

41. DEVELOPMENT OF NEW CZECH AUTOINJECTOR WITH OXIME HI-6 DMS

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Oxime HI-6 (1-(2-(hydroxyiminomethyl)pyridinium)-3-(4-carbamoylpyridinium)-2-oxapropane) is considered to be currently the most universal oxime for the potential use as antidote against nerve agents (sarin, cyclosarin, VX, etc.). None of other commercially available oximes (pralidoxime, obidoxime, trimedoxime, MMB4) has broader antidotal effect. Due to this, development of the appropriate salt of this oxime together with its application form (eg. autoinjector) was the main aim of our departments and several private Czech companies (VAKOS XT as., Decomkov Praha sro., ChemProtect as.). In our contribution, we would like to summarize all the steps which were already done.

We would like to thank to the Ministry of Industry and Trade of the Czech Republic for the Project No. FIIM2/104.

Key Words/ Phrases: acetylcholinesterase; nerve agent; HI-6; autoinjector; oxime



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42. SEARCHING FOR THE UNIVERSAL REACTIVATOR FOR TREATMENT OF PESTICIDE POISONINGS

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According to the present knowledge, none of the currently available oximes (pralidoxime, obidoxime, trimedoxime, MMB-4 or HI-6) originally developed for the treatment of the nerve agent poisonings is able to treat organophosphorus pesticide poisoning. Among them, obidoxime seems to be the best candidate, however, its high toxicity disfavors its application in the high quantities.

As byproduct of our searching for the new nerve agent reactivators, we found that oxime K027 seems to be very promising in the case of the treatment of organophosphorus pesticide poisonings.

Its reactivation potency is similar or better than that of obidoxime, and moreover, its acute toxicity is lower. Thanks to these results, this oxime seems to be the best candidate for future use as universal reactivator for the treatment of poisonings caused by organophosphorus pesticides.

This work was supported by the Czech Grant Agency – project No. 305/07/P162.

Key Words/ Phrases: acetylcholinesterase; pesticide; reactivator; oxime; K027

43. BACTERIOPHAGES FOR DETECTION OF BACTERIAL PATHOGENS

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The G. Eliava Institute of Bacteriophages, Microbiology and Virology (Tbilisi, Georgia) is one of the most famous institutions focused on bacteriophage research for the elaboration of appropriate phage methodologies for human and animal protection. The main direction of the institute is the study and production of bacteriophages against intestinal disorders (dysentery, typhoid, intesti) and purulent-septic infections (staphylococcus, streptococcus, pyophage, etc.). These preparations were successfully introduced during the Soviet era, and for decades were used throughout the former Soviet Union and in other Socialist countries for the treatment, prophylaxis, and diagnosis of various infectious diseases, including those caused by antibiotic-resistant bacterial strains. Bacteriophages were widely used for identifying and detecting infections caused by the most dangerous