



## Geoffrey Chern-Yee Tan

Consultant Psychiatrist, Department of Mood and Anxiety/ Central Region, Institute of Mental Health

Research/Innovation Interests:

- Precision Psychiatry
- Psychotherapy
- AI & Mental Health
- Mood disorders
- Pharmacogenetics and Nutrigenomics

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Research Profile:

Google Scholar:

<https://scholar.google.com.sg/citations?user=ISkMV0cAAAAJ&hl=en&inst=3212728378801010220>

Research Gate: <https://www.researchgate.net/profile/Geoffrey-Chern-Yee-Tan>

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## Biography

I am experienced in conducting research as a clinician-scientist in the Psychiatry field, specialising in Psychotherapy. I have been utilising machine-learning approaches since my Intercalated BSc in neuroscience. I went on to complete my PhD in genetics and neuroimaging where I developed my expertise in cognitive neuroscience and psychological constructs such as personality and aspects of emotional processing. At IMH in the Mood and Anxiety department, my goal is to develop personalised treatments of mood, anxiety and interpersonal issues through the application of AI approaches. In the immediate-term, this involves developing AI-based tools for personalisation of psychotherapy and developing my expertise in applying AI approaches to clinical questions.

## Selected Publications

- **Tan, G. C.-Y.**, Wang, Z., Tan, E. S. E., Ong, R. J. M., Ooi, P. E., Lee, D., ... & Keppo, J. (2024). Transdiagnostic clustering of self-schema from self-referential judgements identifies subtypes of healthy personality and depression. *Frontiers in Neuroinformatics*, 17, 1244347. <https://doi.org/10.3389/fninf.2023.1244347>

- Lu, S. H., Assudani, H. A., Kwek, T. R., Ng, S. W., Teoh, T. E., & **Tan, G. C.** (2021). A Randomised Controlled Trial of Clinician-Guided Internet-Based Cognitive Behavioural Therapy for Depressed Patients in Singapore. *Frontiers in Psychology*, 2833. <https://doi.org/10.3389/fpsyg.2021.668384>
- **Tan, G. C.-Y.**, Tan, H. M., Rane, N., Tan, E. S. E., Hashim, N., Teo, C., Fong, K. V., Yoong, M. R. Y., Garg, R., Sultan, S., Keppo, J., & Huixian, S. L. (2024). Personalised Profiling in Mental Health: A CAT-based Approach for Maternal Well-being and Mood Disorders. <https://doi.org/10.31234/osf.io/m97bk>
- **Tan, G. C.-Y.**, Wang, B. Z., Tan, H. M., Pe, L. S., Yuen, A. K. P., Mu, Y., Lee, B., Huixian, S. L., Tan, E. S. E., Fong, K. V., Keppo, J., & Goh, H. L. (2024). Foundational Models for Personalised Mental Health. OSF. <https://doi.org/10.31234/osf.io/efyrv>
- Fong, W. J., Tan, H. M., Garg, R., Teh, A. L., Pan, H., Gupta, V.,... **Tan, G. C.-Y.** (2024). Comparing feature selection and machine learning approaches for predicting CYP2D6 methylation from genetic variation. *Frontiers in Neuroinformatics*, 17. <https://doi.org/10.3389/fninf.2023.1244336>

#### Notable Research/Innovation Awards & Grants from Past 5 Years

Name of Awards & Grants	Year Obtained
Singapore Health and Biomedical Congress (SHBC) Young Investigator (Basic Science/Translational Research) Bronze Award for 'Genetically predicted CYP2D6 brain expression influences mood and anxiety symptoms in children and their mothers'	2021
Singapore Clinician Investigator Award – Bronze Dr Geoffrey Tan Chern-Yee Abstract Title: A machine learning approach to developing self-referential processing for depression screening	2022
FY21 Prenatal / Early Childhood Grant Call from the Agency for Science, Technology and Research (A*STAR)	2022
Centre for Medical Technologies & Innovations (CMTi) MedTech Grant	2023