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CTL, XX, SD, RFS, TBC, and DWL reported no potential conflicts of interests.

BKC, RAB, IM-D, DJD, AMG, and CAD are named on provisional and non-provisional patent applications for the prophylactic use of (R,S)-ketamine and related compounds against stress-related psychiatric disorders.

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## **AUTHOR CONTRIBUTIONS**

BKC and CAD conceived and designed the experiments.

XX, SD, and DWL provided pharmacological agents.

BKC, CTL, AS, RAB, IM-D, DJD, and AMG performed behavioral experiments and analysis.

VML performed electrophysiological experiments.

RFS and TBC performed mass spectrometry experiments.

BKC and CAD wrote the paper in consultation with all other authors.