Dr. Joanne Macdonald, PhD

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We address the need for broad spectrum reactivators of nerve-agent inhibited acetylcholinesterase using a new approach, based on allosteric effectors. These effectors will act by altering the enzyme structure without binding to the active site of the enzyme or interacting with a specific nerve agent, and thus will have the potential for a broad spectrum of activity. Identified compounds that promote recovery of acetylcholinesterase from nerve agent inactivation will provide a more efficient approach to prevent and reverse the toxic effects of nerve agent exposure.

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