

Comparative Effect of Different Group of Oximes on the Reactivity of Inhibited Acetylcholinesterase

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Abstract

The use of pesticides and insecticides has increased in agricultural field and household etc for pest control, pest management and to prevent diseases caused by insects respectively over a period. Insecticides are also a category of pesticides. Some of the most abundantly used pesticides contain organophosphate compounds as basic ingredient. Organophosphate compounds are ester, amide and thiol derivatives of phosphoric acid. Such compounds are highly toxic and their accumulation in the human body can cause neuro-poisoning. They deactivate the human acetylcholinesterase (AChE) and thus stop the acetylcholine neurotransmission. Although the process is not permanent, it depends upon how much time the interaction between organophosphate compound and AChE has taken before the aging and denaturation of the enzyme starts. Before aging of the enzyme, a group of compounds known as Oximes belonging to the family of amines can be used to reactivate the human acetylcholinesterase.



Biography:

Muhammad Sibte Hasan Mahmood received his MBBS degree from Rawalpindi Medical College in Pakistan. He has worked as a physician in Pakistan for various health care providers. Since moving to Canada in 2015, he has focused more attention to research and study trials. Working with renowned researchers in various medical fields either under direct or indirect supervisions has offered invaluable experience and learning. His main areas of focus has been drug mechanics and therapeutic modelling. He strives to achieve a long lasting impact in the field of clinical and pharmacologic research and development.

Speaker Publications:

1. "Delfino, RT; Ribeiro, TS; Figueroa-Villar, JD; J. Braz. Chem. Soc. 2009 , 20 , 407.
2. "Sidell, FR; Borak, JJ; Ann. Emerg. Med. 1992 , 21 , 865.
3. "Sidell, FR In Medicinal Aspects of Chemical and Biological Warfare ; Sidell, FR; Takafuji, ET; Franz, DR, eds .; Office of Surgeon General US Army, Borden Institute: Washington, 1997, ch. 5.
4. "Benschop, HP; De Jong, LPA; Acc. Chem. Res. 1988 , 21 , 368.
5. "Black, RM; Harrison, JM In The Chemistry of Organophosphorus Compounds ; Hartley, T .; Frank, R., eds .; John Wiley & Sons: New York, 1996, ch. 11.

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