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ЗМІСТ

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ЗАГАЛЬНА ХАРАКТЕРИСТИКА ДИФТЕРІЙНОГО І ПРАВЦЕВОГО ТОКСИНІВ ТА ЇХ АНТИГЕННИХ ДЕРИВАТИВ

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General characteristic of diphtheria and tetanus toxins and their antigenic derivatives
Kalinichenko S.V., Babych E.M., Ryzhkova T.A., Sklyar N.I., Rjabovol O.V., Plugator T.N., Antusheva T.I. 5

The modern views on diphtheria and tetanus exotoxins' structure are presented in this article. Some aspects of toxoids obtaining by formaldehyde treatment are described. Chemical modifications of above mentioned toxins that result loss of toxicity but preservation of immunogenicity are characterized. The stages of immunological preparations based on toxoids production are pointed. It is showed that the most critical step of these vaccines production is exotoxins inactivation because the new reaction products after incubation with formaldehyde may cause negative influence on vaccinated people.

ХІМІЧНА МОДИФІКАЦІЯ ВИСОКОМОЛЕКУЛЯРНИХ ЛІКАРСЬКИХ ЗАСОБІВ

Кашпур Н.В., Мартинов А.В., Волянський А.Ю., Перемот С.Д., Смілянська М.В.

CHEMICAL MODIFICATION OF HIGH MOLECULAR MEDICATIONS

Kashpur N.V., Martinov A.V., Volyanskiy A.Yu., Peremot S.D., Smelyanskaya M.V.

A biotechnology in the developed countries is on the stage of stormy development, that conditioned by perspective of biotechnological medications due to extremely low effective doses of these facilities. Modern medicine knows the whole arsenal of medications on the basis of the chemically modified biopolymers (Pegintron, L-asparaginaza, adenozeindeaminaza, Interferon - al'fa2b), which are widely utilized as medical and prophylactic preparations at different somatic and infectious diseases. Much looked over and monographs allow in a certain measure to estimate the accumulated literary information both about directions and about the biological, physiology and pharmacological action of the chemically modified connections of different origin. It is possible to draw a conclusion on the basis of analysis of literary data, that chemical modification is a beautiful prospect for creation of various medicinal preparations with the controlled and directed action. 9

СУЧАСНІ ПІДХОДИ ДО РОЗРОБКИ ВАКЦИНИ ПРОТИ ТУБЕРКУЛЬОЗУ

Єлісеєва І.В., Бабич Є.М., Ждмарова Л.А., Колпак С.А., Бобирева І.В.

UP-TO-DATE APPROACHES TO TUBERCULOSIS VACCINE DEVELOPMENT

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

Novel concepts in development of vaccines for tuberculosis consist in exchange BCG for more effective vaccine with long-term protective efficacy or in development of vaccine for acquired immunity increase and adult protection support. There are above 200 variants of vaccine at the laboratory test stage in recent years, among of which there are whole-cell (attenuated, vector), subunit, DNA-vaccines et al. Referred to as the late booster strategy is the caveat that in highly tuberculosis endemic regions such a vaccine will in many cases be given to already sensitized to mycobacterial antigens persons (whether by prior BCG vaccination, exposure to environmental mycobacteria, or latent tuberculosis infection). Extensive use of novel vaccines for tuberculosis is expecting not earlier than 2015 year. 22

Експериментальні праці

АКТИВНІСТЬ ЦИТОКІНІВ У ХВОРИХ НА ГОСТРИЙ КОРОНАРНИЙ СИНДРОМ

Перемот С.Д., Смілянська М.В., Волянський А.Ю., Кашпур Н.В., Перемот Я.О.

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ACTIVITY OF CYTOKINES AT PATIENTS BY WITH ACUTE CORONAL SYNDROME

Peremot S.D., Smilyanska M.V., Volyanskiy A.Y., Kashpur N.V., Peremot Y. O.

In the article the levels of cytokines of patients are with a acute coronary syndromes (ACS) in combination with persisting herpetic infection presented, endogenous mechanisms of compensation of immunological disorders conducted for an estimation. It is set as a result of complex research of immunocompetent cells, that a persisting herpes viruses infection is associated with hyper by expression of proinflammatory cytokines, initiating intravascular inflammation the same. It promotes in same queue the risk of trombotic complications and can be considered as an unfavorable sign of flow of ACS. The flow of stable stenocardie is characterized by the high indexes of anti-inflammatory cytokines: IL-4, IL-10 at the unchanged values IL-1, IL-6, TNF- α . Destabilization of ischemic heart disease is accompanied the increase of levels of proinflammatory cytokines and decline of levels of anti-inflammatory. The most meaningful changes of cytokines type are determined at a acute coronale syndrome, combination's with persisting of herpes viruses antigens in immunocellulars.

ПЕРЕХРЕСНІ РЕАКЦІЇ ПРИ ІМУНОДІАГНОСТИЦІ АНАПЛАЗМОЗНОЇ ІНФЕКЦІЇ МЕТОДОМ РІІФ

Похил С.І., Тимченко О.М., Лісняк Ю.В., Чигиринська Н.А., Костириця І.А., Круглова Т.А., Киликко Л.В., Семеренська Є.І.

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CROSS-REACTIONS IN THE IMMUNODIAGNOSTICS OF ANAPLASMOSIS BY THE RIIF METHOD

Pokhil S.I., Timchenko O.M., Lisnyk Yu.V., Chigirinska N.A., Kostiryia I.A., Kruglova T.A., Kilipko L.V., Semerenska E.I.

The immunological methods are the most often used for laboratory diagnostics of anaplasmosis. There has been studied the possibility of anaplasmosis antigen and rabbit anti-anaplasmic γ -globulins, contained in experimental RIIIF-test-systems, to enter into immunological cross-reactions with correspondingly antigens of and antibodies against microorganisms, which are philogenetically close to *Anaplasma* genus, and causative agents of other bacterial tick infections: *Rickettsia prowazekii*, *R. sibirica*, *Bartonella henselae*, *B. quintana*, *Borrelia afzelii*, *B. garinii*, *Brucella abortus*, *Francisella tularensis*, *Coxiella burnetii*. Under certain conditions, the anaplasmic antigen can enter into immunological reactions with antibodies against *R. prowazekii*, *R. sibirica*, *B. henselae*, *B. abortus*, *F. tularensis*, and anti-anaplasmic γ -globulins can enter into immunological reactions with *F. tularensis* antigen. However, the use of anaplasmic antigen and anti-anaplasmic γ -globulins provides rather good quality level of laboratory diagnostics of anaplasmosis if RIIIF is carried out in accordance with manufacturer's instructions.

ВИВЧЕННЯ ЧУТЛИВОСТІ ЗБУДНИКІВ БАРТОНЕЛЬОЗУ ДО АНТИБАКТЕРІЙНИХ ПРЕПАРАТІВ

Бондаренко А.В.

STUDY OF BARTONELLOSIS AGENTS SENSITIVENESS TO ANTIBACTERIAL DRUGS

Bondarenko A.V.

The sensitiveness to antibacterial drugs of regional strains of *Bartonella* was studied. Typical and regional strains of *Bartonella* spp. had a high sensitiveness *in vitro* to most of the drugs: penicillins, aminopenicillins, carboxypenicillins, cephalosporins (except of cefotaximum), aminoglycosides, carbopenems, fluoroquinolones, glycopeptides, rifampicinum, nitrobenzenes. 14-57% strains of *Bartonella* spp. were resistant to macrolides (erythromycin, clarithromycin, azithromycin) and tetracycline, which are traditionally used at the treatment of bartonellosis.

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ВИРУСЫ ГРУППЫ ГЕРПЕСА КАК ВОЗМОЖНЫЙ ЭТИОЛОГИЧЕСКИЙ ФАКТОР ВОЗНИКНОВЕНИЯ И РАЗВИТИЯ ИНФЕКЦИОННЫХ МИОКАРДИТОВ

Смелянская М.В., Перемот С.Д., Матвийчук Н.В., Перемот Я.А., Волянский А.Ю., Мартынов А.В., Кашпур Н.В.

HERPESVIRUSES AS POSSIBLE ETIOLOGIC FACTOR OF ORIGIN AND DEVELOPMENT OF INFECTIOUS MYOCARDITISES

Smelyanskaya M.V., Peremot S.D., Matvichuk N.V., Peremot Y.A., Volyanskiy A.Y., Martinov A.V., Kashpur N.V.

At the virology inspection of patients myocarditis is expose high specific gravity (86,4%) of antigens of herpesviridae in blood. At patients combination of Ag of different types of herpesviridae (in 74 % cases of exposure) prevails myocarditis, while for the practically healthy people of control group – a monoinfection detection more frequent. At myocarditises in imunocytis of blood of patients in 61 % cases the antigens of 3-4 different types of herpesviridae are revealed. More frequent than all it HSV-1, CMV, EBV and HHV-6. Findings show a necessity obligatory inspection of patients with a diagnosis myocarditis on the herpesviruses.

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ВИЗНАЧЕННЯ ЛЕЦИТИНАЗНОЇ АКТИВНОСТІ МІКРООРГАНІЗМІВ РОДУ PROTEUS

Юрченко Л.А.

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DETERMINATION OF LECITHINASE ACTIVITY OF PROTEUS

Yurchenko L.A.

A research purpose was a study of features of Proteus pathogeny festering - inflammatory infections and role in them exciter. Lecithinase activity was shown by 44.44% cultures of P.vulgaris and 91.66% cultures of P.mirabilis. Nutrient medium was developed highly sensitive and suitable for the simultaneous discovery of lecithinase activity and suppression of swarming. The use of this nutrient medium in microbiological practice will allow to promote quality of researches.

ХАРАКТЕРИСТИКА ПАТОГЕННИХ ВЛАСТИВОСТЕЙ ЛАБОРАТОРНИХ ШТАМІВ CHLAMYDIA TRACHOMATIS ПРИ ЕКСПЕРИМЕНТАЛЬНОМУ ІНФІКУВАННІ ТВАРИН 58

Гончаренко В.В.

CHARACTERISTIC OF PATHOGENIC PROPERTIES OF LABORATORY STRAINS CHLAMYDIA TRACHOMATIS IN EXPERIMENTAL INFECTION WITH ANIMALS

Goncharenko V.V.

The pathogenicity study results of the strains Chlamydia trachomatis on the small laboratory animals are shown. The pathogenical features of each strain is determined by the experiment in vivo. These strains C.trachomatis is established to have the capability for the initiation of inflammation processes and cause the definite pathomorphological, pathophysiological and clinical changes with the animals. The pathologic changes of the tissues were revealed by the histological examinations in the organs of dead mice. Etiological role of these strains for the diseases and following death of the animals confirms by the laboratory testing (PCR, EIA, microscopy analyses). The pathogenical features of the strains Ku (urogenital isolate) and Ar1-Z (articular isolate) are weak-virulent and of the strains Ar2-K (articular isolate) – high-virulent.

ОЦІНКА РІВНЯ ДЕЯКИХ ЦИТОКІНІВ ПРИ ПНЕВМОНІЇ РІЗНОМАНІТНОЇ ЕТІОЛОГІЇ В ЕКСПЕРИМЕНТІ

Коляда Т.І., Бруснік С.В., Михайличенко М.С., Агтіков В.Є., Нестеренко А.М., Коляда О.М.

ASSESSMENT OF THE LEVEL OF SOME CYTOKINES IN PNEUMONIA OF DIFFERENT ETIOLOGY IN THE EXPERIMENT

Kolyada T.I., Brusnik S.V., Mikhailichenko M. S., Attikov V.E., Nesterenko A.M., Kolyada O. N.

Cytokines have a key role in inflammatory response development. The cytokine synthesis level has distinct features depending on the type of the pathogen that induces the inflammatory process in the lungs. For inflammatory response, induce by Staphylococcus, a significant increase in the levels of proinflammatory cytokines IFN- γ , IL-4 and IL-8 is observed. IFN- γ , IL-4 and IL-8 in bronchoalveolar lavage. Candida infection of the lungs is characterized by a dominating increase in IFN- γ . In the case of combined inoculation of the two mentioned above pathogens a decrease in IFN- γ and synthesis is observed. While observing the dynamics, in case of Staphylococcal infection it is established that the increased levels of proinflammatory cytokines are gradually decreasing to normal values, as for the Candida infection a significant decrease in IL-8 level, an activator of macrophages and neutrophils, was established.

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ВПЛИВ СУМІШІ ОМЕГА-3 ПОЛІНЕНАСИЧЕНИХ ЖИРНИХ КИСЛОТ ТА МОЛЕКУЛЯРНОГО КОМПЛЕКСУ РНК-ТИЛОРОН НА ФОРМУВАННЯ ПРОТИТУБЕРКУЛЬОЗНОГО ІМУНІТЕТУ У ТВАРИН З Т-КЛІТИННИМ ІМУНОДЕФІЦИТОМ

Льїнська І.Ф.

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THE INFLUENCE OF AN OMEGA - 3 POLY-NON-SATURATED FATTY ACIDS MIXTURE AND RNA-TILORIN MOLECULAR COMPLEX ON FORMATION OF ANTI-TUBERCULOSIS IMMUNITY IN ANIMAL WITH T-CELLULAR IMMUNE DEFICIENCY

Ilyinskaya I.F.

An absence of adoptive anti-tuberculosis immune formation and expressive macrophage dysfunction were demonstrated in animal with premorbidal T-cellular immune deficiency. They stipulated an incompetence of antimycobacteria drugs. It was found the possibility of macrophages stimulation by the using of an omega - 3 poly-non-saturated fatty acids mixture and a molecular complex RNA-tiloron. That was resulted in essential increase of treatment efficiency: after course of immunocorrection indexes of MBT lesions of internals in animal were decreased accordingly on 30 and 50 %, the number of died animal was reduced accordingly in 2 and 8 times and the duration of their life was prolonged accordingly at 50,0 and 77,9 %.