

[54] **NOVEL PRO-DRUG DERIVATIVES OF PYRIDINIUM ALDOXIME TYPE CHOLINESTERASE REACTIVATORS AND PROCESS FOR PREPARING SAME**

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[52] U.S. Cl. **260/296 M; 424/263**

[51] Int. Cl.² **C07D 211/26**

[58] Field of Search **260/296 M**

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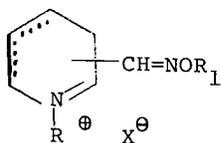
Chemical Abstracts, Seventh Collective Index, 19,266S to 19,267S, (1970).

Primary Examiner—John D. Randolph

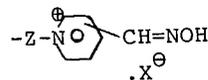
Attorney, Agent, or Firm—Charles N. Blitzer

[57] **ABSTRACT**

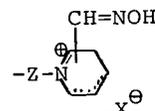
There is provided, novel pro-drug forms of pyridinium aldoxime type cholinesterase reactivators, namely, dihydropyridinium aldoximes, having the formula:



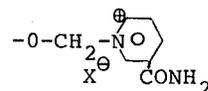
wherein R represents a member selected from the group consisting of an alkyl (C₁-C₄) group, a



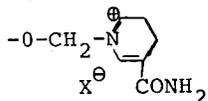
group, a



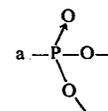
group,



group, and a



wherein Z represents a member selected from the group consisting of a —CH₂—CH₂— group, a —CH₂—O—CH₂— group, a —CH₂CH₂OCH₂CH₂— group, and a —CH₂O—CH₂—CH₂—O—CH₂— group; wherein R₁ represents a member selected from the group consisting of a hydrogen atom, a methyl group, an acyl group and a



group; and wherein X⁻ represents an anion derived from a pharmaceutically acceptable acid addition salt.

These compounds are useful in reactivating cholinesterase, inhibited following exposure to and/or ingestion of conventional anti-cholinesterase agents, especially in the brain.

22 Claims, No Drawings