

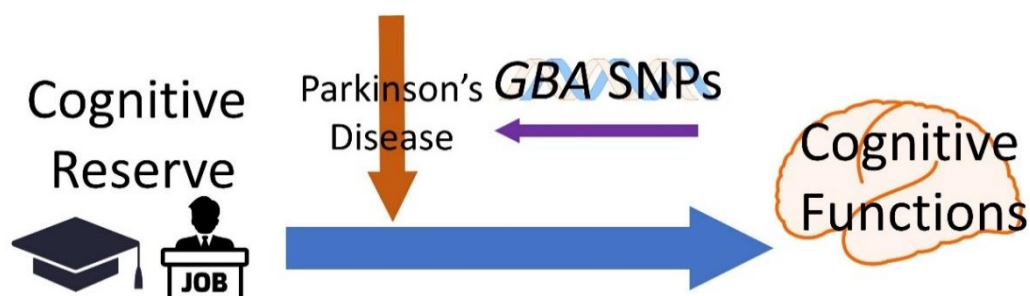
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- ▶ 113 年發表 6 篇論文於 Journal of Neurology、Social Cognitive and Affective Neuroscience、Journal of Chromatography A、Kaohsiung Journal of Medical Sciences 與 Asian Journal of Psychiatry

在過去一年我們深入研究了巴金森病症和病毒性肝炎對認知功能的影響。最重要的發現是 GBA 基因的變異如何影響個體建立的認知儲備，進而影響認知功能。我們發現，擁有特定 GBA 基因型的巴金森病患者，其工作經驗對注意力、記憶力和語言能力有顯著影響。這顯示基因與生活經驗的互動對大腦健康有深遠影響，強調考慮基因資訊的重要性，能協助制定更針對性的認知訓練和干預。此外，我們開發了「老人冷漠量表」(GAS)，用於評估神經退行性疾病患者的冷漠程度。該量表考慮華人文化特性，更適合亞洲患者，能幫助醫護人員早期發現並治療冷漠症狀，改善生活品質。我們還發現，巴金森氏病和阿茲海默症患者在冷漠的認知和社交動機方面比其他症狀更為嚴重。在 TGFB1 基因研究中，我們發現其多態性影響病毒性肝炎患者的認知能力。特定基因變異與語言能力和時間定向相關，病毒性肝炎會增強這種影響，提示 TGFB1 可能是治療病毒性肝炎引起認知障礙的新目標。總之，這些研究深化了我們對基因、生活經驗和疾病如何共同影響神經精神健康的理解。我們希望透過探索這些交互作用，開發更精準的診斷工具和治療方法，提升受影響者的生活品質。

GBA moderates cognitive reserve's effect on cognitive function in patients with Parkinson's disease





【具體成果】

1. Chiang KW, Tan CH, Hong WP, Yu RL*. Disgust-specific Impairment of Facial Emotion Recognition in Parkinson's Disease Patients with Mild Cognitive Impairment. Social Cognitive and Affective Neuroscience. 2024 Oct 17.
2. Tsao WC, Yu RL, Li CT, Tsai WF, Chuang WL, Huang JF, Dai CY, Tan CH*. Viral hepatitis moderates the impact of TGFBI on neurocognitive impairment. The Kaohsiung Journal of Medical Sciences. 2024 Sep;40(9):852-861.
3. Chang CW‡, Tan CH‡, Hong WP, Yu RL*. GBA moderates cognitive reserve's effect on cognitive function in patients with Parkinson's disease. J Neurol 2024 Apr 24 (‡:Equal contribution)
4. Prakasham K, Pan TY, Tan CH, Wu CF, Chandra P, Cheng CM, Chen W, Tsai WC, Ponnusamy VK, Wu MT. A rapid and sensitive analytical methodology for the simultaneous biomonitoring of two direct oral anticoagulant drugs and their major metabolites in thromboembolic disordered patients samples for clinical evaluations. J Chromatogr A. 2024 Feb 22;1717:464689.
5. Yi HJ‡, Tan CH‡, Hong WP, Yu RL. Development and validation of the geriatric apathy scale: Examining multi-dimensional apathy profiles in a neurodegenerative population with cultural considerations. Asian J Psychiatr. 2024 Mar;93:103924. (‡:Equal contribution)
6. Huang HY, Yu RL, Tsai WF, Chuang WL, Huang JF, Dai CY, Tan CH*. Impact of Interleukin 1-Beta Single Nucleotide Polymorphisms and Depressive Symptoms in Individuals with Chronic Viral Hepatitis. The Kaohsiung Journal of Medical Sciences. 2024 Jan;40(1):94-104

【研究團隊】

團隊成員：譚俊祥、鄭郁蓁

團隊簡介：我們持續於神經科學領域進行溫度感知與神經退化性疾患之研究，期望研究結果能讓人類的知識在相關領域更進一步。

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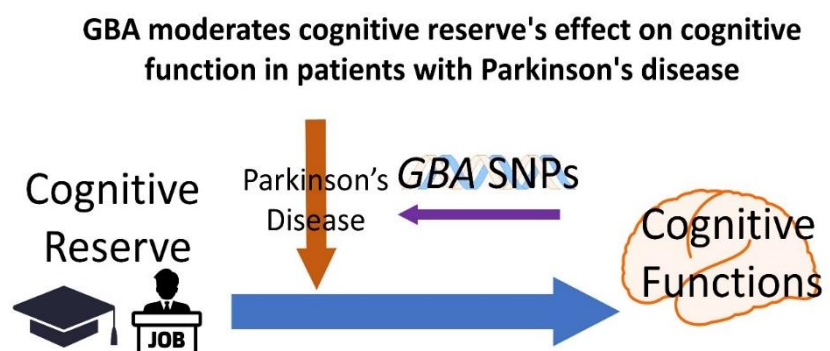
Over the past year, we have conducted an in-depth study of the effects of Parkinson's disease and viral hepatitis on cognitive function. The most important finding is how variations in the GBA gene impact an individual's cognitive reserve, which in turn affects cognitive abilities. We found that among Parkinson's patients with specific GBA genotypes, work experience significantly influences attention, memory, and language abilities. This highlights the profound impact of gene-environment interactions on brain health and underscores the importance of considering genetic information to develop more targeted cognitive training and interventions.

Additionally, we developed the "Geriatric Apathy Scale" (GAS) to assess the level of apathy in patients with neurodegenerative diseases. This scale takes into account cultural characteristics specific to Chinese populations, making it more suitable for Asian patients. It aids healthcare professionals in early detection and treatment of apathy symptoms, ultimately improving quality of life. We also found that cognitive and social motivation apathy is more pronounced in patients with Parkinson's and Alzheimer's disease than in other symptoms.

In our research on the TGFBI gene, we discovered that its polymorphisms affect cognitive abilities in patients with viral hepatitis. Specific gene variants are associated with language abilities and temporal orientation, and viral hepatitis exacerbates this effect, suggesting TGFBI may be a novel target for treating cognitive impairment related to viral hepatitis.

In summary, these studies deepen our understanding of how genes, life experiences, and diseases jointly influence neuropsychological health.

Through exploring these interactions, we aim to develop more precise diagnostic tools and therapeutic approaches to improve the quality of life for affected individuals.





【Research Team Introduction】

1. Chiang KW, Tan CH, Hong WP, Yu RL*. Disgust-specific Impairment of Facial Emotion Recognition in Parkinson's Disease Patients with Mild Cognitive Impairment. Social Cognitive and Affective Neuroscience. 2024 Oct 17.
2. Tsao WC, Yu RL, Li CT, Tsai WF, Chuang WL, Huang JF, Dai CY, Tan CH*. Viral hepatitis moderates the impact of TGFBI on neurocognitive impairment. The Kaohsiung Journal of Medical Sciences. 2024 Sep;40(9):852-861.
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【Research Team】

Team Members: Chun-Hsiang Tan, Yu-Zhen Zheng

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