Dysregulation of Protein Kinase C in the Prefrontal Cortex Impairs Working Memory with Advancing Age

**Description:**

The invention includes methods of preventing and reversing prefrontal cortical decline in normal aged subjects by providing a protein kinase C inhibitor to the subject. The protein kinase C inhibitor can be a phenanthridinium alkaloids or other closely related compound. The inventors have found that when such compounds are administered to normal aged subjects the cognitive performance, including performance in tasks that utilizing working memory, of the subjects improves.

The invention includes a method for improving cognition, including working memory, in an aged subject comprising providing to the subject an effective amount of a compound or salt of the structure.

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