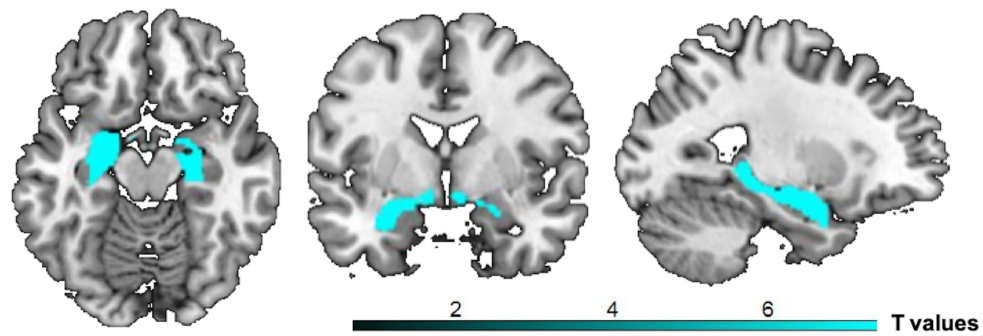


Supplementary Material

Language network connectivity increases in early Alzheimer's disease

Supplementary Figure 1. Regions showing less density of gray matter in MCI due to AD participants in comparison to healthy controls. The statistical threshold is $p_{FWE-corr} < 0.05$ ($k > 50$ voxels)



Areas	Coordinates (x; y; z)	T values	K voxels
Left hippocampus, parahippocampus, Thalamus	-28 -32 -5	7.28	3278
Right hippocampus, parahippocampus, Thalamus	24 -30 -5	7.40	1076

Supplementary Table 1. Summary of regions positively and negatively correlated with the seeds in each group. PCC, posterior cingulate gyrus; SMG, supramarginal gyrus; AG, angular gyrus; TP, temporal pole; ITG, inferior temporal gyrus; MTG, middle temporal gyrus; SPL, superior parietal lobule.

Cluster	Functional connectivity	K voxels	Peak in MNI coordinates (x, y, z)	T value
Seed IFG				
MCI due to AD group				
Left and right frontal regions (i.e., frontal poles, middle and superior frontal gyri, inferior frontal gyri). Left lateral occipital cortex, SMG, AG, SPL, ITG. Right TP, precuneus	positive	24,565	-48 +26 -06	21.35
Right lateral occipital cortex, SMG, AG	positive	3,786	+50 +20 -16	13.03
Right ITG, MTG, STG	positive	1,269	+52 -32 -08	8
Right cerebellum	positive	1,418	+24 -86 -46	7.96
Left cerebellum	positive	673	-34 -34 -36	-10.14
Precuneus and posterior cingulate	negative	2,144	+16 -60 +34	-10.82
Left and right superior parietal lobules, Right lateral occipital cortex	negative	457	-04 -56 +58	-5.82
Right cerebellum	negative	341	+14 -56 -62	-8.89
Left cerebellum	negative	335	-26 -80 -42	6.91
HC group				
Left and right frontal regions (i.e., frontal poles, middle and superior frontal gyri, inferior frontal gyri). Left lateral occipital cortex, SMG, AG, SPL, ITG. Right TP, precuneus	positive	41,598	-42 +24 +24	18.82
Right lateral occipital cortex, SMG, AG	positive	2,752	+42 -44 +44	8.68
Right ITG, MTG	positive	1,050	+60 -38 -18	6.94
Right cerebellum	positive	2,367	+32 -70 -52	9.22
Left cerebellum	positive	396	-24 -78 -52	6.92
Left hippocampus, caudate and temporal fusiform cortex	negative	4,587	-04 +06 +20	-5.18
Right hippocampus, thalamus, parahippocampal gyrus, PCC	negative	2,275	+36 -38 +18	-9.24
Left cerebellum	negative	870	-08 -26 -54	-10.34

Cluster	Functional connectivity	K voxels	Peak in MNI coordinates (x, y, z)	T value
Seed STG				
MCI due to AD group				
Left frontal regions (i.e., frontal pole, middle and superior frontal gyri, inferior frontal gyri) and temporoparietal regions (i.e., TP, ITG, MTG, SMG, AG, lateral occipital cortex and SPL).	positive	26,454	-44 -58 +24	22.6
Right regions mentioned in the cluster above	positive	7,705	+52 -64 +32	14.07
Right cerebellum	positive	2,281	+20 -78 -34	10.96
Left cerebellum	positive	1,392	-24 -76 -32	10.13
Precuneus and posterior cingulate	negative	4,343	-10 -50 +30	8.51
Right superior parietal lobule, SMG, lateral occipital cortex	negative	1,463	+28 -42 +34	-6.32
HC group				
Left frontal regions (i.e., frontal pole, middle and superior frontal gyri, inferior frontal gyri) and temporoparietal regions (i.e., TP, ITG, MTG, SMG, AG, lateral occipital cortex and SPL).	positive	31,472	-54 -56 +26	19.71
Right regions mentioned in the cluster above	positive	10,411	+56 -54 +26	18.41
Right cerebellum	positive	2,928	+24 -80 -42	11.11
Left cerebellum	positive	868	-20 -80 -30	7.86
Precuneus and posterior cingulate	negative	4,343	-08 -48 +36	9.89
Right Superior parietal lobule, SMG, lateral occipital cortex	negative	289	+46 -36 +62	-6.05
Left cerebellum	negative	238	-16 -44 -54	-7.23