

АННАЛИ МЕЧНИКОВСЬКОГО ІНСТИТУТУ

2011 рік № 1

ЗМІСТ

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Огляди

ADVERSE REACTIONS TO VACCINES AND WAYS OF ITS PREVENTION

Yelyseyeva I. V., Babych Ye. M., Zhdamarova L. A., Belozersky V. I., Kolpak S. A., Bobireva I. V.

The overview concerns allergic reaction on vaccines and possible ways of increasing safety of immunization on basis of use of local specific immunotherapies (SIT) experience, particularly the sublingual route. The use of chemically altered allergens, allergoids; alternative routes of administration, particularly the sublingual route; use of novel adjuvants, such as CpG oligonucleotides and mycobacterial vaccines; other approaches, such as allergenic peptides, relevant T-cell epitope peptide immunotherapy; DNA vaccination, recombinant and engineered allergens, chimeric molecules and combined therapy are all approaches that have yielded positive results to increase safety of SIT and improve its efficacy.

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МЕХАНИЗМЫ ДЛИТЕЛЬНОЙ ПЕРСИСТЕНЦИИ ВИРУСА ПРОСТОГО ГЕРПЕСА В ОРГАНИЗМЕ ХОЗЯИНА

Дьяченко П.А., Дьяченко А.Г., Кучма И.Ю., Волянский А.Ю.

HEUMAN HERPES SIMPLEX VIRUS MECHANISMS OF LONG TIME PERSISTENCE IN HOST ORGANISM

Diachenko P.A., Diachenko A.G., Kuchma I.Yu., Volyansky A.Yu.

Latency of HSV-1/2 is a complicated virus-host interaction that plays a crucial role in the pathogenic potential of this virus. Numerous studies have indicated that sensory neurons are the primary sites of HSV latency. The ability of these viruses to reactivate from latency is responsible for recurrent disease and virus transmission. Since LAT is only known viral transcript that are abundantly transcribed in latently infected neurons, it is reasonable to hypothesize that it regulate latency. LAT protein expression is tightly regulated and may occur only at specific times during latency to prevent immune recognition. Recent studies demonstrating that the genes encoding LAT have antiapoptotic properties strongly suggest that this function plays a crucial role in promoting neuronal survival and thus latency.

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СУЧАСНІ УЯВЛЕННЯ ЩОДО ТАКСОНОМІЇ ТА БІОЛОГІЧНИХ ОСОБЛИВОСТЕЙ МІКРООРГАНІЗМІВ ПОРЯДКУ CHLAMYDIALES

Гончаренко В.В., Джораєва С. К., Кутова В. В.

Current notions about taxonomy and biological peculiarities of microorganisms of order Chlamydiales

Goncharenko V.V., Dzhoraeva S.K., Kutova V.V.

The reclassification data and name species conformity of the family Chlamydiaceae, which was subjected most radical changes was shown in the article. The generally accepted characteristics of the serovars C.trachomatis in according divergences of genovar sequence for MOMP gene (ompA) were examined. The study result of antigenic variability MOMP C.pneumoniae was analyzed. Common features of the microorganism with the developmental cycle realization were shown.

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RESEARCH OF GENERAL TOXICITY OF 2H-PIRANO[2,3-*c*]PYRIDINE DERIVATIVES

Yevsyukova V. Y., Andreieva I. D., Kazmirchuk V. V., Scherbak O. M., Yuchimenko V. I., Lahman S. M., Chernyshenko D. M.

The aim of this study was to determine the potential general toxicity of 2*H*-pyrano[2,3-*c*]pyridines in experiments on laboratory animals (mice). The three most promising derivatives of 2*H*-pyrano[2,3-*c*]pyridines, synthesized at Kharkov National pharmaceutical university. The study of general toxicity of 2*H*-pyrano[2,3-*c*]pyridine derivatives was carried out on 308 outbred white mice of both sexes. According to the general toxicity parameters the researched 2*H*-pyrano[2,3-*c*]pyridine derivatives belong to the IV class of toxicity – low toxic agents. The data obtained in the study of general toxicity of 2*H*-pyrano[2,3-*c*]pyridine derivatives shows that the compound 1(1) – derivative of 2-imino-3-*N*-aricarboxamide could be acknowledged as most promising for further studies aimed for development of antimicrobial agents based there of. 26

Експериментальні праці

EXPERIMENTAL SUBSTANTIATION OF HERB MATERIAL SELECTION IN THE MAKING OF COMPLEX TINCTURE FOR PERIODONTICS

Shulga L.I., Biriucova S.V., Piminov O.F.

During this work, possibility of using of licorice roots, sedge cane rootstocks as well as burnet rootstocks with its roots as components of a complex tincture for periodontitis treatment was experimentally substantiated, and an optimal raw material-extractant ratio, based on results of microbiological studings, was proved. 30

БІОЛОГІЧНІ ВЛАСТИВОСТІ ЦИРКУЛЮЮЧИХ І МУЗЕЙНИХ ШТАМІВ ЗБУДНИКІВ ДИФТЕРІЇ ТА КАШЛЮКУ

Калініченко С.В., Колоколова О.Б., Рижкова Т.А., Большакова Г.М., Калініченко О.О., Соломка О.О., Пульневса О.М., Піддубна Т.Л., Кадерова А.Г., Соколов А.В., Касьяненко Т.М., Котеньова Т.О.

THE BIOLOGICAL PROPERTIES OF CIRCULATING AND MUSEUM strains of diphtheria and pertussis causative agents

Kalinichenko S.V., Kolokolova O.B., Ryzhkova T.A., Bolshakova G.M., Kalinichenko E.O., Solomka E.A., Pulneva O.N., Poddubnaya T.L., Kaderova A. G., Sokolov A.V., Kasyanenko T.N., Koteneva T.A.

The article contains results of experimental studies of the most significant, in terms of epidemiology, biological properties of *Corynebacterium* and *Bordetella* circulating and museum strains. It was established that all researched strains showed ability to interact with eukaryotic cells. Moreover, adhesive activity rates of pertussis causative agents were two times higher compared with the same parameters in diphtheria bacteria. All studied cultures of toxigenic corynebacteria were able to produce neuraminidase and hyaluronidase, to inactivate complement. However, these pathogenic properties rates depended on *Corynebacterium* biovariant. In the study of bacteria sensitivity to antimicrobials it was found that toxigenic corynebacteria circulating strains were more sensitive to antibiotics, in comparison with museum cultures. *B.pertussis* strains showed resistance to the penicillins and susceptibility to fluoroquinolones. 34

ВПЛИВ ХІМІЧНО-МОДИФІКОВАНОГО ГЛІКОПРОТЕЇДНОГО АНТИГЕНУ СИНЬОГНІЙНОЇ ПАЛИЧКИ НА ПОКАЗНИКИ ІМУННОЇ СИСТЕМИ

Городницька Н. І., Мартинов А. В.

INFLUENCE OF CHEMICALLY-MODIFIED GLICOPROTEIDIC PSEUDOMONAS AERUGINOSA ANTIGEN ON THE IMMUNITY SYSTEM

Gorodnitskaya NI., Martynov AV.

We have elaborated a new chemically-modified glicoproteidic *Pseudomonas aeruginosa* antigen for experimental vaccination which can be used to receive vaccines and diagnosticums against *P. aeruginosa* in the future. The antigen causes the induction of high anti-*Pseudomonas aeruginosa* antibodies titer (from 1: 1280 for peroral using and 1: 5120 for injection using), activates phagocytosis, stimulates the development of delayed type of hypersensitivity. It doesn't influence the count of antibody-forming cells against sheep erythrocytes. 43

ПАТОЛОГОМОРФОЛОГІЧНЕ ДОСЛІДЖЕННЯ ВНУТРІШНІХ ОРГАНІВ ЛАБОРАТОРНИХ ТВАРИН ПІСЛЯ ВВЕДЕННЯ АНТИСЕПТИЧНОГО ПРЕПАРАТУ СЕПТЕФРИЛ

Жорняк О. І., Сухляк В. В., Палій І.Г.

PATHOLOGO-MORPHOLOGICAL RESEARCH IN THE ORGANS OF LABORATORY

ANIMALS AFTER INTRODUCTION PILL ANTISEPTIC SEPTEFRIL

Zhornjak O.I., Suchljak V.V., Paly IG.

In the article it is shown the results of histological research of pathologo-morphological changes in the organs of laboratory animals age pill antiseptic septefril have been shown. The given data allow us to ascertain the absence of septefril pathological influence to inner parenchymatous organs (liver, lungs, heart, kidneys) of experimental animals.

ПРОВІДНІ СИМПТОМИ ТА ЧАСТОТА ЇХ ВИЯВЛЕННЯ У ХВОРИХ НА ПНЕВМОНІЮ РІЗНОЇ ЕТІОЛОГІЇ

Граділь Г.І., Козько В.М., Піддубна Т.Л., Меркулова Н.Ф., Могиленець О.І., Єгошина В.О., Аттіков В.Є.

MAIN SYMPTOMS AND FREQUENCY OF DETECTION IN PATIENTS WITH PNEUMONIA OF DIFFERENT ETIOLOGY

Gradil G.I., Kozko V.N., Poddubnaja T.L., Merculova N.F., Mogilenets O.I., Egoshina V.O., Attikov V.E.

Pneumonia today occupies the first place among infectious diseases for lethality level and occupies the 6th place for the frequency of lethal complications in the world. Bacteriological analysis of the sputum has revealed that the dominating causative agents of the disease are Streptococcus pneumoniae and Mycoplasma pneumoniae, besides Mycoplasma is found more frequently in younger patients. The leading symptoms of pneumonia induced by H. influenzae, St. pneumonia, S. aureus, M. catarrhalis were cough with sputum, crepitation, fine moist rales. The leading symptoms in Mycoplasma-induced pneumonia were fever and pharyngotracheobronchitis. Viral pneumonias were characterized by fever, dry cough and also pharyngotracheobronchitis. The means for etiological diagnosis of the bacterial and viral pneumonias on early stages of the disease are limited due to the low level of informativity of bacteriological methods applied for the lower respiratory tract infections (LRTI). That fact stipulates the urgency for additional criteria search, which could be useful for etiotropic therapy tacticts. In connection with the mentioned above tendencies an active search for markers that are suitable for early diagnosis of bacterial and viral infections of LRTI is under way.

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ЗМІНИ ПОПУЛЯЦІЙНОГО РІВНЯ БАКТЕРІЙ КОРОЗІЙНО АКТИВНОГО МІКРОБНОГО УГРУПОВАННЯ В ПРОЦЕСІ ФОРМУВАННЯ БІОПЛІВКИ НА ПОВЕРХНІ МАЛОВУГЛЕЦЕВОЇ СТАЛІ

Демченко Н.Р.

THE CHANGES OF THE POPULATION LEVEL OF CORROSIVE-ACTIVE MICROBAL GROUP BACTERIA IN THE BIOFILM FORMING PROCESS ON LOW-CARBON STEEL SURFACE

Demchenko N. R.

The qualitative and quantitative changes of artificially created corrosive active microbial group were studied. The dynamics of quantity of sulfate-reducing bacteria, iron-reducing, denitrifying and ammonificative bacteria of corrosive microbial group during biofilm forming on low-carbon steel surface in the presence of triazoloazepinium quaternary salt with a biocic and inhibitory action were established.

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И.И. МЕЧНИКОВ – ОСНОВАТЕЛЬ СОВРЕМЕННОЙ МИКРОБИОЛОГИИ И ИММУНОЛОГИИ

Галушка Р.А., Кучма И.Ю., Глазунова Л.И.

I.I. MECHNIKOV IS THE FOUNDER OF MODERN MICROBIOLOGY AND IMMUNOLOGY

Galushka R.A., Kuchma I.Yu., Glazunova L.I.

The article covers life, scientific work and creative activity of I.I. Mechnikov who was a great scientist, microbiologist, immunologists and Nobel Prize winner. His main outstanding achievements and discoveries are mentioned.

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ПАМ'ЯТІ ВЧЕНОГО

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