# ABSTRACT BOOK

# 7th International Scientific Interdisciplinary Conference

## for medical students and young scientists

http://isic.kharkov.ua

Kharkiv National Medical University, Kharkiv, Ukraine

*May 15th-16th, 2014*

inhibition of lipoproteinlipase activity (catalyzes the blood lipids and splitting of triglycerides to free fatty acids). The disturbance of lipidic metabolism is characterized by increase of the level of total cholesterol with increasing of atherogenic fractions (low density lipoproteids and very low density lipoproteids), triglycerids and decrease of high-density lipoproteins. That changes lead to increase of blood serum`s atherogenicity. The blockade of $\beta_3$-receptors and $\beta_2$-receptors can lead to the weight increase, decrease of sensitivity of tissues to insulin, inhibition of peripheral glucose uptake and insulin-dependent decrease in skeletal muscle microcirculation. The deceleration of general metabolism and the change of providing thermal balance are also very important. The negative impact of β-AB on carbohydrate metabolism is connected with their effects on the β2- and β3-adrenergic receptors. β-AB increase the risk of hypoglycaemia and mask its manifestations, reduce the production of insulin and insulin-dependent peripheral glucose uptake, impair lipolysis, reduce the production of contrainsular hormones that more and more break the internal regulation of insulin release. The blockade of $\beta_3$-receptors in pancreatic islands leads to the progress of insulin resistance and hyperglycemia. However, modern cardioselective β1-AB block principally β1-receptors which are not the main cells of the pancreas, liver, fatty tissue, thyroid gland. That mediates the carbohydrate metabolism. In this way, the higher selectivity of β-AB is, the less their ability to disrupt the metabolism of carbohydrates and lipids is. Although, the large doses of the β1-AB act as non-selective, they may cause certain metabolic effects. The usage of highly selective (nebivolol) and nonselective β-AB with additional α1-blockade,vasodilating β-AB (carvedilol) allows to avoid adverse metabolic disorders.

**Conclusion.** In patients with metabolic syndrome, diabetes, obesity, it is preferable to use a selective β1-AB, metabolically neutral, with additional vasodilating properties.

**Olefir A.S., Skrebec N.S., Karnaukh E.V.**

## RECOMBINANTCOLONY-STIMULATING FACTORS-INNOVATIVE BIOTECHNOLOGIES INCELL-THERAPY OF LEUKOPOIESIS PATHOLOGY

**Kharkiv national medical university, Kharkiv, Ukraine**
**Department of Pharmacology and Drug Prescription**

**Introduction.** The most important innovation of modern biotechnologyis creating by genetic engineering of the recombinant human stimulants of leukopoiesis and immunomodulators. This currenttrend incell therapy of leucopenia and immunodeficiency disorders of various origins, associated with suppression of bone marrow leukopoietic function. Demand for these drugs is determined bythe high prevalenceleukopenic states andclinical need purposefully of immune processes control -longinfections andinflammatory diseases of bacterial, viral, fungal and protozoalorigin; chemotherapy, radiotherapy and radiation therapy in oncology; radiation disease, recurrents or esandstomach ulcer; burn disease, severe intoxication.

**Results.** Long-term use of drugs that have hematotoxic side effects are antiblastomic, antithyroid, sulfonamides, nonsteroidal antiinflammatory drugs from the pyrazolone group (Phenylbutazone, Analginė, Amidopyrine), fenotiazine group of the neuroleptics (Chlorpromazine, Ftorfenazine, Promazine, Thioridazine and others). The creation and introductionof recombinantcolony-stimulating factors(CSF) allows fast and clinically efficient to correctdisorders of all stagesof the granulocytesand/ormacrophages maturation

and differentiation, and this due to such group as-granulocyte-CSF (G-CSF), macrophage-CSF(M-CSF),granulocyte-macrophage-CSF(GM-CSF). Endogenous growth factors glycoproteins cytokines erythropoietin, interleukin-3 and endogenicCSF were taken as prototype. In the USA, results of these studies are strictly controlled by FDA (Food and Drug Administration, the Federal Office for sanitary inspection by the Food and Drug Administration). Currently approved by the FDA for medical use of recombinant leukopoietic CSF from the group G-CSF - Filgrastim (Neupogen, Leucostim, Leicita, Granogen, Myelastra, Neupomax, Neitrostim); Lenograstim (Granocyte); Pegfilgrastim (Neulastim); from the group of GM-CSF - Molgramostim (Leucomax, Neustim), Sargramostim. But genetic recombination of exogenic synthetic analogues, manifested by the presence of not only their proven clinical efficiency, but serious side effects (fever, weakness, convulsions, paresis, increased intracranial andchangesin blood pressure, indigestion, arrhythmia and heart failure, the strongest nonspecific pain expressed hemogram changes, allergies), which are less pronounced indrugs from the groupG-CSF.

**Conclusion.** Thisis a strategicdirectionof biomedicinefor the worldmedical science and it has becomean integral part ofthe therapeuticarsenalof leading clinics ofGermany, USA, Israel and other countries.

**Rostovtseva M. S.**

## VITAMIN A OVERVIEW INFORMATION

**Kharkiv national medical university, Kharkiv, Ukraine**
**Department of Pharmacology and Drug Prescription**

**Introduction.** Vitamin A is a vitamin. It can be found in many fruits, vegetables, eggs, whole milk, butter, fortified margarine, meat, and oily saltwater fish. It can also be made in a laboratory.

**Results.** Vitamin A is used for treating vitamin A deficiency. It is also used to reduce complications of diseases such as malaria, HIV, measles, and diarrhea in children with vitamin A deficiency. Women use vitamin A for heavy menstrual periods, premenstrual syndrome (PMS), vaginal infections, yeast infections, "lumpy breasts" (fibrocystic breast disease), and to prevent breast cancer. Some women with HIV use vitamin A to decrease the risk of transmitting HIV to the baby during pregnancy, childbirth, or breast-feeding. Men use vitamin A to raise their sperm count. Some people use vitamin A for improving vision and treating eye disorders including age-related macular degeneration (AMD), glaucoma, and cataracts. Vitamin A is also used for skin conditions including acne, eczema, psoriasis, cold sores, wounds, burns, sunburn, keratosis follicularis (Darier's disease), ichthyosis (noninflammatory skin scaling), lichen planuspigmentosus, and pityriasisrubrapilaris.It is also used for gastrointestinal ulcers, Crohn's disease, gum disease, diabetes, Hurler syndrome (mucopolysaccharidosis), sinus infections, hayfever, and urinary tract infections (UTIs).Vitamin A is also used for shigellosis, diseases of the nervous system, nose infections, loss of sense of smell, asthma, persistent headaches, kidney stones, overactive thyroid, iron-poor blood (anemia), deafness, ringing in the ears, and precancerous mouth sores (leukoplakia).Other uses include preventing and treating cancer, protecting the heart and cardiovascular system, slowing the aging process, and boosting the immune system. Vitamin A is applied to the skin to improve wound healing, reduce wrinkles, and to protect the skin against UV radiation.