

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
TARAS SHEVCHENKO NATIONAL UNIVERSITY OF KYIV

MINISTRY OF HEALTH OF UKRAINE
UKRAINIAN ASSOCIATION OF SPECIALISTS IN IMMUNOLOGY,
ALLERGOLOGY AND IMMUNOREHABILITATION

VYNOGRADS'KYJ SOCIETY OF MICROBIOLOGISTS OF UKRAINE

II International Scientific Conference

Microbiology and Immunology – the development outlook in the 21st century

ABSTRACTS BOOK

(APRIL 14-15, 2016, KYIV)

KYIV 2016

on days 3, 10 and 17; 8 (47.8%) started to show decrease NKc later or faster returned to base levels; and only in 3 (13%) subjects displayed no effect of CT on NKc. Expectedly, no changes in T-cell subsets (CD3CD4, CD3CD8, HLA-DR, CD158a) were observed after CT.

Conclusion: CT decreased NK cell numbers, their activity, and cytotoxicity. Low cost, safety, non-invasive nature and ease of administration make CT treatment a promising approach for NKc downregulation.

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**FISH HISTOLOGICAL AND BIOCHEMICAL INDICATORS FOR THE
EVALIATION OF MARINE ENVIRONMENT HEALTH.**

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At the last decades researchers take their attention to the consequences of the environmental pollution and negative effects on the living organisms in ecosystems and biosphere. Long-term and large-scale monitoring studies indicate the changes of anthropogenic impact on the water ecosystems, which can be chronically stressed by multiple environmental factors. Indicators of negative effects allow the direct determination of pollutant impact on living organisms in aquatic systems. Histopathological and biochemical analysis of various organs and tissues is an important tool of environmental monitoring of water pollution which allows assessing of structure changes and lesions that caused by environmental toxicants and various negative factors. The responses of Scorpion fish *Scorpaena porcus*, caught in Sevastopol bays characterizing different level of chemical pollution, to the unfavorable ecological factors were studied. The significant increase of the number of melanomacrophage centers (MMCs) in the liver of fish from the most polluted site was shown. Increase of oxidized products and chemiluminescence values in the liver extracts of fish from the contaminated bay was the result of oxidative stress in the animals. Induction of antioxidant enzyme activities in the liver demonstrated the response of scorpion fish to pollution. Defense mechanisms activation resists the organism against the consequences of oxidative stress and adapt it to the unfavorable environmental conditions. The obtained results can be applied for development monitoring management and for perspectives of conservation ecology and biodiversity in impacted aquatic ecosystems. The analysis of tested biomarkers in

fish liver is important tool for the evaluation of fish abilities to protect against chemical pollution and keep their life in the pollute environments. In contaminated areas the exposure of aquatic organisms to xenobiotics results to interaction between these compounds and biological systems which may give elevation to biochemical and physiological damage or/and adaptive mechanisms via the induction of defense immune and antioxidant systems

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**LABORATORY DIAGNOSTIC OF CHRONIC GRANULOMATOUS DISEASE:
COMPARISON OF TWO METHODS.**

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Chronic granulomatous disease (CGD) is a group of five genetic disorders of the phagocyte nicotinamide adenine dinucleotide phosphate (NADPH) oxidase complex generating reactive oxygen species (ROS) in response to physiological stimuli such as the phagocytosis of microbes. CGD leads to recurrent life-threatening opportunistic infections and uncontrolled inflammation, often accompanied by granuloma formation. A provisional diagnosis of CGD is made by a DHR assay using flow cytometry or by nitroblue tetrazolium (NBT) using light microscopy. DHR (dihydrorhodamine-1, 2, 3) freely enters the phagocytes and is oxidised intracellularly to rhodamine-1, 2, 3 by diffusible H₂O₂ after phagocyte stimulation. In our study we have compared measurement of neutrophils (NADPH) oxidase complex activity by two methods - NBT-test and DHR assay in a group of healthy children, children with CGD (3 genetically confirmed patients) and the group of children with invasive bacterial infections. We showed DHR assay as more sensitive and more convenient method for the measurement of neutrophil oxidative burst activity.

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THE ROLE OF TOLL-LIKE RECEPTORS IN TUMORIGENESIS.

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Interest in the role of inflammation process in the development of cancer is extremely increased nowadays. TLRs recognize structurally conserved molecules derived from microorganisms and play the key role in the formation of the innate