the week before and the week after irradiation, group 2 - received the polyphenol concentrate only before irradiation, group 3 - received the polyphenol concentrate only after irradiation, group 4 - control - none of the animals received the polyphenol concentrate. Experimental animals were given 0.5 ml of the polyphenol concentrate intragactrically on daily basis. The level of oxidative stress in the blood plasma was studied with FRAS 4 (Evolvo srl, Italy) using sets of d-ROMs test (shows the amount of free radicals in plasma) and PAT Test (evaluates the total antioxidant activity of blood plasma).

Results: In comparison to intact animals all irradiated animal developed pancytopenia. Erythrocyte indicators such as red blood cell count, hemoglobin, and hematocrit were also decreased. Group 1 and group 3 showed less decrease in hemoglobin, platelets and erythrocytes in blood compared to other groups. Activation of the oxidative stress (d-ROMs Test) and reduction of the systemic antioxidant potential (PAT Test) was observed in all groups of irradiated animals. It was also shown that the polyphenol concentrate prevented the reduction of the total antioxidant activity of blood plasma in all treated groups (groups 1, 2 and 3) in comparison to untreated animals (group 4).

Conclusions: The polyphenol concentrate prevents reduction of the total antioxidant activity of plasma, as well as limits the progress of pancytopenia.

POSSIBLE CHANGES OF PHARMACOKINETICS OF IL-2 DEPOSITED IN RED BLOOD CELLS (RBC)

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Objective: The study aims are to investigate possible changes in pharmacokinetics of IL-2 deposited in red RBC by intravenous administration to patients with severe surgical infections.

Methods: A total of 17 patients, with purulent complications of the postoperative period were included in the study.

The homogeneous suspension of blood cells with IL- 2 was administered intravenously to patients of group (n=10). In the control group (n=7), 1 000 000 ME IL-2 dissolved in saline solution was administered intravenously.

The level of IL-2 was measured in blood serum and supernatant of tissue homogenate. Received data on concentration of IL- 2 level in blood serum after intravenous administration of drug with and without deposition to the suspension of blood cells were approximated within the frame of compartmental two-chambered pharmacokinetic model: Cp = Ae −αt + Be −βt.

A = 0.000 a = 0.00078 B = 0.00659 b= 0.00080 k= 0.00659

The curve "concentration - time" of intravenous administration of IL- 2 medication deposited to the cell suspension is a two-phase curve. The curve could be represented by method of the least squares: C=A*exp(−at)+B*exp(−bt).

A = 81.456 a = 0.02954 B = 29.156 b= 0.01079.

Results: Our results suggest that pharmacokinetics of IL-2 administration in a deposited and free form differs significantly. Half-life elimination (T1/2) period increases when clearance (Cl) plunged. The stationary level of IL-2 activity in body is sustained as 122.5 and 63 min for deposited and free form, respectively. Increased volume in the central chamber (blood), and increased amounts of kinetic and stationary volumes (peripheral tissue) indicates that cytokine moves from blood to peripheral tissues and organs. Growth of MRT and AUC indicates on a possible prolonged and stable effect of the cytokine.

Conclusions: Thus, a cell transport system by changing pharmacokinetics provides conditions for increasing the therapeutic effect of IL-2.

KNOWLEDGE ON ANTIBIOTICS AMONG NON-ACADEMIC STAFF MEMBERS OF A SRI LANKAN UNIVERSITY

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Background: Studies have shown that the public knowledge on antibiotics is poor although many practice antibiotic self-medication. This study aimed to determine the knowledge regarding antibiotics and their use among non-academic staff members of a Sri Lankan University.

Methods: This is a descriptive cross-sectional study. The participants were permanent non-academic staff members of a selected university in Sri Lanka. Consecutive sampling was done. Data were obtained using a pre-tested self-administered questionnaire administered in mother-tongue.

Results: 321 individuals participated (response rate - 80%); 53.9% were men; mean age was 36.8±8.8 years. 40.2% have self-medicated with antibiotics at least once during the preceding 12 months.46.4% have understood antibiotics as medicines which can act against diseases caused by all the microbes including bacteria, viruses and fungi.

24.6% knew they act only against bacterial infections. 77.3% identified amoxicillin as an antibiotic. Majority (88.5%) did not know about antimicrobial resistance. 98.1% agreed that they should know whether there is any allergy to the drug before taking it. 88.5% indicated that type and dose of the antibiotic should change based on the age. 95.9% knew that if a woman is going to take an antibiotic, it is important to know whether she is pregnant or lactating. 62.6% agreed that they should know about the liver & kidney function before taking a drug.

Conclusions: In this population with high rates of antibiotic self-medication, the knowledge related to indications for antibiotics and antimicrobial resistance was poor. However the majority of the participants were knowledgeable about the important precautions. Improving public awareness and knowledge is needed to prevent antibiotic misuse.

ADVERSE DRUG REACTIONS IN A COHORT OF SRI LANKAN PATIENTS WITH NON-COMMUNICABLE CHRONIC DISEASES

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Background: Adverse drug reactions (ADRs) pose a major problem in medication use. This study was done to describe incidence, nature and associated factors of ADRs in a cohort of Sri Lankan patients with non-communicable chronic diseases (NCCDs).

Methods: The prospective observational data presented here are obtained as a part of a large study conducted in a tertiary-care hospital in Sri Lanka. In-ward patients with NCCDs were recruited systematically using the admission register in the ward as the sampling frame. All ADRs occurred during the index hospital admission and 6-month post-discharge period were detected by active surveillance.

Results: 715 patients were studied (females – 50.3%; mean age – 58.3±15.4years). 35.4% were aged ≥65years. Mean number of drugs prescribed per patient was 6.11±2.97. Most prevalent NCCDs were hypertension (48.4%), diabetes (45.3%) and ischemic heart disease (29.4%). 154 ADRs [33 (21.4%) during index hospital admission; 121 (78.6%) during 6-month post-discharge period) were detected involving 112 (15.7%) patients. 51.9%(80/154) of them were potentially avoidable. 47% (73/154) of ADRs were serious adverse events (SAEs); 13 were life threatening, 46 caused hospitalization and 14 caused disability. The most common causes for re-hospitalization due to ADRs were hypoglycemia due to anti-diabetic drugs (17/46), bleeding due to warfarin (6/46) and hypotension due to anti-hypertensives (6/46). ADRs were more common in elderly (34% vs 14.7%, p<0.001), in those who were on ≥ 5 drugs (25.9% vs 12.7%, p<0.001) and among those with diabetes (28.5% vs 15.6%, p<0.001).

Conclusions: Incidence of ADRs was high in the study population. A large proportion of them were SAEs. The majority of ADRs that required re-hospitalization were caused by widely used drugs and were potentially avoidable. Factors associated with a higher incidence of ADRs were age ≥65years, use of ≥5drugs in the prescription and presence of diabetes. The healthcare system in the study setting needs improvement in order to minimize ADRs.

CANNABINOID TOXICITY POST THERAPEUTIC INTRAPERITONEAL INJECTION

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Background: Since November 2016, medicinal cannabis has been able to prescribed under the provision of a controlled drug in the Australian Poisons Standard. However there are multiple state and federal laws required for patients to navigate access, and imported products can be expensive. Some patients are growing and using their own supply while awaiting the health outcomes research required for streamlined access.

Results: A 56 year old female with stage IV ovarian cancer with peritoneal metastases presented to hospital with fevers, abdominal distension and severe pain, vomiting, anorexia, dehydration and confusion. The patient reported receiving an intraperitoneal injection on two days prior to presentation (administered by a deregistered medical practitioner) containing 12 g of cannabis oil. Plasma concentrations of THC and OH-THC (active metabolite) were 43 ng/mL and 25 ng/mL. A week post admission THC and OH-THC remained elevated at 34 ng/mL and 33 ng/mL. Pharmacokinetics showed THC concentrations consistent with the clinical state but not with the known pharmacokinetics of cannabis.

Discussion: The pharmacokinetics of this case suggested there is a large amount unknown about cannabis pharmacokinetics. In particular: the human intraperitoneal pharmacokinetics of a cannabinoid emulsion, the effect of peritoneal metastases, inflammation and altered vasculature, reservoirs, the role of the excipient (coconut oil in this case), the concentration at which saturation of hepatic glucuronyl transferase system responsible for conjugation occurs, cell transport characteristics within tumors considering both theoretical predictions and experimental measurements suggest very limited penetration of drugs into tissues including tumors adjacent to the peritoneal cavity, the effect of cachexia, role of the liver and liver metastases in metabolism, possible vehicle-induced inhibition of cannabidiol metabolism and/or transport processes as well as direct enhancement of tissue permeability for micellous surfactants. These and the pharmacokinetic data presented are all relevant to understanding the altered pharmacokinetics of cannabinoids in the severe cancer setting.

ANTIBIOTIC CONSUMPTION IN A SPECIALISED TEACHING HOSPITAL IN ETHIOPIA

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Background: Like in many developing countries most people in Ethiopia never see a doctor and use few western drugs. In hospitals, however, especially antibiotics are extensively used. High resistance rates are documented. In the present study the antibiotic consumption was investigated in three clinical wards in a big hospital in Addis Ababa.

Methods: The material was 2231 medical charts for the period 11/9-13 to 10/9-14 from the wards internal medicine, surgery and gynecology/obstetrics in Tikur Anbessa Specialised Hospital.

Data collection was carried out from January to April 2015 by pharmacists from the hospital.

Results: Each of the medical charts represented one patient due to no readmissions. About 60% of the patients were admitted to internal medicine, about 20% to each of the two other wards. The number of bed days was high with an average of 16.5 (s.d. 16.3). Fourteen percent had been hospitalised for more than 30 days. Antibiotics for systemic use were prescribed to 1645 patients (73.7%), of whom 79 were treated for nosocomial infections. Sensitivity tests were performed for only 3.8% of the patients; hence, empirical prescribing was therefore the common situation. As much as forty percent had been prescribed one antibiotic, 33.6% two, and the remaining three to nine. The average number of antibiotics per patient was 2.1