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Employment

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| 2024– | Senior Bioinformatician, Generation Scotland |
| 2021– | Senior Research Fellow, Centre for Clinical Brain Sciences, University of Edinburgh |
| 2017–2021 | Data Scientist, Division of Psychiatry, University of Edinburgh |
| 2015–2017 | Post-doctoral Research Fellow, Division of Psychiatry, University of Edinburgh |
| 2012–2015 | Post-doctoral Research Associate, Department of Animal and Plant Sciences, University of Sheffield |
| 2006–2007 | Laboratory Technician, Drosophila Genetic Resource Center, Kyoto Institute of Technology |

Academic Service

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| 2023– | Academic Postgraduate Coordinator, Centre for Clinical Brain Sciences, University of Edinburgh |
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Education

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| 2008–2012 | PhD Psychology, University of Edinburgh |
| 2007–2008 | MSc Quantitative Genetics & Genome Analysis, University of Edinburgh |
| 1999–2003 | AB Theoretical Evolutionary Biology, Cornell University |

External Roles

Psychiatric Genomics Consortium

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| 2025– | Core Analytical Group Co-Director, Major Depressive Disorder Working Group |
| 2019– | Open Science Maintainer |
| 2019–2025 | Stage 2 Analyst, Major Depressive Disorder Working Group |
| 2017–2019 | Data Access Committee Representative, Major Depressive Disorder Working Group |

Grants

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| 2025–2029 | Wellcome Trust. <i>What is the molecular genetic basis of anxiety in a very-low-income African setting? The Genetics of Anxiety In Malawi (G-AIM) Study.</i> (309744/Z/24/Z) £3,976,039. (Co-I) |
| 2025–2026 | BHF REA4 Pump Priming Award. <i>Multi-ancestry finemapping of gene clusters implicated in cardiovascular disease and mental health.</i> (RE/24/130012). £3500 |
| 2021–2024 | Medical Research Council. <i>DATAMIND: Data Hub for Mental health INformatics research Development.</i> £225,575. (Co-I) |
| 2014 | Wellcome Trust. <i>Inferring genetic architecture from high-density genomic data.</i> £2000 (Co-I) |
| 2010 | Moray Endowment Fund Award. <i>Selection on human personality.</i> £2280. |
| 2009 | Sasakawa Foundation. <i>Personality in Japanese macaques.</i> £1000. |

Awards

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| 2025 | Gershon Paper of the Year Award, International Society of Psychiatric Genetics. For: Adams, Streit, et al., 2025. (<i>Given to a paper which has been published and reported on an outstanding achievement in the field of psychiatric genetics.</i>) |
| 2012 | Fulker Award, Behavior Genetics Association. For: Adams et al., 2012. (<i>Given to a paper of unusual merit that appeared in Behavior Genetics.</i>) |
| 2008 | Sir Kenneth Mather Memorial Prize, Genetics Society. For: MSc thesis. (<i>Outstanding performance in the area of quantitative genetics.</i>) |

Team Recognition

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| 2025 | Team Excellence Award, College of Medicine and Veterinary Medicine, University of Edinburgh. For: Generation Scotland. |
| 2022 | Good Research Practice Award, University of Edinburgh. For: Depression Detectives (<i>2nd Prize in ‘Responsible Research’ category.</i>) |

Publications

As Lead Author

Studies designed and lead.

Adams, M. J., Streit, F., Meng, X., Awasthi, S., Adey, B. N., Choi, K. W., Chundru, V. K., Coleman, J. R. I., Ferwerda, B., Foo, J. C., Gerring, Z. F., Giannakopoulou, O., Gupta, P., Hall, A. S. M., Harder, A., Howard, D. M., Hübel, C., Kwong, A. S. F., Levey, D. F., ... McIntosh, A. M. (2025). Trans-ancestry genome-wide study of depression identifies 697 associations implicating cell types and pharmacotherapies. *Cell*, 188(3), 640–652. <https://doi.org/10.1016/j.cell.2024.12.002>

Adams, M. J., Thorp, J. G., Jermy, B. S., Kwong, A. S. F., Kõiv, K., Grotzinger, A. D., Nivard, M. G., Marshall, S., Milaneschi, Y., Baune, B. T., & et al. (2024). Genome-wide meta-analysis of ascertainment and symptom structures of major depression in case-enriched and community cohorts. *Psychological Medicine*, 54(12), 3459–3468. <https://doi.org/10.1017/S0033291724001880>

Adams, M., Hill, W., Howard, D., Dashti, H., Davis, K., Campbell, A., Clarke, T.-K., Deary, I., Hayward, C., Porteous, D., Hotopf, M., & McIntosh, A. (2020). Factors associated with sharing e-mail information and mental health survey participation in large population cohorts. *International Journal of Epidemiology*, 49(2), 410–421. <https://doi.org/10.1093/ije/dyz134>

Adams, M., Howard, D., Luciano, M., Clarke, T.-K., Davies, G., Hill, W., Smith, D., Deary, I., Porteous, D., McIntosh, A., 23andMe Research Team, & Major Depressive Disorder Working Group of the Psychiatric Genomics Consortium. (2020). Genetic stratification of depression by neuroticism: Revisiting a diagnostic tradition. *Psychological Medicine*, 50(15), 2526–2535. <https://doi.org/10.1017/S0033291719002629>

Arden, R., & Adams, M. (2016). A general intelligence factor in dogs. *Intelligence*, 55, 79–85. <https://doi.org/10.1016/j.intell.2016.01.008>

Adams, M., Bonaventura, M., Ostner, J., Schulke, O., De Marco, A., Thierry, B., Engelhardt, A., Widdig, A., Gerald, M., & Weiss, A. (2015). Personality structure and social style in macaques. *Journal of Personality and Social Psychology*, 109(2), 338–353. <https://doi.org/10.1037/pspp000041>

Adams, M., Robinson, M., Mannarelli, M., & Hatchwell, B. (2015a). Social genetic and social environment effects on parental and helper care in a cooperatively breeding bird. *Proceedings of the Royal Society B-Biological Sciences*, 282(1810). <https://doi.org/10.1098/rspb.2015.0689>

Hatchwell, B., Gullett, P., & Adams, M. (2014). Helping in cooperatively breeding long-tailed tits: A test of Hamilton's rule. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 369(1642). <https://doi.org/10.1098/rstb.2013.0565>

Adams, M., King, J., & Weiss, A. (2012). The majority of genetic variation in orangutan personality and subjective well-being is nonadditive. *Behavior Genetics*, 42, 675–686. <https://doi.org/10.1007/s10519-012-9537-y>

Reviews & Commentary

Adams, M. J. (2023). Leveraging family relatedness to detect participation bias in genetic studies. *Nature Genetics*. <https://doi.org/10.1038/s41588-023-01440-9>

Arden, R., Bensky, M., & Adams, M. (2016). A review of cognitive abilities in dogs, 1911 through 2016: More individual differences, please! *Current Directions in Psychological Science*, 25(5), 307–312. <https://doi.org/10.1177/0963721416667718>

Adams, M. (2014). Feasibility and uncertainty in behavior genetics for the nonhuman primate. *International Journal of Primatology*, 35(1), 156–168. <https://doi.org/10.1007/s10764-013-9722-8>

As Main Author

Provided primary data, analysis, and design.

Casey, H., Wright, H., King, J., Adams, M., McIntosh, A., Strawbridge, R., Fallon, M., Smith, D., Murray, A., & Whalley, H. (2025). Impact of lifestyle in chronic pain and depression: A

propensity score analysis in UK Biobank. *Wellcome Open Research*, 10(318). <https://doi.org/10.12688/wellcomeopenres.23982.1>

Davis, K. A., Coleman, J. R., Adams, M., Breen, G., Cai, N., Davies, H. L., Davies, K., Dregan, A., Eley, T. C., Fox, E., Holliday, J., Hübel, C., John, A., Kassam, A. S., Kempton, M. J., Lee, W., Li, D., Maina, J., McCabe, R., ... Hotopf, M. (2025). The UK Biobank mental health enhancement 2022: Methods and results. *PLOS ONE*, 20(5), 1–20. <https://doi.org/10.1371/journal.pone.0324189>

Davyson, E., Shen, X., Huider, F., Adams, M. J., Borges, K., McCartney, D. L., Barker, L. F., van Dongen, J., Boomsma, D. I., Weihs, A., Grabe, H. J., Kühn, L., Teumer, A., Völzke, H., Zhu, T., Kaprio, J., Ollikainen, M., David, F. S., Meinert, S., ... McIntosh, A. M. (2025). Insights from a methylome-wide association study of antidepressant exposure. *Nature Communications*, 16(1), 1908. <https://doi.org/10.1038/s41467-024-55356-x>

Edmondson-Stait, A. J., Davyson, E., Shen, X., Adams, M. J., Khandaker, G. M., Miron, V. E., McIntosh, A. M., Lawrie, S. M., Kwong, A. S., & Whalley, H. C. (2025). Associations between IL-6 and trajectories of depressive symptoms across the life course: Evidence from ALSPAC and UK Biobank cohorts. *European Psychiatry*, 68(1), e27. <https://doi.org/10.1192/j.eurpsy.2025.7>

Kanjira, S. C., Adams, M. J., Jiang, Y., Tian, C., 23andMe Research Team, Lewis, C. M., Kuchenbaecker, K., & McIntosh, A. M. (2025). Polygenic prediction of major depressive disorder and related traits in African ancestries UK Biobank participants. *Molecular Psychiatry*, 30(1), 151–157. <https://doi.org/10.1038/s41380-024-02662-x>

Shen, X., Barbu, M., Caramaschi, D., Arathimos, R., Czamara, D., David, F. S., Dearman, A., Dilkes, E., Herrera-Rivero, M., Huider, F., Kühn, L., Lu, K.-C., Palviainen, T., Schowe, A. M., Shireby, G., Weihs, A., Wong, C. C. Y., Davyson, E., Casey, H., ... McIntosh, A. M. (2025). A methylome-wide association study of major depression with out-of-sample case-control classification and trans-ancestry comparison. *Nature Mental Health*, 3(10), 1152–1167. <https://doi.org/10.1038/s44220-025-00486-4>

Shen, X., Toenders, Y. J., Han, L. K. M., Weihs, A., Alexander, N., Andlauer, T. F. M., Brosch, K., Forstner, A. J., Grotegerd, D., Hahn, T., Hermesdorf, M., Hosten, N., Jamalabadi, H., Meinert, S., Milaneschi, Y., Sämann, P. G., Stein, F., Stoliczyn, A., Teutenberg, L., ... Whalley, H. C. (2025). Association between polygenic risk for major depression and brain structure in a mega-analysis of 50,975 participants across 11 studies. *Molecular Psychiatry*. <https://doi.org/10.1038/s41380-025-03136-4>

Thomas, J. T., Thorp, J. G., Huider, F., Grimes, P. Z., Wang, R., Youssef, P., Coleman, J. R. I., Byrne, E. M., Adams, M., BIONIC consortium, The GLAD Study, Medland, S. E., Hickie, I. B., Olsen, C. M., Whiteman, D. C., Whalley, H. C., Penninx, B. W. J. H., van Loo, H. M., Derkx, E. M., ... Mitchell, B. L. (2025). Sex-stratified genome-wide association meta-analysis of major depressive disorder. *Nature Communications*, 16(1), 7960. <https://doi.org/10.1038/s41467-025-63236-1>

Grimes, P. Z., Adams, M. J., Thng, G., Edmonson-Stait, A. J., Lu, Y., McIntosh, A., Cullen, B., Larsson, H., Whalley, H. C., & Kwong, A. S. F. (2024). Genetic architectures of adolescent depression trajectories in 2 longitudinal population cohorts. *JAMA Psychiatry*. <https://doi.org/10.1001/jamapsychiatry.2024.0983>

Thng, G., Shen, X., Stoliczyn, A., Adams, M. J., Yeung, H. W., Batziou, V., Conole, E. L. S., Buchanan, C. R., Lawrie, S. M., Bastin, M. E., & et al. (2024). A comprehensive hierarchical comparison of structural connectomes in major depressive disorder cases v. controls in two large population samples. *Psychological Medicine*, 54(10), 2515–2526. <https://doi.org/10.1017/S0033291724000643>

Yeung, H. W., Stolicyn, A., Shen, X., Adams, M. J., Romaniuk, L., Thng, G., Buchanan, C. R., Tucker-Drob, E. M., Bastin, M. E., McIntosh, A. M., Cox, S. R., Smith, K. M., & Whalley, H. C. (2024). Classification accuracy of structural and functional connectomes across different depressive phenotypes. *Imaging Neuroscience*, 2, 1–24. https://doi.org/10.1162/imag_a_00064

Davyson, E., Shen, X., Gadd, D. A., Bernabeu, E., Hillary, R. F., McCartney, D. L., Adams, M., Marioni, R., & McIntosh, A. M. (2023). Metabolomic investigation of major depressive disorder identifies a potentially causal association with polyunsaturated fatty acids. *Biological Psychiatry*. <https://doi.org/10.1016/j.biopsych.2023.01.027>

de Nooij, L., Adams, M. J., Hawkins, E. L., Romaniuk, L., Munafò, M. R., Penton-Voak, I. S., Elliott, R., Bland, A. R., Waiter, G. D., Sandu, A.-L., & et al. (2023). Associations of negative affective biases and depressive symptoms in a community-based sample. *Psychological Medicine*, 53(12), 5518–5527. <https://doi.org/10.1017/S0033291722002720>

Gao, C., Amador, C., Walker, R. M., Campbell, A., Madden, R. A., Adams, M. J., Bai, X., Liu, Y., Li, M., Hayward, C., Porteous, D. J., Shen, X., Evans, K. L., Haley, C. S., McIntosh, A. M., Navarro, P., & Zeng, Y. (2023). Phenome-wide analyses identify an association between the parent-of-origin effects dependent methylome and the rate of aging in humans. *Genome Biology*, 24(1), 117. <https://doi.org/10.1186/s13059-023-02953-6>

Stolicyn, A., Lyall, L. M., Lyall, D. M., Høier, N. K., Adams, M. J., Shen, X., Cole, J. H., McIntosh, A. M., Whalley, H. C., & Smith, D. J. (2023). Comprehensive assessment of sleep duration, insomnia, and brain structure within the UK Biobank cohort. *Sleep*, 47(2), zsad274. <https://doi.org/10.1093/sleep/zsad274>

Wang, X., Walker, A., Revez, J. A., Ni, G., Adams, M. J., McIntosh, A. M., Wray, N. R., Ripke, S., Mattheisen, M., Trzaskowski, M., Byrne, E. M., Abdellaoui, A., Adams, M. J., Agerbo, E., Air, T. M., Andlauer, T. F. M., Bacanu, S.-A., Bækvad-Hansen, M., Beekman, A. T. F., ... Wray, N. R. (2023). Polygenic risk prediction: Why and when out-of-sample prediction R^2 can exceed SNP-based heritability. *The American Journal of Human Genetics*, 110(7), 1207–1215. <https://doi.org/10.1016/j.ajhg.2023.06.006>
doi: 10.1016/j.ajhg.2023.06.006.

Barbu, M. C., Amador, C., Kwong, A. S., Shen, X., Adams, M. J., Howard, D. M., Walker, R. M., Morris, S. W., Min, J. L., Liu, C., van Dongen, J., Ghanbari, M., Relton, C., Porteous, D. J., Campbell, A., Evans, K. L., Whalley, H. C., & McIntosh, A. M. (2022). Complex trait methylation scores in the prediction of major depressive disorder. *eBioMedicine*, 79, 104000. <https://doi.org/10.1016/j.ebiom.2022.104000>

Barbu, M. C., Harris, M., Shen, X., Aleks, S., Green, C., Amador, C., Walker, R., Morris, S., Adams, M., Sandu, A., McNeil, C., Waiter, G., Evans, K., Campbell, A., Wardlaw, J., Steele, D., Murray, A., Porteous, D., McIntosh, A., & Whalley, H. (2022). Epigenome-wide association study of global cortical volumes in Generation Scotland: Scottish Family Health Study. *Epigenetics*, 17(10), 1143–1158. <https://doi.org/10.1080/15592294.2021.1997404>

Barbu, M., Huider, F., Campbell, A., Amador, C., Adams, M., Lynall, M.-E., Howard, D., Walker, R., Morris, S., van Dongen, J., Porteous, D., Evans, K., Bullmore, E., Willemsen, G., Boomsma, D., Whalley, H., & McIntosh, A. (2022). Methylome-wide association study of antidepressant use in Generation Scotland and the Netherlands Twin Register implicates the innate immune system. *Molecular Psychiatry*. <https://doi.org/10.1038/s41380-021-01412-7>

Chuong, M., Adams, M. J., Kwong, A. S. F., Haley, C. S., Amador, C., & McIntosh, A. M. (2022). Genome-by-trauma exposure interactions in adults with depression in the UK Biobank. *JAMA Psychiatry*, 79(11), 1110–1117. <https://doi.org/10.1001/jamapsychiatry.2022.2983>

Grotzinger, A. D., Mallard, T. T., Akingbuwa, W. A., Ip, H. F., Adams, M. J., Lewis, C. M., McIntosh, A. M., Grove, J., Dalsgaard, S., Lesch, K.-P., Strom, N., Meier, S. M., Mattheisen, M., Børglum, A. D., Mors, O., Breen, G., Meier, S. M., Lee, P. H., Kendler, K. S., ... Schizophrenia Working Group of the Psychiatric Genetics Consortium. (2022). Genetic architecture of 11 major psychiatric disorders at biobehavioral, functional genomic and molecular genetic levels of analysis. *Nature Genetics*. <https://doi.org/10.1038/s41588-022-01057-4>

Shen, X., Caramaschi, D., Adams, M. J., Walker, R. M., Min, J. L., Kwong, A., Hemani, G., Barbu, M. C., Whalley, H. C., Harris, S. E., Deary, I. J., Morris, S. W., Cox, S. R., Relton, C. L., Marioni, R. E., Evans, K. L., McIntosh, A. M., & Genetics of DNA Methylation Consortium. (2022). DNA methylome-wide association study of genetic risk for depression implicates antigen processing and immune responses. *Genome Medicine*, 14(1), 36. <https://doi.org/10.1186/s13073-022-01039-5>

Barbu, M., Harris, M., Shen, X., Stolicyn, A., Green, C., Amador, C., Walker, R., Morris, S., Adams, M., Sandu, A., McNeil, C., Waiter, G., Evans, K., Campbell, A., Wardlaw, J., Steele, D., Murray, A., Porteous, D., McIntosh, A., & Whalley, H. (2021). Epigenome-wide association study of global cortical volumes in Generation Scotland: Scottish Family Health Study. *Epigenetics*. <https://doi.org/10.1080/15592294.2021.1997404>

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Johnston, K., Ward, J., Ray, P., Adams, M., McIntosh, A., Smith, B., Strawbridge, R., Price, T., Smith, D., Nicholl, B., Bailey, M., & Epstein, M. (2021). Sex-stratified genome-wide association study of multisite chronic pain in UK Biobank. *PLoS Genetics*, 17(4), e1009428. <https://doi.org/10.1371/journal.pgen.1009428>

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Barbu, M., Spiliopoulou, A., Colombo, M., McKeigue, P., Clarke, T.-K., Howard, D., Adams, M., Shen, X., Lawrie, S., McIntosh, A., & Whalley, H. (2020). Expression quantitative trait loci-derived scores and white matter microstructure in UK Biobank: A novel approach to integrating genetics and neuroimaging. *Translational Psychiatry*, 10. <https://doi.org/10.1038/s41398-020-0724-y>

Davis, K., Coleman, J., Adams, M., Allen, N., Breen, G., Cullen, B., Dickens, C., Fox, E., Graham, N., Holliday, J., Howard, L., John, A., Lee, W., McCabe, R., McIntosh, A., Pearsall, R., Smith, D., Sudlow, C., Ward, J., ... Hotopf, M. (2020). Mental health in UK Biobank –

development, implementation and results from an online questionnaire completed by 157 366 participants: A reanalysis. *BJPsych Open*, 6(2). <https://doi.org/10.1192/bjo.2019.100>

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Kwong, A., Pearson, R., Adams, M., Northstone, K., Tilling, K., Smith, D., Fawns-ritchie, C., Bould, H., Warne, N., Zammit, S., Gunnell, D., Moran, P., Micali, N., Reichenberg, A., Hickman, M., Rai, D., Haworth, S., Campbell, A., Altschul, D., ... Timpson, N. (2020). Mental health before and during COVID-19 in two longitudinal UK population cohorts. *The British Journal of Psychiatry*, 1–27. <https://doi.org/10.1192/bjp.2020.242>

Meng, W., Adams, M., Reel, P., Rajendrakumar, A., Huang, Y., Deary, I., Palmer, C., McIntosh, A., & Smith, B. (2020). Genetic correlations between pain phenotypes and depression and neuroticism. *European Journal of Human Genetics*, 28, 358–366. <https://doi.org/10.1038/s41431-019-0530-2>

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Arnau Soler, A., Adams, M., Clarke, T.-K., MacIntyre, D., Milburn, K., Navrady, L., Generation Scotland, Major Depressive Disorder Working Group of the Psychiatric Genomics Consortium, Hayward, C., McIntosh, A., & Thomson, P. (2019). A validation of the diathesis-stress model for depression in Generation Scotland. *Translational Psychiatry*. <https://doi.org/10.1038/s41398-018-0356-7>

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Invited talks

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| 2019 | College of Medicine, University of Malawi |
| 2014 | Institute of Psychiatry, King's College London |
| | Department of Psychology, University of Sheffield |
| | Department of Psychology, University of York |
| 2013 | German Primate Center. Göttingen |

Teaching

Undergraduate

Genetic and Environmental Influences on Behaviour and Mental Health
Data Science for Health and Biomedical Sciences
Medical Science 4 seminar on “Psychiatric Genetics”
Psychology 2 Practical Course (tutor)
Psychology 3 Methods (tutor)

Postgraduate

Univariate and Multivariate Statistics with R

Workshops

GenomicSEM Module, International Statistical Genetics Workshop

Supervision

Doctoral students

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| 2021 | Keira Johnston, Precision Medicine |
| 2023 | Melissa Lewins, Precision Medicine |
| 2025 | Ella Davyson, Biomedical Artificial Intelligence |

MSc & Honours Students

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|----------------|---|
| U of Edinburgh | Quantitative Genetics & Genome Analysis Biomedical Artificial Intelligence Integrative Neuroscience Biomedical Sciences and Medical Sciences |
| U of Sheffield | Sheffield Undergraduate Research Experience |

Knowledge Exchange

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| 2025 | Generation Scotland Symposium Usher Building Showcase Exhibition |
| 2024 | Doors Open Day |
| 2023 | Using de-identified Scottish primary care data for research: A meeting of stakeholders |
| 2021 | Evidence Submitted to Cross Party Group – Mental Health, Scottish Parliament <i>Depression Detectives</i> , online participant-led research forum |
| 2020 | Consultation on Digital Strategy for Scotland, Scottish Government NHS Research Scotland Mental Health Annual Scientific Meeting |
| 2019 | Midlothian Science Festival HDR UK Schools Engagement Edinburgh International Science Festival |

Consulting & Industry Collaborations

23andMe
Baillie Gifford
University of Cambridge

Open Science

Code repositories

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|------------|---|
| Personal | https://github.com/mja |
| Group | https://github.com/ccbs-stradl |
| Consortium | https://github.com/psychiatric-genomics-consortium |

Datasets

Adams, M. J., Lewis, C., McIntosh, A., & Major Depressive Disorder Working Group of the Psychiatric Genomics Consortium. (2025). GWAS summary statistics for major depression (PGC MDD2025). Dataset. <https://doi.org/10.6084/m9.figshare.27061255>

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Journals, Conferences, Grant Panels

Editorial Boards

2014–2016 Frontiers in Evolutionary and Population Genetics

Reviewer

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| Journals | American Journal of Primatology, Animal Behaviour, BJP, PsychOpen, Behavioral Ecology and Sociobiology, Biological Psychiatry, Evolution, Intelligence, International Journal of Primatology, JAMA Psychiatry, Journal of Comparative Psychology, Journal of Research in Personality, Journal of the American Academy of Child and Adolescent Psychiatry, Lancet Psychiatry, Molecular Psychiatry, Proceedings of the Royal Society B, Psychological Science |
| Conferences | World Congress of Psychiatric Genetics |
| Grants | Medical Research Council, Swiss National Science Foundation |