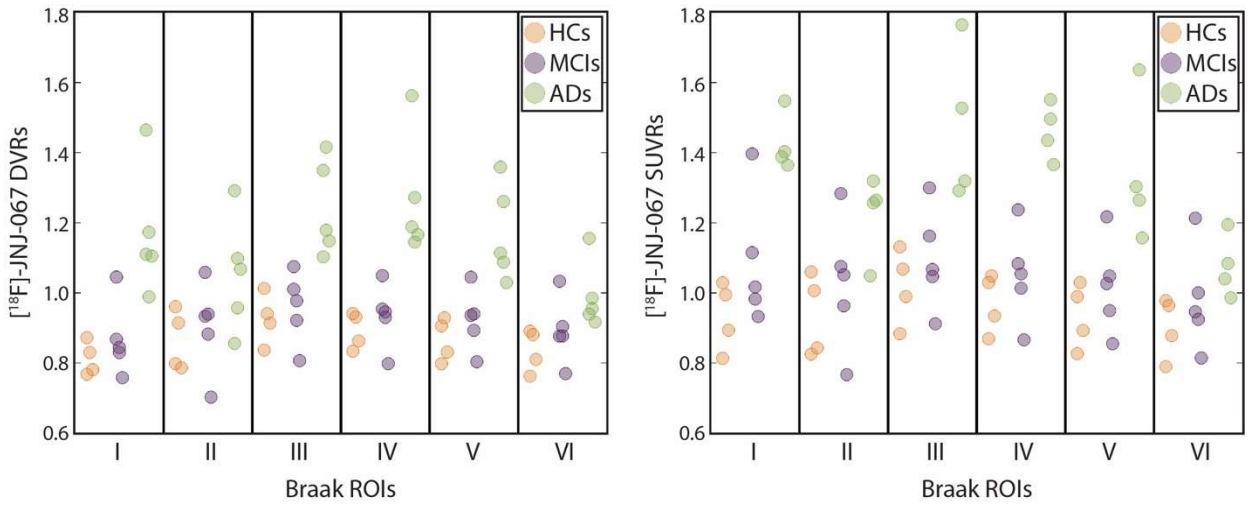
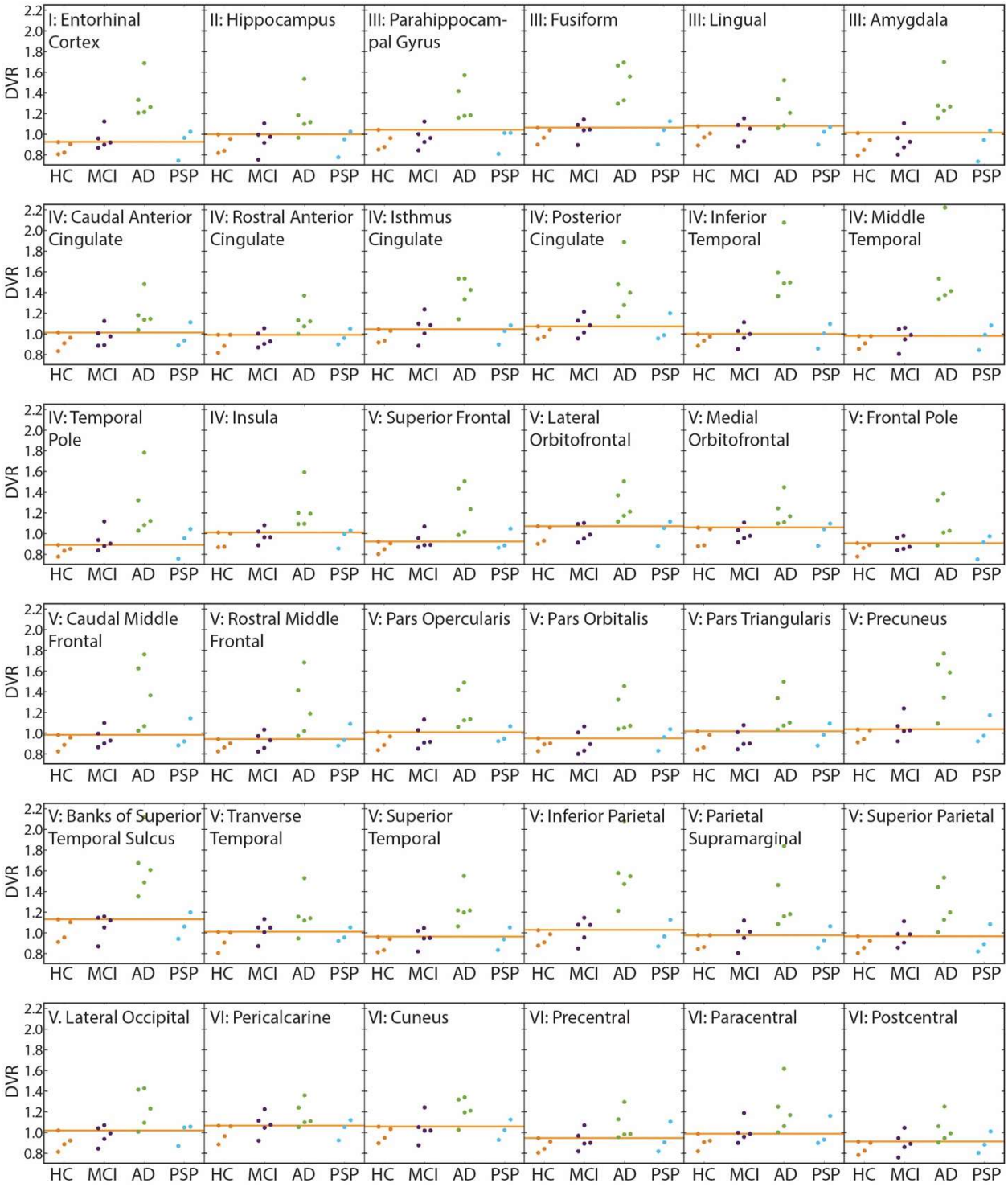
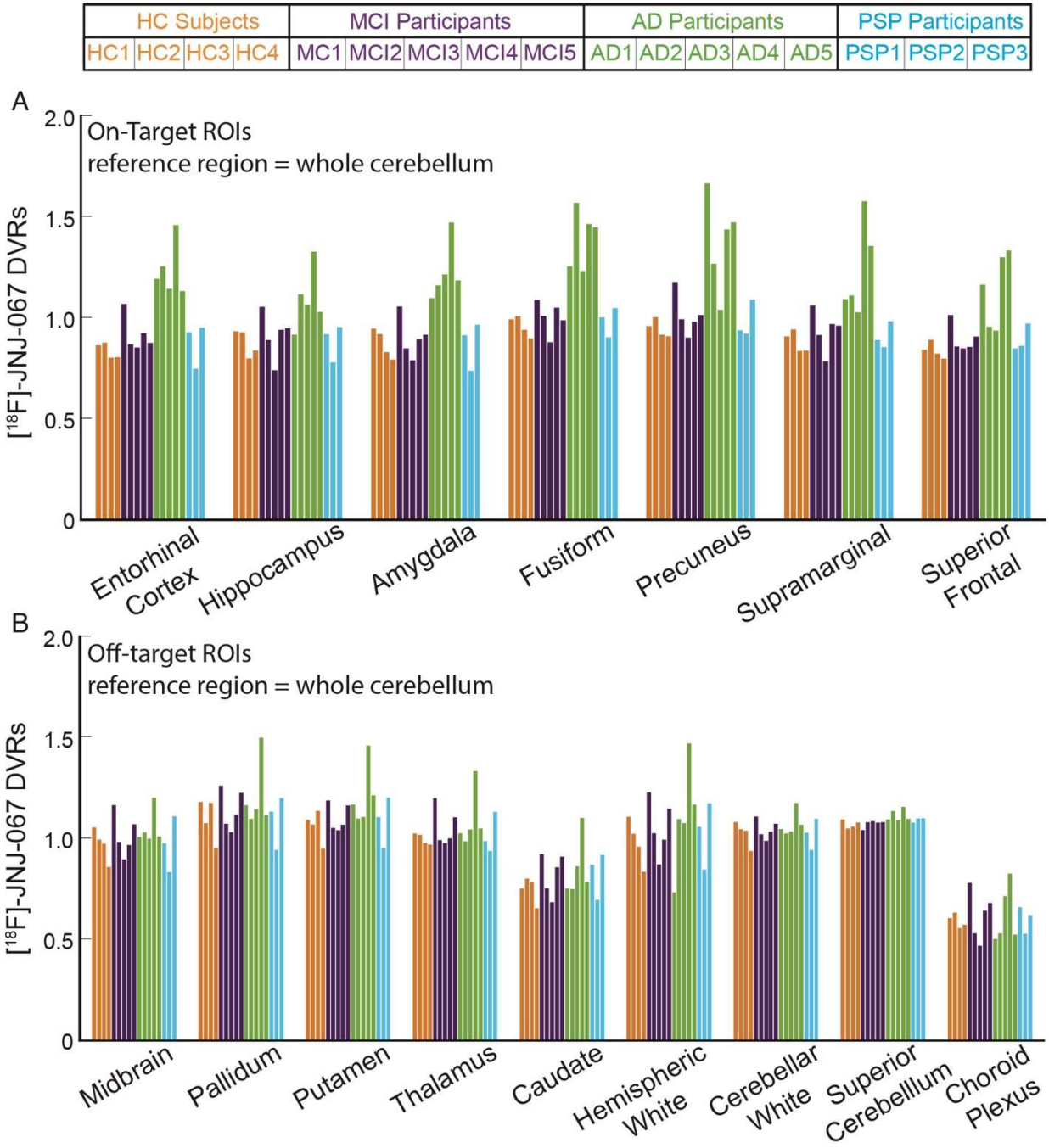


Supplementary Figure 1: DVR and SUVR 70-90 min mean values for Braak I-VI ROIs in healthy controls (orange), MCI (purple) and AD (green) participants where Braak I ROI is entorhinal cortex, Braak II ROI is hippocampus, Braak III ROI is parahippocampal, fusiform, amygdala and lingual cortices, Braak IV ROI is insula, cingulate, middle and inferior temporal cortices and temporal pole, Braak V ROI is frontal, lateral occipital, parietal, superior and transverse temporal, banks of superior temporal sulcus, and precuneus, and Braak VI ROI is primary motor and somatosensory cortex, pericalcarine cortex and cuneus. AD4 participant had to end [^{18}F]-JNJ-067 scan at 67 min and therefore we could not calculate SUVR 70-90 min for that participant.



Supplementary Figure 2: Mean [^{18}F]-JNJ-067 DVR values using inferior cerebellar gray as reference region for all ROIs. ROIs are labeled with Braak region preceding name of ROI. Orange line represents highest DVR value for that ROI within healthy control group.



Supplementary Figure 3: Mean [^{18}F]-JNJ-067 DVR values using whole cerebellum as reference region. Bars are ordered by HC (orange), MCI (purple), AD (green), and PSP (blue) subjects, and ordered within diagnosis group by increasing PIB SUVR index (as in Table 1). A. On-target ROIs and B. Off-target ROIs.

Supplementary Table 1

	DVR reference = inferior cerebellar gray		DVR reference = whole cerebellum	
	AD>HC	**AD>MCI**	**AD>HC**	**AD>MCI**
Braak I ROI				
Entorhinal Cortex	p<0.001	p<0.001	p<0.001	p<0.001
Braak II ROI				
Hippocampus	p=0.01		p<0.01	
Braak III ROIs				
Parahippocampal	p<0.01	p<0.01	p<0.001	p<0.001
Fusiform	p<0.001	p<0.001	p<0.001	p<0.001
Lingual				
Amygdala	p<0.001	p<0.001	p<0.001	p<0.001
Braak IV ROIs				
Caudate anterior cingulate				
Rostral anterior cingulate				
Posterior cingulate	p<0.001	p<0.001	p<0.001	p<0.001
Isthmus cingulate	p<0.001	p<0.01	p<0.001	p<0.001
Insula	p<0.01		p<0.01	
Inferior temporal	p<0.001	p<0.001	p<0.001	p<0.001
Temporal pole	p<0.001	p<0.01	p<0.001	p<0.001
Middle temporal	p<0.001	p<0.001	p<0.001	p<0.001
Braak V ROIs				
Superior frontal	p<0.01	p<0.01	p<0.001	p<0.01
Lateral orbitofrontal	p<0.01	p<0.01	p<0.01	p<0.01
Medial orbitofrontal				
Frontal pole			p<0.01	
Caudal middle frontal	p<0.001	p<0.001	p<0.001	p<0.001
Rostral middle frontal	p<0.001	p<0.01	p<0.001	p<0.001
Pars opercularis	p<0.01	p<0.01	p<0.01	p<0.01
Pars orbitalis	p<0.01	p<0.01	p<0.01	p<0.01
Pars triangularis	p<0.01	p<0.01	p<0.01	p<0.01
Lateral occipital	p<0.01		p<0.01	p<0.01
Supramarginal	p<0.001	p<0.001	p<0.001	p<0.001
Inferior parietal	p<0.001	p<0.001	p<0.001	p<0.001
Superior parietal	p<0.001	p<0.01	p<0.001	p<0.01
Superior temporal	p<0.01	p<0.01	p<0.001	p<0.01
Banks of superior temporal sulcus	p<0.001	p<0.001	p<0.001	p<0.001
Transverse temporal				
Precuneus	p<0.001	p<0.001	p<0.001	p<0.001
Braak VI ROIs				

Pericalcarine				
Cuneus				
Precentral				
Paracentral	$p<0.01$		$p<0.01$	
Postcentral				