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ABSTRACT BOOK

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was done through the outpatient database and reviews. Annual frequency of change and reding on the cause were calculated. The data compared with those described in Davidson (Antiviral Research 2010, 86:227–9) concerning consultations.

of 538 ART regimens were changed, affecting of patients. 79% were men with a mean age of annual rate of change was 18%. The main cause adverse effects (45%) (mostly for gastrointestinal and CNS disorders (21%)). This was followed es (19%), simplicity (19%), virological failure ractions (5%).

he reasons for discontinuation of ART agree in in magnitude with those indicated in the existing fewer changes due to adverse effects were found ges in the hope of treatment optimisation when a nsultation was possible. This was due to better care and better communication between doctor t.

interest.

ELOPMENTS IN PHARMACY EDUCATION IN AINE UNDER THE INFLUENCE OF THE BOLOGNA TEM: AN EXAMPLE IS THE "TOXICOLOGICAL EMISTRY" COURSE

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present one of most important strategic chalensuring the system of higher education in Ukraine igh quality education to pharmacists in order to orldwide needs. Therefore improving the higher em and designing new conceptual directions for its on the basis of analytical marking and strategic very important for those wishing to study phar- the new concepts we need to introduce is 'Toxicogy'. Nowadays people live in the conditions of train; therefore we have an important task to give systematic and accessible knowledge of 'Toxicolog- to the future pharmacists.

ist schools of pharmacy in their quality assurance improve. To implement new pedagogical, psychocal, chemical, analytical and biochemical methods of 'Toxicological chemistry'. Ukraine is also higher education system to bring in the Bologna

methods Testing is the most important modern control instrument used to evaluate students' the new modular credits system. The second instrument is a complex of principles used to ring in this course such as 'general-to-specific and eral' and 'from simple to complex, from complex

Results As a result of the evaluation a report has been written, a new course has been designed "Toxicological chemistry" and new book for students of the same name (2012–2013). The course is based on the modular credits system and recommendations of the European education system.

For example: one of the most important classes of toxic substances being studied in the course is the class of 'volatile' poisons (aliphatic alcohols, aldehydes and ketones, hydrocyanic acid, phenols, carboxylic acids, etc). The definitive representatives of this class of 'volatile' poisons are methyl and ethyl alcohols. During the studying of biotransformation of methyl and ethyl alcohols in the human body, it is important to pay attention to the fact that their metabolic conversions are performed not only according to the well-known paths, but in complex interactions with the body. The main metabolite of methanol is the product of its oxidation by the alcohol dehydrogenase (ADH) enzymes to formaldehyde, which is oxidised to formic acid under the influence of the oxidase enzymes, part of which is under the influence of decarboxylase enzymes breaks down into carbon monoxide (IV) and water. 90% of ethyl alcohol is oxidised by the alcohol dehydrogenase (ADH) enzymes to acetic aldehyde, and then by the oxidase enzymes is oxidised to acetic acid or to carbon monoxide (IV) and water.

Conclusions In the new course, books, lectures and lessons of "Toxicological chemistry" we describe any changes in the structure of drugs during the chemical reactions, metabolic processes and properties. We are examining the impact of the new initiative on the quality of the students' knowledge. Thus, by studying the class representatives of 'volatile' poisons – methyl and ethyl alcohol – in the 'Toxicological chemistry' course, they are learning both about particular chemicals and general principles of metabolism. Testing is an important way of checking students' knowledge. We aim to provide a high quality preparation for the future pharmacists on a course that meets international requirements.

No conflict of interest.

OHP-055 THE SEARCH FOR ORIGINAL ANTITUMOUR DRUGS – NEW ANTIMETABOLITES OF PYRIMIDINES AND THEIR ADDUCTS WITH BACTERIAL LECTINES

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Background The search for new antitumour drugs is creating new pyrimidine antimetabolites that will affect the structure and functions of nucleonic acids. It is known that some tumours metabolise uracil more actively than normal cells. Therefore 5-FU (5-fluorouracil) and its derivatives will act as substrates and/or inhibitors of ferments and will be taken up by tumour cells.

Lectins are multivalent proteins that interact with glycosylated surfaces and nanomaterials.

Purpose To report the synthesis, characterisation, toxicity and antitumour activity of a new chemical-biological adduct: bacterial lectin (*Bacillus subtilis* 668 IMV) - bis-derivative of 5-FU).

Materials and methods Object of the investigation: new bis derivative of 5-FU, its adduct with bacterial lectin (*Bacillus subti-*

Centre of the Russian Federation's Academy of Medical Sciences. The efficiency parameter [% of growth relaxation of LS Plissa, (volume, mass)] was less than 50%.

The new bis-derivative of 5-FU (bis-5-FU) and halothane was obtained under phase-transfer conditions with catalysis by an 18-crown-6 complex. The new chemical-biological adducts were created by joining bis-derivative of 5-FU and *Bacillus subtilis* 668 IMV (lectin 668).

Results Data from toxicity studies of the compounds confirmed their low toxicity: LD_{50} of lectin 668 is 89 mg/kg, LD_{50} of bis-5-FU is 125 mg/kg, LD_{50} of the adduct (lectin 668-bis-5-FU) is 137 mg/kg. Thè adduct (lectin 668- bis-5-FU) was found to have a strongly antitumour effect on LS Plissa – 62.8% (for 5-FU, the control is 55%).

Conclusions Derivatives of 5-FU and their adducts with bacterial lectin (B. subtilis 668 IMV) are substances for further investigation as potential drugs with antitumour activity.

No conflict of interest.

International Posters

INT-002 THE EVOLUTION OF DEVICES IN HAEMODYNAMIC UNIT: THE EXPERIENCE OF 'SAN PAOLO' HOSPITAL IN BARI (ITALY)

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Background The percutaneous transluminal coronary angioplasty (PTCA) is a therapeutic technique based on the use of devices (balloon catheters (POBA), bare-metal stents (BMS) and drug-eluting stents (DES)) which permit the treatment of coronary artery stenosis. Introduced at the end of the 70s', the PTCA has had a rapid and intense development both in terms of number of procedures/year and in terms of technological evolution. In little more than 30 years we have moved from the treatment of coronary lesions with only the expansion by POBA, to the system of BMS, and since the 2000s, the system of DES.

Purpose The aim of this work is to evaluate how the evolution of devices affects the work of the haemodynamic unit, with particular reference to the "San Paolo" hospital in Bari.

Materials and methods The analysis was conducted retrospectively on the data of the aforementioned department in the years 2011–2012. Results: Until the mid-90s', the treatment of coronary artery stenosis by percutaneous way was limited to the use of POBA with high incidence of procedural complications (coronary dissection and use of interventions of aortic-coronary bypass) and post-procedural (high incidence of restenosis evaluated between 40% and 50%). With the introduction of BMS both complications were significantly reduced. In particular, the incidence of restenosis was halved and the necessity of recurring to urgent by-pass intervention was lowered to almost zero. The use of DES and their technological development has resulted in a further reduction in the incidence of restenosis, now less than 7–8%. In 2011, in the haemodynamic unit of "San Paolo" hospital, were carried out 339 PTCA by treating 430 vessels; 271 DES and 190 BMS were implanted. 19 procedures were completed with the use of POBA. In 2012, 479 PTCA were performed by treating 600 vessels; 462 DES, 209 BMS and 28 POBA were implanted. In the two years analysed, only was resorted to by-pass surgery emergency (for ineffe of PTCA) and the incidence of restenosis was appro 4%.

Conclusions: The analysis shows that the use of DES, c ised by the release of drugs with cytostatic and antipro activity, is prevalent (58.3% in 2011 and 68.9% in 201 their efficacy and safety. With regards to the analysis the advantage of using DES is the lower incidence of r and therefore re-hospitalisation and additional procedur tion. Disadvantages are: major procedural costs and the continue the dual antiplatelet therapy for one year.

No conflict of interest.

INT-003 INTRATHECAL CHEMOTHERAPY: HOW TO ENSU MICROBIOLOGICAL STABILITY?

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Background Cytotoxic preparations centralisation h secure the circuit of chemotherapy but also brought straints for caregivers especially when cytotoxic prepara in the pharmacy is closed. As ANSM agency recommen considering physicochemical stability studies, we chos University hospital, to prepare in advance and store i preparations. However and even if there is an infecti microbiological stability of cytotoxic preparations has studied yet.

Purpose Therefore we decided to investigate microl stability of usual intrathecal preparations produced service.

Materials and methods Three intrathecal preparatio studied: methotrexate Mylan® 25 mg/ml, aracytine Pf mg/ml and hydrocortisone Upjohn® 50 mg/ml. They pared under sterile isolator and kept in double pack b and 8°C for 0 to 4 days. First, according to European P poeia, we studied growth of 6 microbial strains (Cl sporogenes, Pseudomonas aeruginosa, Staphylococcu Aspergillus niger, Bacillus subtilis, Candida albicans) soy and thioglycolate resazurin medium alone and supp with intrathecal preparation. Second, sterility of the pre was tested by direct inoculation of intrathecal prepara from 0 to 4 days in medium. All tests were repeated 3 t

Results The 6 strains were able to grow in culture be and with hydrocortisone intrathecal preparation. growth was also possible when methotrexate or aracy added to the medium but only if diluted up to 1/50 fo trexate and up to * for aracytine. Sterility tests showed rial or fungal culture in our preparations stored up t prior inoculation.

Conclusions This study ensures us that our process sterile intrathecal methotrexate, hydrocortisone and preparation. Sterility was controlled after storage for days after manufacture in a double pack at 2 to 8°C and icochemical stability was demonstrated by previous w are now able to provide intrathecal preparations mani as recommended even when service is closed. It could ested to extend this work to others cytotoxic pre needed in case of emergency.

No conflict of interest.