

*Supplementary information:*

**<sup>18</sup>F-AV-1451 in Parkinson's Disease with and without dementia and in Dementia with Lewy Bodies.**

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*MRI sequences*

- MPRAGE: 1 x 1 x 1 mm<sup>3</sup>, 176 slices, TR/TE/TI 1900/2.64/900 ms
- FLAIR: 0.7 x 0.7 x 5 mm<sup>3</sup>, 20 % distance, 23 slices, TR/TE/TI 9000/81/2500 ms

*Composite ROIs*

The composite ROIs used for analyses in the manuscript were composed of the following Desikan-Killiany Atlas regions from FreeSurfer 5.3:

*Frontal ROI:* Bilateral superior frontal, rostral middle frontal, caudal middle frontal pars opercularis, pars triangularis, pars orbitalis, lateral orbitofrontal, medial orbitofrontal and frontal poles.

*Medial parietal ROI:* Bilateral precuneus, posterior cingulate and isthmus cingulate.

*Lateral parietal ROI:* Bilateral superior parietal, inferior parietal and supramarginal.

*Inferior temporal ROI:* Bilateral inferior temporal and temporal poles.

*Medial temporal ROI:* Bilateral hippocampus, parahippocampus, entorhinal and fusiform.

*Lateral temporal ROI:* Bilateral banks of the superior temporal sulcus (bankssts), middle temporal, superior and transverse temporal.

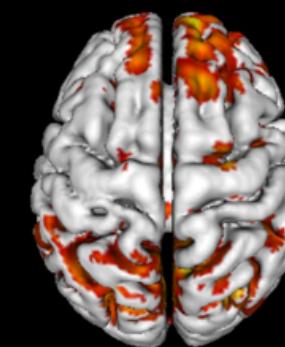
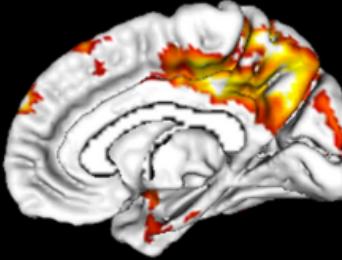
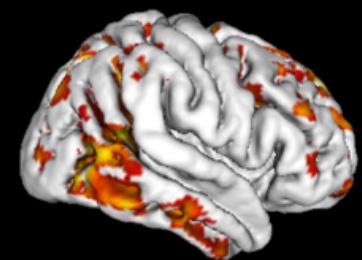
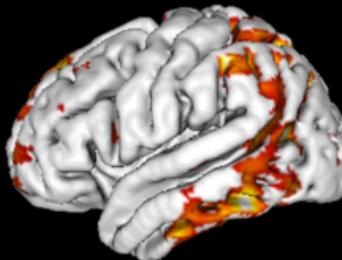
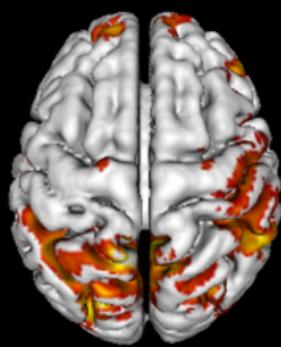
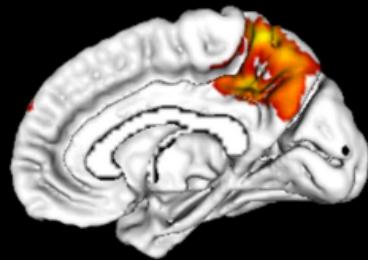
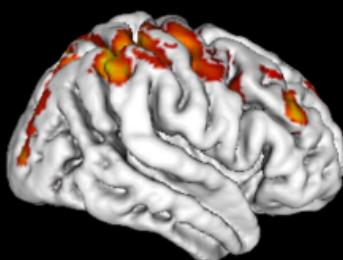
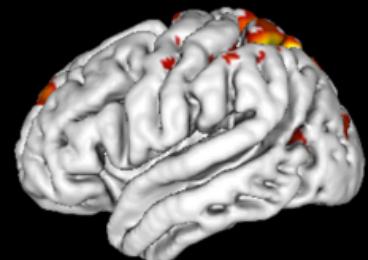
*Occipital ROI:* Bilateral cuneus, lateral occipital, lingual and pericalcarine.

**A**

DLB &gt; HC

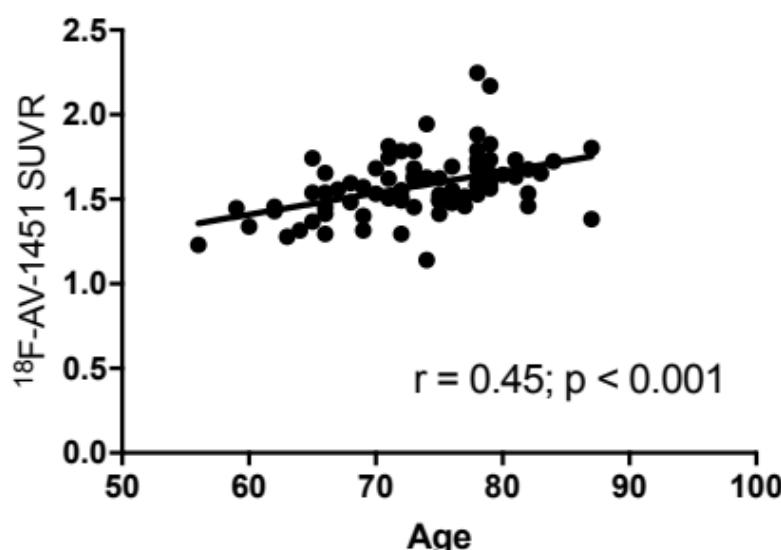
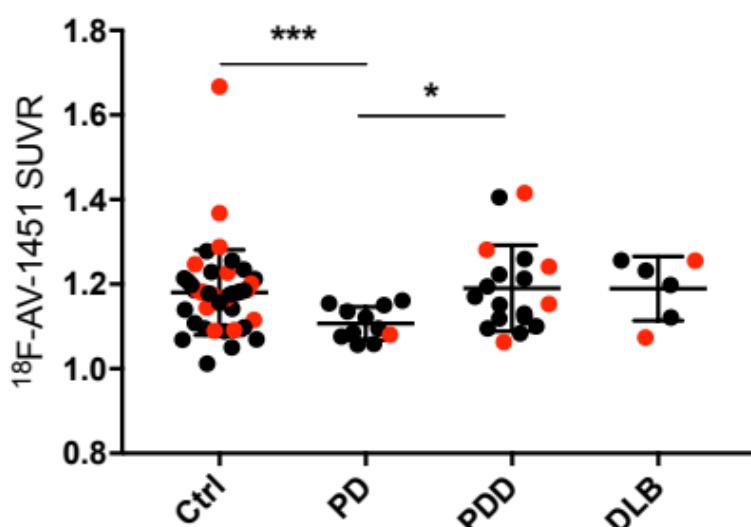
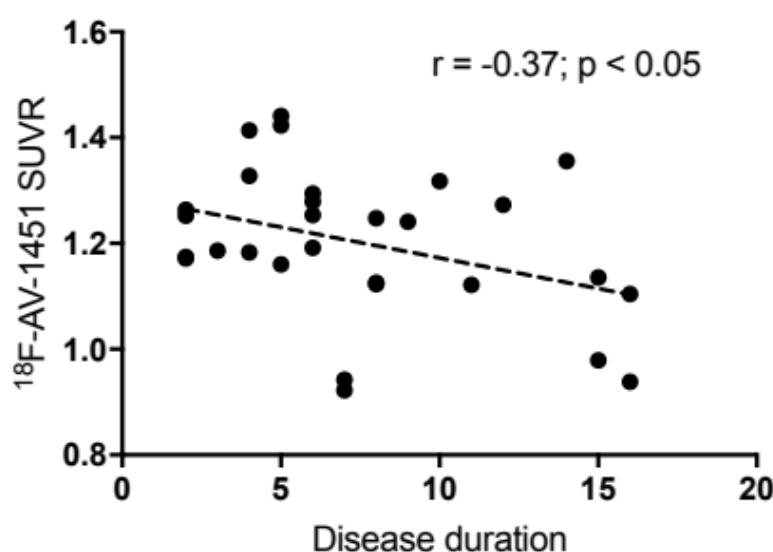
**B**

DLB &gt; PD



All results  $p<0.01$ , uncorr

**Supplementary Figure 1.** Voxel-wise comparisons of DLB and healthy controls (A) and DLB and PD (B) subjects, thresholded at  $p<0.01$ , uncorrected for multiple comparisons.

**A****Globus Pallidus****B****Inferior temporal****C****SN SUVR vs. Disease duration**

**Supplementary Figure 2.** A) Correlation of Globus pallidus SUVR to participant age. B) SUVR-values in the inferior temporal lobe. Red dots represent amyloid positive subjects. \*  $p < 0.05$ ; \*\*\*  $p < 0.001$ . C) Substantia nigra retention versus disease duration in subjects with Parkinson's disease.