



**Supplemental Figure 1. Regions of Interest**

Schematic representation of the region of interest (ROI) template overlaid on an MR image. In white, with their respective labels, are examples of cortical and subcortical ROIs examined in this study. Also shown is the cerebellar cortex ROI used as reference region.

## Appendix 1

### 1. SUVR

Standardized uptake value (SUV), defined as the decay-corrected brain radioactivity concentration, normalized for injected dose and body weight, was calculated for the all sampled regions in the brain. (See Supplementary Fig 1) These SUV were then used to derive the Standardized Uptake Value Ratio (SUVR) using the cerebellar cortex as reference region.

$$\text{SUVR} = \text{SUV}_{\text{Tissue}} / \text{SUV}_{\text{Cb}}$$

### 2. DVR

For the graphical analysis approach, DVR was determined as the slope of the linear section of the plot of:

$$\int_0^T C_{\text{Tissue}}(t) dt / C_{\text{Tissue}}(T) \quad \text{versus} \quad \int_0^T C_{\text{Cb}}(t) dt / C_{\text{Tissue}}(T)$$

where  $C_{\text{Tissue}}$  is the decay corrected PET radioactivity concentration in brain regions and  $C_{\text{Cb}}$  is the decay corrected PET radioactivity concentration in the cerebellar cortex.

### 3. Effect size

Cohen's effect size ( $d$ ), is a statistical index of the difference between two groups. It was calculated as the difference between the group mean values ( $M_1$  and  $M_2$ ) normalized to the pooled standard deviations ( $SD_1$  and  $SD_2$ ) of the two groups. The pooled standard deviation is defined as the root mean square of the two standard deviations.

$$d = [M_1 - M_2] / \sqrt{[(SD_1^2 + SD_2^2) / 2]}$$