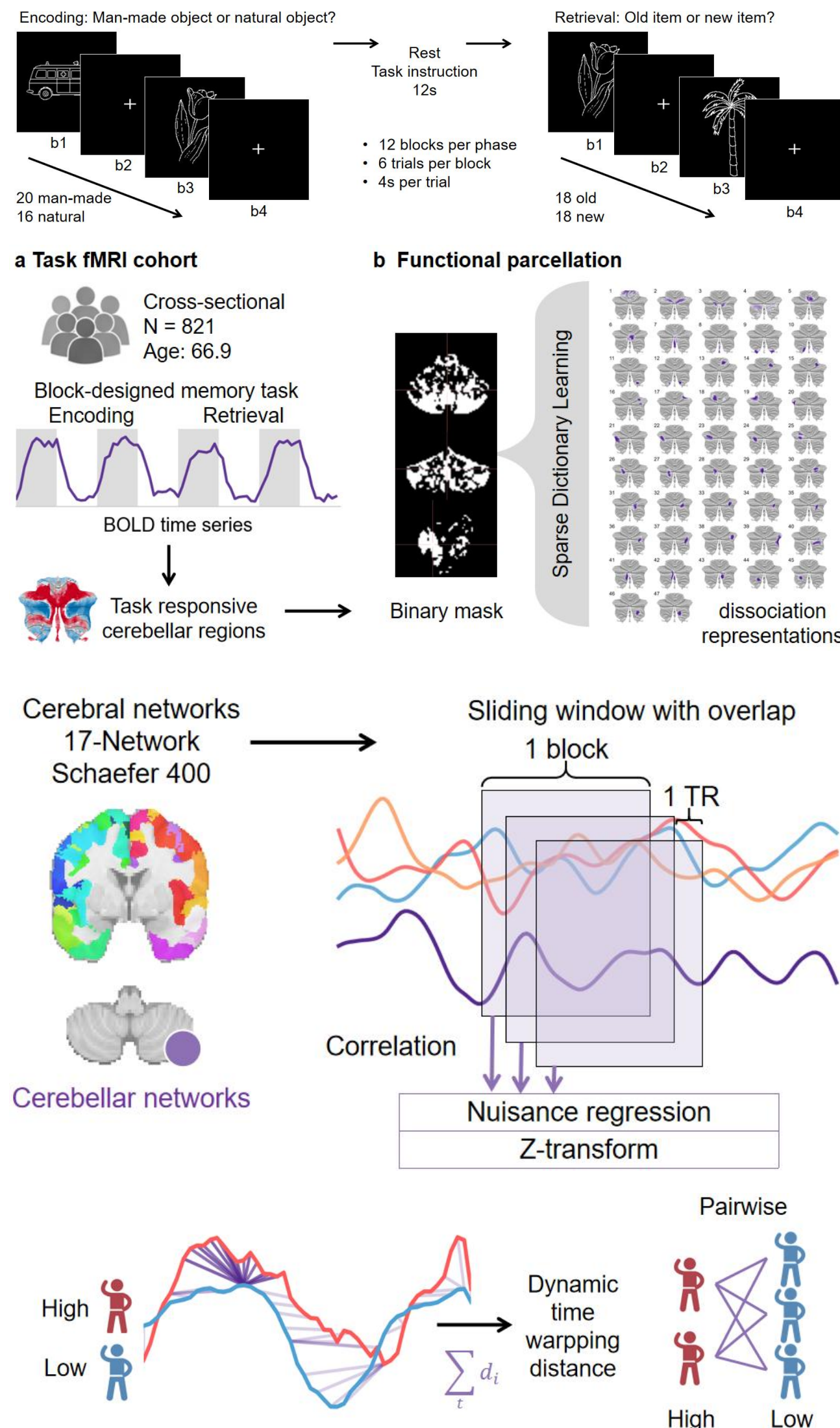
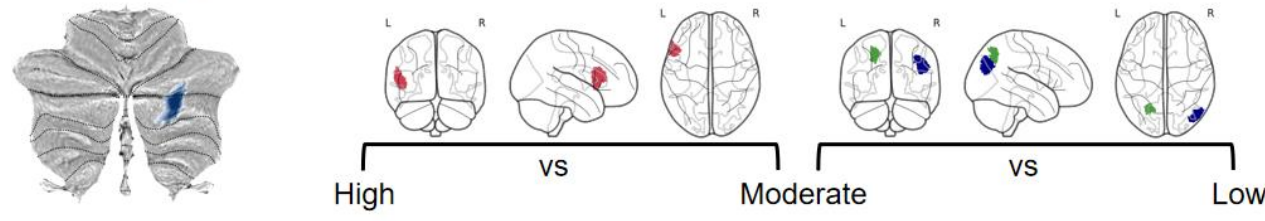
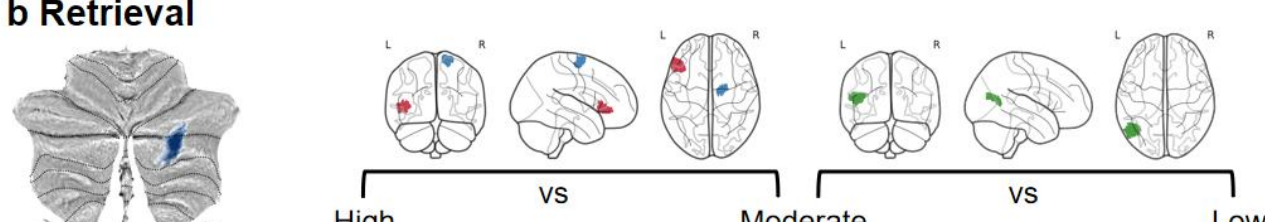
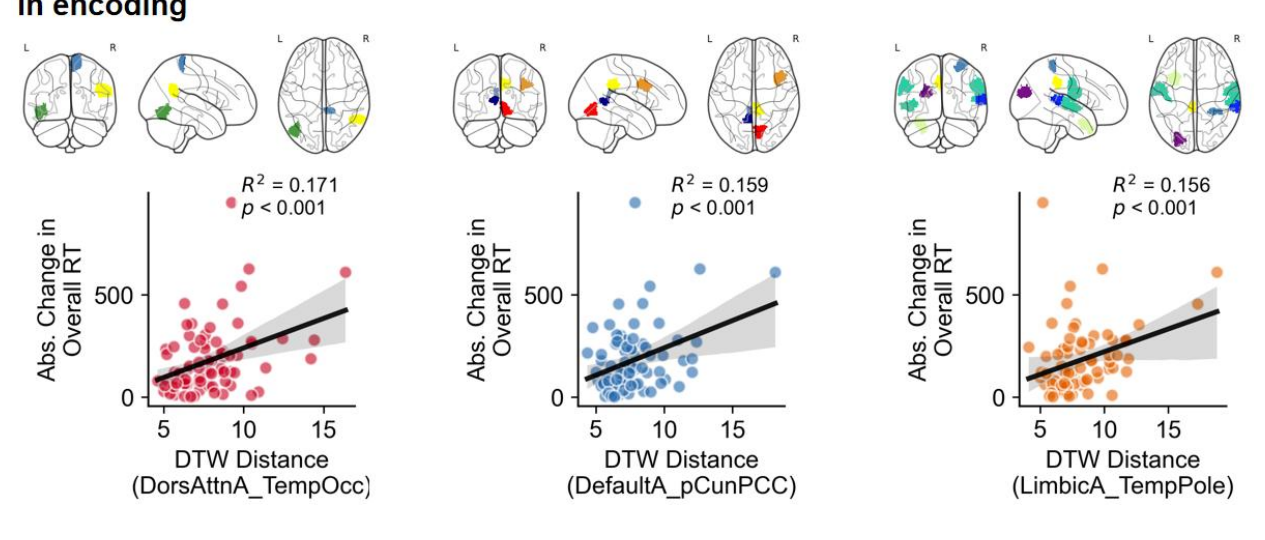
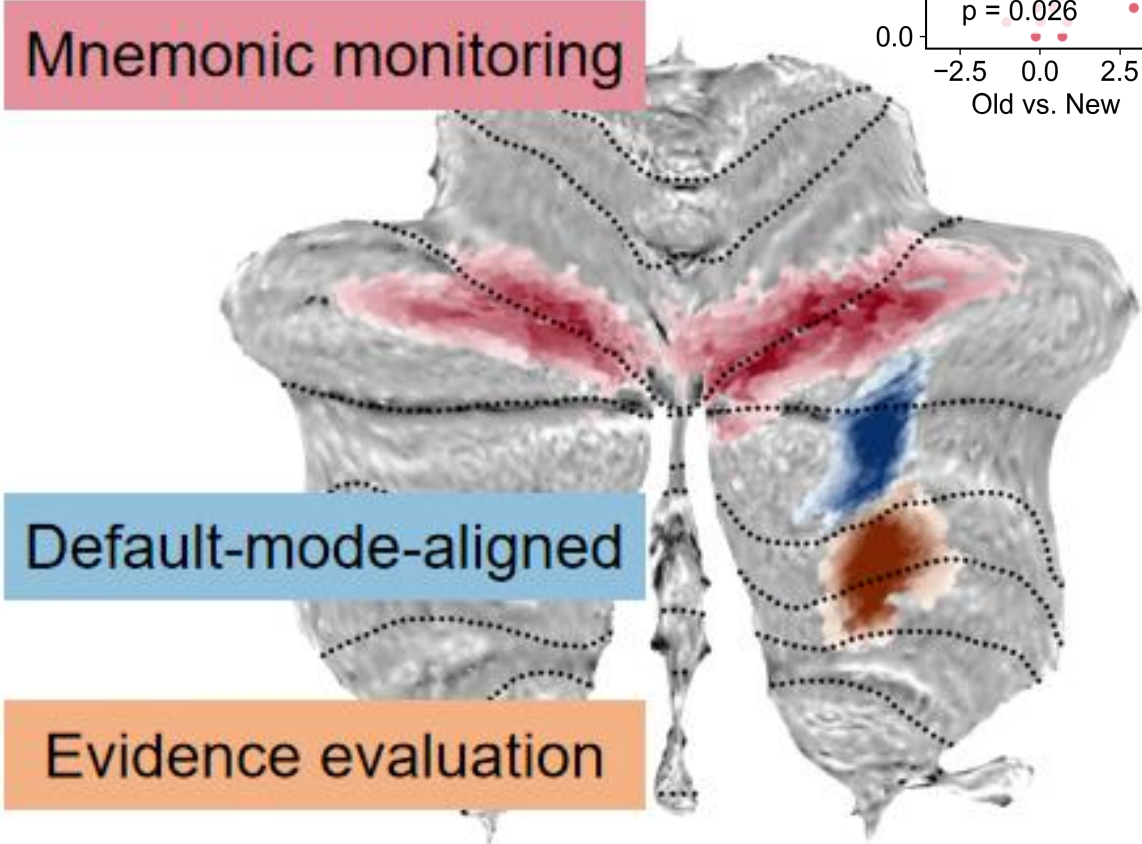
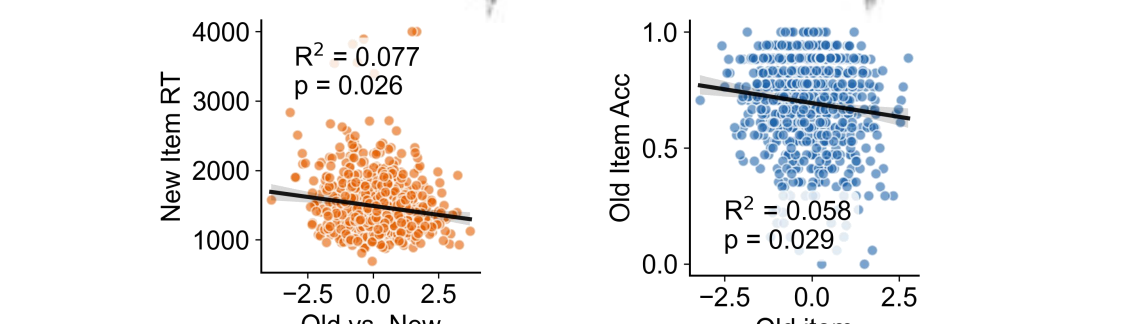


Cerebellar Functional Topography And Dynamic Interactions Underlie Episodic Memory In Aging

Tuesday-0581

Tengfei Han^{1,2} Zaizhu Han¹, Yaojing Chen^{1,2} Zhanjun Zhang^{1,2}
¹ State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, 100875, China
² Beijing Key Laboratory of Cognitive Intelligence for Elderly Brain Health, Beijing Normal University, Beijing, 100875, China

We identified three cerebellar networks with distinct memory relevance: a bilateral lobule VI / Crus I mnemonic-monitoring network, a right Crus I/II default-mode-aligned network and a right lobule VIIb/VIIIa evidence-evaluation network. Their dynamic functional connectivities with cerebral cortex differentiated memory-performance groups and predicted longitudinal slowing in retrieval.

INTRODUCTION	METHODS	RESULTS	CONCLUSIONS	REFERENCES
Episodic memory decline in aging is usually explained by cortico-hippocampal dysfunction, but the cerebellum may also shape memory performance through its interactions with association cortex. We examined task-evoked cerebellar organization and cerebellar–cerebral interactions in fMRI during episodic memory in a large cohort of cognitively normal older adults with follow-up.		Baseline a Encoding  b Retrieval  Follow-up In encoding 	These findings suggest that memory resilience in older adults depends on preserved temporal coordination between specialized cerebellar networks and distributed cortical systems.  	Almeida, J. et al. The cerebellum is causally involved in episodic memory under aging. <i>GeroScience</i> 45, 2267–2287 (2023). Diedrichsen, J. & Zotow, E. Surface-based display of volume-averaged cerebellar imaging data. <i>PLOS ONE</i> 10, e0133402 (2015). Fliessbach, K., Trautner, P., Quesada, C. M., Elger, C. E. & Weber, B. Cerebellar contributions to episodic memory encoding as revealed by fMRI. <i>Neuroimage</i> 35, 1330–1337 (2007). Schmahmann, J. D., Guell, X., Stoodley, C. J. & Halko, M. A. The theory and neuroscience of cerebellar cognition. <i>Annu Rev Neurosci</i> 42, 337–364 (2019).
CONTACT WeChat  hantengfei@mail.bnu.edu.cn ALZHEIMER'S ASSOCIATION AAIC 26				