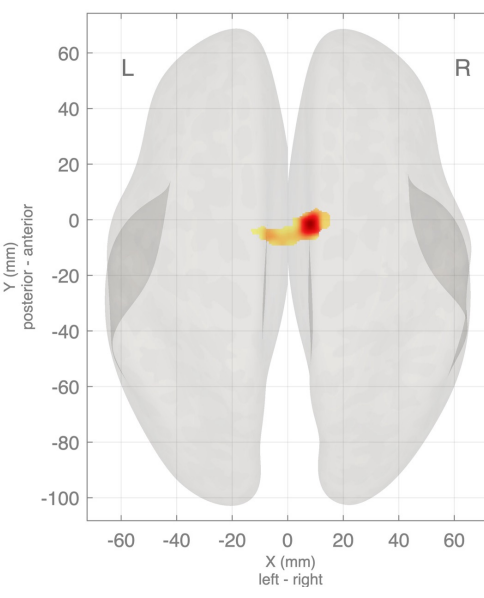
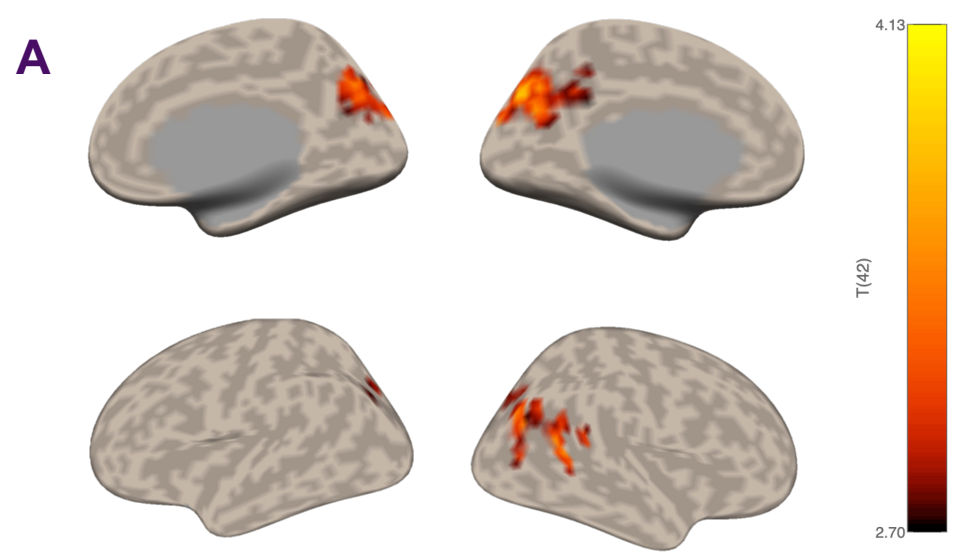
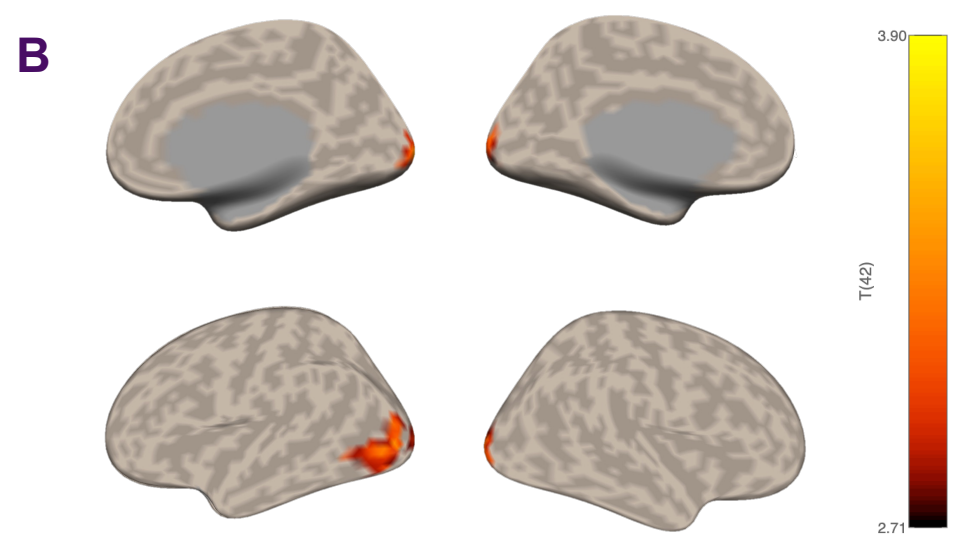


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In the prodromal phase of dementia with Lewy bodies, alterations in resting-state functional connectivity originating the visual system and the default-mode network might be a predisposing condition for experiencing visual hallucinations.

INTRODUCTION	METHODS	RESULTS	CONCLUSIONS
Visual hallucinations (VH) are a hallmark symptom of dementia with Lewy bodies (DLB), often occurring early in the disease course, including its prodromal phase (pro-DLB). Despite their prominence, the underlying mechanisms responsible for the onset of VH and the factors that predispose individuals to experience them (hallucination trait) remain poorly understood. Within the hodotopic framework¹, the aim of this study was to investigate alterations in resting-state functional connectivity (rsFC) in pro-DLB patients.	Participants: 44 pro-DLB patients divided into two groups based on clinical history of VH, assessed through North-East Visual Hallucination Interview² (NEVHI): 20 with VH (pro-VH) 24 without VH (pro-NoVH) fMRI analysis: Multivariate Pattern Analysis³ (MVPA) to detect regions with altered rsFC with the rest of the brain in one group vs. the other; Post-hoc seed-based analysis to examine the direction of FC from the MVPA-identified cluster, used as seed.	The MVPA identified a cluster in the right parahippocampal gyrus (extending into the left hemisphere):  This cluster showed greater rsFC in pro-VH relative to pro-NoVH in: - The posterior precuneus (including lateral parietal, temporal, occipital regions; panel A) - The left lateral occipital cortex (encompassing the occipital pole; panel B).	The observed functional alteration involves core nodes of the visual system and the default-mode network (DMN). In line with the hodotopic model, the increased FC can be interpreted as a predisposing condition for VH, likely due to alterations in cortical excitability or a reduction in stability among networks. This imbalance between visual perceptual processing and DMN could therefore represent the VH trait, a predisposing factor for the onset and maintenance of hallucinatory experiences. A  B  REFERENCES ¹ ffytche DH. The hodology of hallucinations. <i>Cortex</i>. 2008 Sep;44(8):1067-83. doi: 10.1016/j.cortex.2008.04.005. Epub 2008 May 23. PMID: 18586234. ² Mosimann UP, Collerton D, Dudley R, Meyer TD, Graham G, Dean JL, Bearn D, Killen A, Dickinson L, Clarke MP, McKeith IG. A semi-structured interview to assess visual hallucinations in older people. <i>Int J Geriatr Psychiatry</i>. 2008 Jul;23(7):712-8. doi: 10.1002/gps.1965. PMID: 18181237. ³ Nieto-Castanon A. Brain-wide connectome inferences using functional connectivity MultiVariate Pattern Analyses (fc-MVPA). <i>PLoS Comput Biol</i>. 2022 Nov 15;18(11):e1010634. doi: 10.1371/journal.pcbi.1010634. PMID: 36378714; PMCID: PMC9707802. CONTACT desiree.conti@uniroma1.it 