

2013 № 4 ЗМІСТ (Contents)

	С. (Р.)
Редакційна рада (Editorial Board)	1
Зміст (Contents)	2-4
ОГЛЯДИ (REVIEWS)	
<hr/>	
АДЬЮВАНТЫ В СОВРЕМЕННОЙ ВАКЦИНОЛОГИИ Исаенко Е.Ю., Бабич Е.М., Елисеєва И.В., Ждмарова Л.А., Белозерский В.И., Колпак С.А. ADJUVANTS IN MODERN VACCINOLOGY Isaenko Ye. Yu., Babych Ye. M., Yelyseyeva I. V., Zhdamarova L. A., Belozersky V. I., Kolpak S. A. A concept of adjuvants and their story of creation is characterized in the article. They're presented the various types of non-specific stimulators of immune systeme, thier excipients and classification. They're described basic properties of adjuvant systems, their significant advantages and disadvantages. Particular attention is paid to the numerous antigen delivery systems, including alive vectors, nanoparticles, bacterial toxins, etc. They're considered non-specific stimulators mechanisms of action on immune system and their interaction with antigens. They're given examples of different adjuvants in licensed vaccines use. Key words: adjuvants, non-specific stimulators of immune systeme, antigen delivery systems antigen delivery systems, immunogenicity, immunity.	5-21
<hr/>	
РОЛЬ ЕНТЕРОКОКІВ У ВИНИКНЕННІ НОЗОКОМІАЛЬНИХ ІНФЕКЦІЙ (огляд літератури) Перетятко О.Г. ROLE OF ENTEROCOCCI IN THE OCCURRENCE OF NOSOCOMIAL INFECTIONS (REVIEW) Peretyatko E. G. In the article considers the role of microorganisms of the genus Enterococcus in the occurrence of nosocomial infections. The most common nosological forms of infections enterococci's etiology: urinary tract infections, infectious endocardit, sepsis, gynecological, neonatal, intraabdominal infections and infectious-inflammatory soft tissue lesions. Shows the clinical role not only <i>E. faecalis</i> and <i>E. faecium</i> , but other species, namely: <i>E. avium</i> , <i>E. casseliflavus</i> , <i>E. durans</i> , <i>E. gallinarum</i> , <i>E. hirae</i> , <i>E. malodoratus</i> , <i>E. mundtii</i> , <i>E. raffinosus</i> , <i>E. solitarius</i> . Key words: enterococci, nosocomial infection, etiological role, E. faecalis, E. faecium.	22-27
<hr/>	
ЕКСПЕРИМЕНТАЛЬНІ РОБОТИ (EXPERIMENTAL STUDY)	
<hr/>	
VALUE OF HOUSE AEROALLERGENS IN THE ETIOLOGICAL SPECTRUM OF BRONCHIAL ASTHMA IN CHILDREN Makeeva N.I., Shmulych V.K., Chernenko L.N., Staruseva V.V., Shmulych A.V., Parameyeva K.O. 1487 children with asthma were examined by prick- test method. Were made a comparative assessment of the etiological significance of house aeroallergens: house dust mites, bird's feathers, chironomids, fungus in the formation of bronchial asthma in children. Defined a dominating allergen from the house dust (Allergenum e pulvere domesticum e Dermatophagoides pteronyssinus), which could be used to optimize the specific immunotherapy of asthma in children. Keywords: asthma, house aeroallergens, etiologic significance, children.	28-32
<hr/>	
ДЛЯ УЛЬТРАЗВУКОВОГО ВИПРОМІНЮВАННЯ НА СФОРМОВАНІ БІОПЛІВКИ ТА ЗДАТНІСТЬ ДО ЇХ ФОРМУВАННЯ <i>S.AUREUS</i> Мішина М.М. EFFECT OF ULTRASOUND RADIATION ON FORMED BIOFILMS AND ABILITY TO THEIR FORMATION IN <i>S.AUREUS</i> Mishina M.M. Microbiological research of the clinical material received from with inflammatory processes was carried on that to detect ability to form biofilms and to study effect of low-intensity ultrasound radiation on formed biofilms and their aggregation ability. Performed research showed that ultrasound radiation of low intensity could destroy biofilms and inhibit ability of microorganisms to form secondary biofilms. Key words: ultrasound radiation, biofilms, S.aureus.	33- 36
<hr/>	
ВИВЧЕННЯ ВПЛИВУ УЛЬТРАЗВУКОВОГО ВИПРОМІНЮВАННЯ НА ЗДАТНІСТЬ ДО ФОРМУВАННЯ БІОПЛІВОК ТА НА СФОРМОВАНІ БІОПЛІВКИ <i>KLEBSIELLA PNEUMONIAE</i> Мозгова Ю.А. STUDY OF ULTRASOUND RADIATION INFLUENCE ON ABILITY TO FORM BIOFILMS AND FORMED BIOFILMS OF <i>KLEBSIELLA PNEUMONIAE</i> Mozgova Yu.A. With aim to detect ability to form biofilms in <i>K. pneumoniae</i> and to study effects of low-intensity ultrasound radiation on formed biofilms and their aggregation microbiological research of material from patients with pyoinflammatory diseases was performed. It was found that low-intensity ultrasound radiation could destroy formed biofilms of <i>K. pneumoniae</i> and decrease ability of this pathogen to form secondary biofilms. Key words: biofilm, Klebsiella pneumoniae, low-intensity ultrasound radiation.	37-40
<hr/>	
МІКРОБНА ФЛОРА РОТОГЛОТКИ ПРИ ЗАХВОРЮВАННЯХ НА ГРИП ТА ГРВІ Климнюк С.І., Покришко О.В., Савчук М.М., Романюк Л.Б., Ткачук Н.І., Андрейчин Ю.М. MICROBIAL FLORA OF STOMASTOPHARYNX IN PEOPLE WITH INFLUENZA AND ACUTE RESPIRATORY VIRAL INFECTIONS Klymnyuk S. I., Pokryshko O. V., Savchuk M.M., Romanyuk L.B., Tkachuk N.I.,	41-48

Andreichyn Y.M.

Stomatopharynx samples of 146 patients with influenza and acute respiratory viral infections were investigated. Diagnosis of influenza was confirmed in 2,7 % patients, the remaining persons had acute respiratory viral infections and their complications. Oropharyngeal microbiocenosis was represented by associations of facultative anaerobic, aerobic, anaerobic bacteria, and fungi. Almost all isolated strains (97,2 %) had bacterial nature, rest ones belonged to *Candida* genus. Bacteria were represented by 3 types and 7 classes. Coccal bacteria – Streptococci and *Staphylococci* colonized stomatopharynx mucosa most frequently – 91,8 % and 74,7 % of patients accordingly. *Corynebacteria* spp., *Moraxella* spp. and *Neisseria* were presented in patients microbiocenosis in 3,3-4,1 times less. *Haemophilus* spp. colonized mucosa of 7,5 % of patients. Other bacteria had low consistency indexes that's why there are typical transient inhabitants of mucosa. In Staphylococcus community there were two genera of cocci: *Staphylococcus* (98,2 % of strains) and *Gemella* –1,8 %. Coagulase positive staphylococci *S. aureus* and *S. intermedius* put together 30,6 % of proper community. Another cocci belonged to coagulase negative ones. Colonizational level of coagulase positive cocci was in ten-hundred times more than coagulase negative ones - about 5,9-6,4 lg CFU/ml. Micrococcus community was present by *Micrococcus*, *Dermacoccus*, *Kokuria*, and *Rothia* genera. Their colonization level fluctuated between 4,1 (*Micrococcus*) – 6, 4 (*Rothia*) lg CFU/ml. *Moraxella* spp. were dominated in community of *Moraxella* and *Neisseria*. (64, 1 % of strains) Such rare inhabitants of stomatopharynx microbiocenosis as *Rothia* spp., *Granilicatella* spp., *Gemella* spp., *Facklamia* spp., *Lactococcus* spp., are appeared in patients with flue and acute respiratory viral infections. This situation may be as a result of dysbiosis formation in this biotope.

Key words: influenza, acute respiratory viral infections, stomatopharynx, microbiocenosis.

ДОСЛІДЖЕННЯ ВПЛИВУ КОМБІНАЦІЙ АНТИБІОТИКІВ НА МУЗЕЙНІ ПОЛАНТИБІОТИКОРЕЗИСТЕНТНІ ШТАМИ СИНЬОГНІЙНОЇ ПАЛИЧКИ

Дяченко В.Ф., Ягнюк Ю.А., Марющенко А.М., Бомко Т.В., Бакуменко А.В., Городницька Н.І.

THE STUDY OF ANTIMICROBIAL ACTION OF COMBINATION OF ANTIBIOTICS AGAINST POLYANTIBIOTIC-RESISTANT STRAINS OF PSEUDOMONAS AERUGINOSA BY OF CHECKERBOARD METHOD

Dyachenko V.F., Yagnyuk Yu.A., Mariushchenko A.M., Bomko T.V., Bacumenko A.V., Gorodnitskaya N.I.

Many researchers from different countries are searching synergistic combinations of antimicrobial preparations that allow, first of all, to achieve the elimination of severe infections caused by multiresistant pathogens. Research conducted under the direction of Sh. Oie and M. Masako, T. Kazumi et al. demonstrated the effectiveness of two- and three-component combinations of antibiotics for multidrug-resistant strains of *P.aeruginosa*. The result of experimental study by of method "time-bactericidal effect" was shown the high effectiveness of the combinations of cefepime and ciprofloxacin in relation to four multiresistant *Pseudomonas aeruginosa* strains obtained from the Museum of microorganisms of State Establishment "Mechnikov Institute of Microbiology and Immunology of the National Academy of Medical Sciences of Ukraine".

49-52

Key words: combinations of the antibiotics, polyantibiotic-resistant strains, method "time-bactericidal effect".

ОБГРУНТУВАННЯ ВИБОРУ АНТИСЕПТИКА ДЛЯ КОМПЛЕКСНОГО НАЗАЛЬНОГО ПРЕПАРАТУ З АНТИМІКРОБНОЮ ТА СУДИНОЗВУЖУВАЛЬНОЮ ДІЄЮ

Бойко М.М., Нефьодова Л.В., Рибалкін М. В., Осолодченко Т.П.

ANTISEPTIC SELECTION RATIONALE FOR COMPLEX NASAL MEDICINE HAVING ANTIMICROBIAL AND VASOCONSTRICTOR ACTION

Boyko, N.N., Nefedova, L.V., Rybalkin, N.V., Osolodchenko, T.P.

Screening of antimicrobial properties of Myramistinum 0.01 % solution, Decasanum 0.02 % solution, Chlorhexidine digluconate 0.05 % solution, Benzalkonium chloride 0.05 % solution, and Octenisept 0.1 % solution has been carried out. It has been found that Chlorhexidine digluconate 0.05 % solution has the greatest antimicrobial activity, whereas Myramistinum 0.01 % solution has the lowest activity. For manifestation of optimal antiseptic properties of cation-active antiseptics, it is proposed to increase their concentration in the preparation by not less than 0.05% and not more than 0.1%. It is noted that use of Octenisept is inefficient due to its expensiveness and high concentration needed to achieve the optimal level of manifestation of its anti-microbial properties.

53-56

Keywords: nasal medicine, antiseptics, screening microbiological studies.

СОСТОЯНИЕ НЕСПЕЦИФИЧЕСКОЙ РЕЗИСТЕНТНОСТИ ОРГАНИЗМА РАБОЧИХ, ЗАНЯТЫХ ЛИТЬЕМ В ПОСТОЯННЫЕ МЕТАЛЛИЧЕСКИЕ ФОРМЫ

Завгородний І.В., Перцев Д.П., Никулина Н.А., Никулина Г.Л.

STATE NONSPECIFIC RESISTANCE OF WORKERS EMPLOYED BY INJECTION IN A CONSTANTLY METAL FORMS

Zavgorodniy I.V., Peppers D.P., Nikulin N.A., Nikulin G.L.

The purpose of this paper is to examine the state of nonspecific resistance in 52 men aged 22 to 57 years working in the foundry industry for at least three years (professional groups - studied - zalivschiki, naplavschiki and smelters, the control group - fitters, turners) to Kharkov by copyright invention number 1180000. To determine the status of non-specific resistance of peripheral blood was used. In the blood was determined by the total number of white blood cells, the percentage of cells in the human leucocyte leykoformule, phagocytic reaction rates as indicators of non-specific cell-mediated resistance. The serum titer of agglutinins and lysozyme activity as indicators of humoral non-specific resistance. On the basis of these data, calculated the integral index of non-specific resistance. Calculated on the basis of the obtained data the figures are non-specific resistance of the first group within Abs.n 91,68 ± 3,33, in the second - 104,94 ± 4,18 abs.n, a third - 102,87 ± 1 98 abs.n, in the fourth - 105,077 ± 4,86 abs.n at the rate of 110-140 abs.n Revealing the quantitative reduction of the level of non-specific resistance index shows a decline in the overall resistance of the organism associated with the working conditions in this industry.

57-60

Keywords: non-specific resistance, prenosological diagnostics, foundry industry.

СТУПІНЬ ВПЛИВУ ТЕТРАЦИКЛІНУ НА МІКРОБІОЦЕНОЗ КИШЕЧНИКУ ТА ЙОГО КОРЕКЦІЯ ПРЕПАРАТОМ «БІФІФОРМ – 21»

Голяр О.І., Сидорчук І.Й.

THE DEGREE OF TETRACYCLINE EFFECTS ON THE INTESTINAL MICROBIocenosis AND ITS CORRECTIONS BY «BIFIFORM – 21»

Holyar O.I., Sydorchuk I.Y.

The paper presents a theoretical synthesis and scientific solution of scientific problem, grounded on the experimental side effects of broad-spectrum antibiotic (tetracycline hydrochloride) on qualitative and quantitative composition of the microbiota in the biological layer on mucus membrane of colon and distal part of small intestine; substantiation of self-healing process within 10 days qualitative and quantitative composition of the microbiota of given biotype, depending on the dose of tetracycline (average and maximum therapeutic dose) orally administered white rats, and the influence of probiotic «Child powder Bifiform number 21» on the restoration of the qualitative and quantitative composition of the gut microbiome.

61-70

Keywords: microbiome, large and small intestine, normal flora, dysbacteriosis, tetracycline.

МАКРОМІКРОСКОПІЧНА ТА УЛЬТРАМІКРОСКОПІЧНА ХАРАКТЕРИСТИКА СЕРЦЯ ТА ЙОГО СУДИН ПРИ ЕКСПЕРИМЕНТАЛЬНІЙ ЕРЛІХІОЗНІЙ ІНФЕКЦІЇ У МИШЕЙ
Покил С.І., Торяник І.І., Тимченко О.М., Чигиринська Н.А., Костира І.А., Килинко Л.В.
MACROMICROSCOPIC AND ULTRAMICROSCOPIC CHARACTERISTICS OF THE HEART AND ITS BLOOD VESSELS IN MICE EHRLICHIOSIS INFECTION

Sergey I. Pokhil, Inna I. Torianik, Olena M. Timchenko, Nila A. Chigirinsky, Irina A. Kostyria, Ludmila V. Kylypko
The macromicroscopic, ultramicroscopic studying change's in the heart and its blood vessels in unlinear immunocomprometive laboratory male and female mice with the experimental ehrlichiosis is presented in this article. The cardiac destructive and degenerative changes, cardiomyopathy, cardiosclerosis had been established in experimental animal group's. The blood vessels endothelial lieyr disorganization, stasis, thrombosis has been noted.

71-74

Key words: macromicroscopic, ultramicroscopic changes, the unlinear immunocomprometive laboratory male and female mice, ehrlichiosis, cardiac muscles and blood vessels, cardiomyopathy, stasis, trombosis.

ОСОБЛИВОСТІ КЛІТИННОГО ІМУНІТЕТУ ДІТЕЙ, ХВОРИХ НА ХРОНІЧНУ ГЕРПЕСВІРУСНУ ІНФЕКЦІЮ, ЗАЛЕЖНО ВІД ВІКУ ТА СТУПЕНЮ ІНФІКОВАНОСТІ ВІРУСАМИ РІЗНИХ ТИПІВ
Волянський А.Ю., Романова О.А., Ігумнова Н.І., Сидоренко Т.А., Юхименко В.І., Конарева К.С.
FEATURES OF CELLULAR IMMUNITY IN CHILDREN WITH CHRONIC HERPES VIRUS INFECTION DEPENDING ON THE AGE AND DEGREE OF EXPOSURE TO THE DIFFERENT TYPES VIRUSES

Volynskiy A.Yu., Romanova E.A., Igumnova N.I., Sidorenko T.A., Yuchimenko V.I., Konareva K.S.
The basic parameters of cellular immunity and leukocyte composition of peripheral blood of children suffering HGVI caused by herpes viruses of I-VI types, age groups 3-5, 6-11, 12-14 years, corresponding to different degrees of maturity of immune system, were studied. Regardless of age, a significant change in the quantity and composition of lymphoid subpopulations of leukocytes observed in patients with persistent groups of 3 or more types of herpes viruses in leukocytes. Typical for these patients all surveyed age groups are lack of cell subpopulations of T-cytotoxic (CD8+) and T-active (HLA-DR +) lymphocytes and decreased functional capacity of T-lymphocytes (except for patients 12-14 years old) as a spontaneous and stimulated PHA blastogenesis. The most numerous irregularities characterized by cellular immunity HGVI with younger children (3-5 years). Regardless of the viral load in all patients 3-5 years, and a group with high viral load is observed 6-11 multiple increase of activated T-lymphocytes (CD25 +) against a significant reduction of T lymphocyte apoptosis markers (CD3 + CD95 +). With increasing age of the children with the HGVI, the amount of the changed parameters of cellular immunity in charge of anti-virus protection is reduced. Thus more rapid and complete normalization observed in patients infected with 1-2 herpes viruses.

75-83

Key words: HGVI, cellular immunity.

ВПЛИВ СТАФІЛОКОКОВОЇ ІНФЕКЦІЇ НА СТРУКТУРНУ ОРГАНІЗАЦІЮ ГОЛОВНОГО МОЗКУ ТА ЙОГО СУДИН У ЩУРІВ ЛІНІЇ ВІСТАР В ЕКСПЕРИМЕНТІ

Торяник І.І., Казмирчук В.В.

THE INFLUENCE OF THE STAPHYLOCOCCUS INFECTION TO THE STRUCTURAL ORGANIZATION OF WISTAR RATS BRAIN AND CEREBRAL BLOOD VESSELS

Torianik Inna I., Kazmirchuk Victor V.

In this article there are a dates about the influence of the staphylococcus infection to the structural organization of Wistar rats brain and cerebral blood vessels in experiment. The purpose of the experiment's are achieving by the seding staphylococcus infection means of the characterical structures of the brain and cerebral blood damages, that similar with the such in a human in a case of the development of a traditional clinic pathology. The results are evaluated to character of the morphological changes (brain cortex and cerebral blood vessels destructive and degenerative alterations, inflammatory processes).

84-87

Key words: staphylococcus infection, structural organization, brain, cerebral blood vessels, Wistar rats, experiment.

ДОСЛІДЖЕННЯ СПЕЦИФІЧНОЇ АКТИВНОСТІ ТА АНТИМІКРОБНОЇ ДІЇ ПОРОШКУ ГРИБА ШИІТАКЕ (*Lentinus edodes*)

Бобріцька Л.О., Попова Н.В., Осолодченко Т.П., Федоритенко Н.О.

THE STUDY OF IMMUNOMODULATORY AND ANTIMICROBIAL ACTIVITY OF SHIITAKE MUSHROOMS POWDER (*Lentinus edodes*)

Bobritskaya L.A., Popova N.V., Osolodchenko T.P., Fedoritenko N.A.

It was found that Shiitake mushroom powder exhibited immunomodulatory effects and it could be used in perspective for immunity correction in the complex therapy for the treatment of various infectious and inflammatory diseases. It had moderate antimicrobial activity against aerobic bacteria (*Staphylococcus aureus* ATCC 26923, *Escherichia coli* ATCC 25922, *Bacillus subtilis* ATCC 6633), and fungi (*Candida albicans* ATCC 653/885).

88-91

Key words: immunopotentiating activity, shiitake mushroom powder, antibacterial activity

ДОСЛІДЖЕННЯ ЗМІН РІВНЕЙ ДЕЯКИХ ЦИТОКІНІВ ТА SIgA ПРИ ЛІКУВАННІ ХРОНІЧНОГО ГІПЕРТРОФІЧНОГО ФАРИНГІТУ ІЗ ЗАСТОСУВАННЯМ ІМУНОКОРЕКЦІЇ

Коляда Т.І., Аттіков В. Є., Тупотілов О.В., Вдовіченко Н.І., Егошина В.А.

STUDY OF CHANGES IN LEVELS OF SOME CYTOKINES AND SIgA IN CHRONIC HYPERTROPHIC PHARYNGITIS WITH THE USE OF IMMUNOCORRECTION

Kolyada T.I., Attikov V.E., Tupotilov A.V., Vdovichenko N.I., Egoshina V.O.

Found that in this pathology is a significant increase in pro-and anti-inflammatory cytokines in patients due to the predominance of pro-inflammatory cytokines during exacerbation of chronic inflammation of the lymphoid tissues of the pharynx . Found that after the standard treatment for patients with hypertrophic pharyngitis content IFN- γ levels and SIgA in the oropharyngeal secretions reaches levels of the control group , provided intermittent effect in terms of reducing cytokine levels in the serum of 45 and 90 days after initiation of treatment and partial restoration of local immunity oropharynx. In a joint application Derinat and IRS-19 was observed acceleration of restoring the balance of cellular and humoral immunity, no recurrence of the disease for the entire period of observation, that the efficiency of treatment of chronic hypertrophic pharyngitis.

92-95

Key words: cytokines, chronic hypertrophic pharyngitis, immunotherapy.

Некролог. Волянський Юрій Леонідович

96-98