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MEETING ABSTRACTS

ACETYLCHOLINESTERASE REACTIVATORS BASED ON OXIME-FUNCTIONALIZED BIODEGRADABLE IONIC LIQUIDS

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Progress in the development of biodegradable ionic liquids (ILs) [1] allowed finding sustainable fragments to assist the synthesis of sustainable molecules by means of "benign by design" approach. Based on our recent experience in creating micellar catalytic systems for decomposition of organophosphates [2, 3] we have elaborated the following oxime-functionalized low-toxic biodegradable ILs as potential AcChE reactivators: amide/ester linked (amino acid free) IL (I) as well as L-alanine (II) and L-phenylalanine (III) containing compounds with pyridinium aldoxime moiety in cationic part. Variation of amino acid variation (e.g. Me for I and phenyl for II) can help us to analyze a role of hydrophobicity of IL's cation in AcChE reactivation. The reactivation capacity of novel ILs were evaluated towards AcChE inhibited by typical toxic organophosphate agents. The regularities of antidotal activity of studied compounds are to use in the further improvement of their structures.

Keywords: reactivators; oximes; functional ionic liquids

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