

Acknowledgements

This research was supported by a grant from the Austrian National Bank (P 14193). Funding for this work was also provided in part by the Intramural Research Program at the National Institute of Mental Health, National Institutes of Health (IRP-NIMH-NIH; ZIAMH002857) to C. Zarate. The authors thank Thomas Vanicek, Pia Baldinger, and the diploma students of the Neuroimaging Labs (NIL) for medical support, subject recruitment, and assistance in performing the study; the staff of the MR Centre of Excellence for technical support; Annette Hartmann for the genetic analyses; and Ioline Henter (NIMH) for editorial assistance.

Author contributions

A. Höflich helped design the study; helped acquire and interpret the data; drafted the manuscript; revised the manuscript; approved the final version of the manuscript. C. Kraus helped analyze and interpret the data; helped draft and revise the manuscript; approved the final version of the manuscript. S. Kasper helped conceptualize and design the study; interpret the results; revised the manuscript for critical intellectual content; approved the final version of the manuscript. R. M. Pfeiffer and R. Seiger helped analyze and interpret the data; approved the final version of the manuscript. D. Rujescu, C. and A. Zarate Jr helped interpret the results; revised the manuscript for critical intellectual content; and approved the final version of the manuscript. D. Winkler helped conceptualize the study; helped acquire the data; revised the manuscript; approved the final version of the manuscript. R. Lanzenberger helped conceptualize and design the study; helped interpret the data; revised the draft; approved the final version of the manuscript.

Conflict of interest

S. Kasper received grants/research support, consulting fees, and/or honoraria within the last 3 years from Angelini, AOP Orphan Pharmaceuticals AG, AstraZeneca, Eli Lilly, Janssen, KRKA-Pharma, Lundbeck, Neuraxpharm, Pfizer, Pierre Fabre, Schwabe, and Servier. R. Lanzenberger received travel grants and/or conference speaker honoraria within the last 3 years from Bruker BioSpin MR, Heel, and support from Siemens Healthcare regarding clinical research using PET/MR. He is a shareholder of the start-up company BM Health GmbH since 2019. C. Zarate is a full-time employee of the US government. He is listed as a co-inventor on a patent for the use of ketamine and its metabolites in major depression and suicidal ideation. C. Zarate has assigned his patent rights to the US government but will share a percentage of any royalties that may be received by the government. C. Kraus received support from Janssen, Roche and AOP Orphan. D. Winkler received lecture fees/authorships honoraria within the last 3 years from Angelini, Lundbeck, and Medizin Medien Austria. The remaining authors have no conflicts of interest to declare, financial or otherwise.

Publisher's note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.