Potential Use of the Protein Kinase C Inhibitor Chelerythrine for the Treatment of Bipolar Disorder

Dr. Arnsten has discovered in animal studies that exposure to uncontrollable stress impairs prefrontal cortical function via activation of protein kinase C, and that administration of chelerythrine or a chelerythrine analog in accordance with the invention inhibits harmful protein kinase C activation. Accordingly, the invention provides compositions and methods useful in treating a subject suffering from a CNS disorder, particularly a CNS disorder associated with impaired prefrontal cortical function related to activation of protein kinase C due to exposure to uncontrollable stress. In particular, the invention provides compositions and methods that treat a subject suffering from such disorders by administering to the subject an effective amount of the selective protein kinase C inhibitor chelerythrine or a chelerythrine analog as defined hereinafter.

Additionally, the invention provides a method of protecting a subject’s cognitive performance from alpha-1 receptor stimulation or stress exposure by administering to the subject an effective amount of the selective protein kinase C inhibitor chelerythrine or a chelerythrine analog.

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