MEETING ABSTRACTS

NOVEL BISQUATERNARY HETEROAROMATIC COMPOUNDS AS POTENTIAL REACTIVATORS OF HUMAN BUTYRYLCHOLINESTERASE

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Human butyrylcholinesterase (hBChE) is well-known stoichiometric scavenger in case of organophosphorus (OP) intoxication. However, its major limitation lies in binding of only one OP moiety per hBChE molecule and thus necessity of its very high dosage prior or post intoxication. This issue might be resolved by use of hBChE reactivators that could cleave irreversibly bound OP moiety from the enzyme active site and restore its scavenging function. This concept has been called pseudo-catalytic scavenger. Within our contribution, we would like to present bisquaternary heteroaromatic compounds that are butyrylcholinesterase reactivators and might act as potential pseudo-catalytic bioscavengers. Recently, we have prepared and evaluated over 20 novel compounds that displayed better hBChE reactivation activity than clinically used reactivators.

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