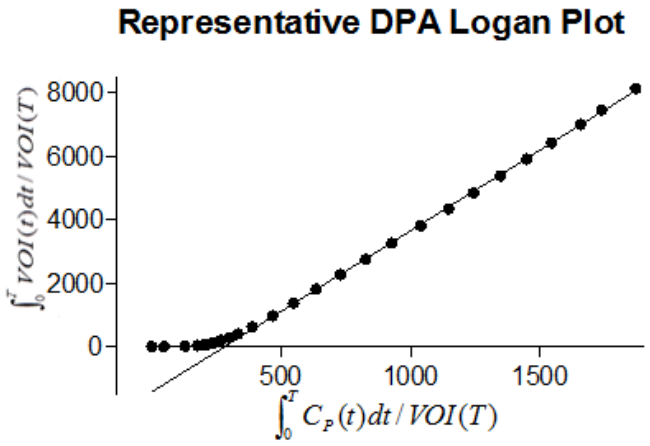
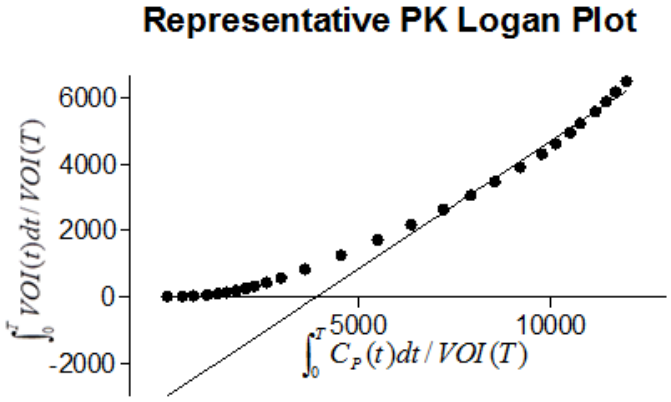
A.

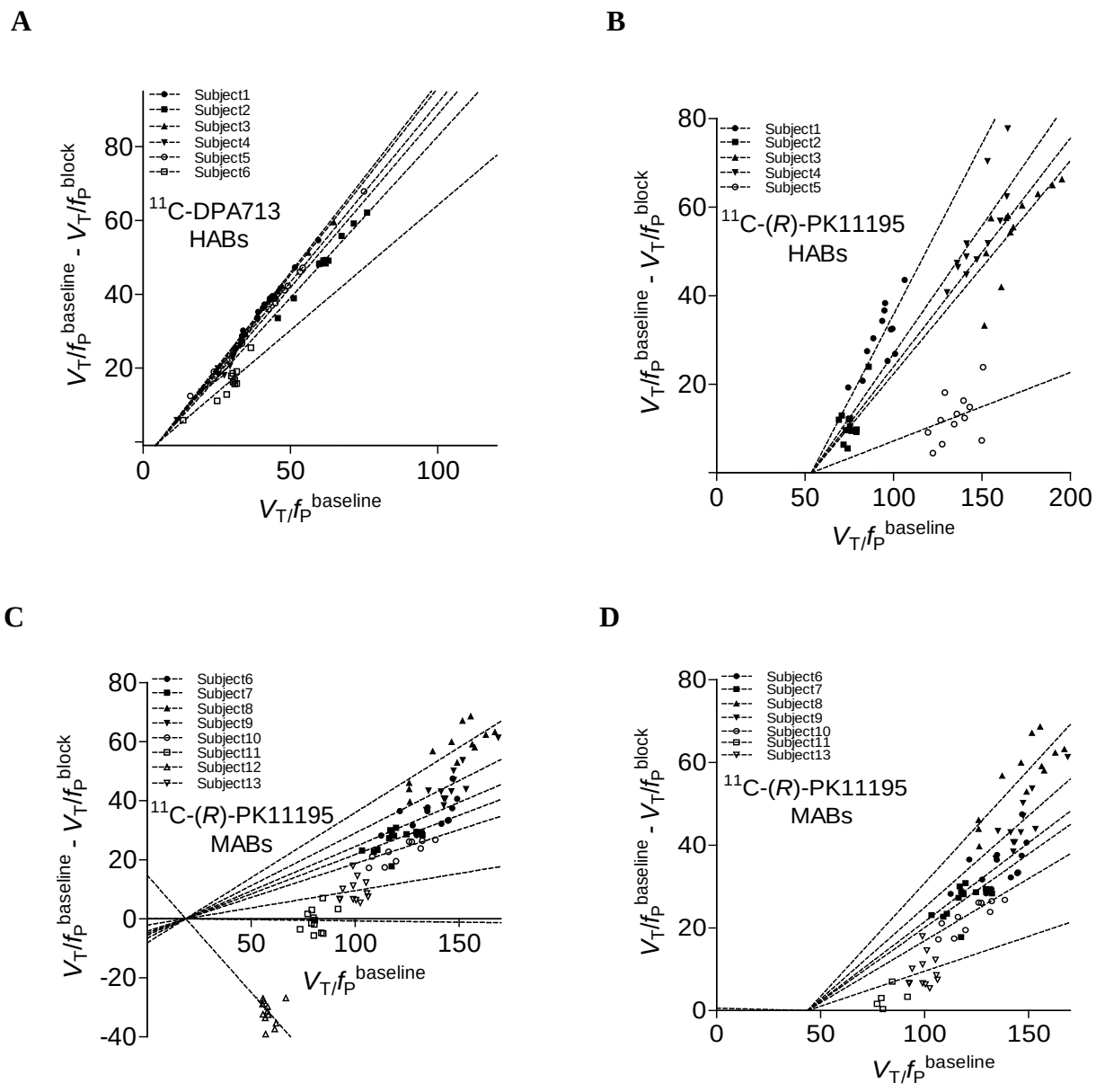


B.



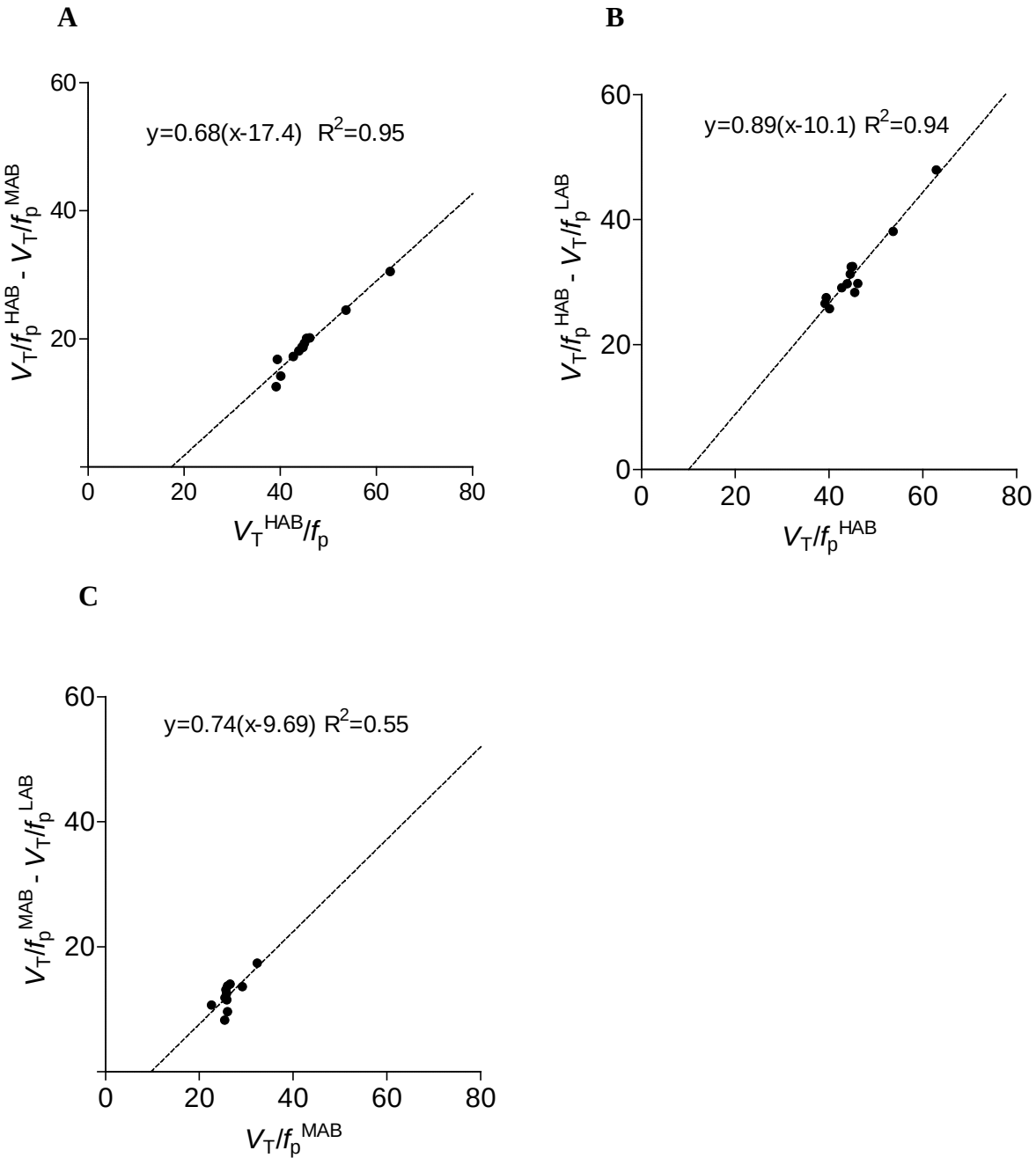
Supplemental Figure 1. Representative Logan plot in frontal cortex for ^{11}C-DPA-713 (A) and ^{11}C-(*R*)-PK11195 (B).

VOI: volume of interest



Supplemental Figure 2. Lassen occupancy plot to determine nondisplaceable uptake (V_{ND}) corrected for plasma free fraction (V_{ND}/f_P) of ^{11}C-DPA-173 in brain of six HABs (A) and ^{11}C-(*R*)-PK11195 in brain of five HABs (B) and eight MABs (C). Each point represents a brain region in an individual subject. Because one MAB (subject #12) showed a paradoxical increase of V_T/f_P after administration of XBD173, V_{ND}/f_P was determined after eliminating this subject (D). The coefficients of determination (R^2) are shown for each relationship.

HABs = high-affinity binders, MABs = mixed-affinity binders, LABs = low-affinity binders.



Supplemental Figure 3. Polymorphism plot to determine a population average of nondisplaceable uptake (V_{ND}) corrected for plasma free fraction (V_{ND} / f_P) of ^{11}C-DPA-713 in 14 HABs, five MABs, and three LABs. The plots were performed for three different combinations of the affinity types. The plots were performed using average V_T / f_P values in each VOI of the same affinity type.

HABs = high-affinity binders, MABs = mixed-affinity binders, LABs = low-affinity binders.

Supplemental Table 1. Injected mass, injected activity, and f_P for baseline scan of ^{11}C-DPA-713 and ^{11}C-(*R*)-PK11195.

Radioligands	^{11}C-DPA-713				^{11}C-(*R*)-PK11195			
	All	HABs	MABs	LABs	All	HABs	MABs	LABs
Injected mass dose (pmol/kg)	104 ± 57	110 ± 61	67 ± 34	124 ± 41	104 ± 71	57 ± 30	134 ± 81	103 ± 48
Injected activity (MBq)	698 ± 95	683± 114	734 ± 10	731± 16	669 ± 39	690 ± 67	662 ± 12	661 ± 29
f_p (%)	8.0 ± 2.2	8.4 ± 2.7	7.4 ± 1.4	7.8 ± 0.8	0.7 ± 0.2	0.7 ± 0.1	0.7 ± 0.3	0.6 ± 0.1

HABs = high-affinity binders, MABs = mixed-affinity binders, LABs = low-affinity binders. Data are mean ± SD.

Supplemental Table 2. Plasma free fraction (f_P) in baseline and blocked scans

Parameters	^{11}C-DPA-713		^{11}C-(*R*)-PK11195	
	Base	Block	Base	Block
f_p^{HAB} (%)	8.4 ± 2.7	7.7 ± 0.5	0.62 ± 0.10	0.74 ± 0.04
f_p^{MAB} (%)	7.4 ± 1.4	N/A	0.72 ± 0.38	0.71 ± 0.12
f_p^{LAB} (%)	7.8 ± 0.8	N/A	0.62 ± 0.07	0.67 ± 0.14
f_p^{All} (%)	8.0 ± 2.2	7.7 ± 0.5	0.67 ± 0.27	0.71 ± 0.10

Supplemental Table 3. Total distribution volume, non-displaceable uptake, and non-displaceable binding potential of ^{11}C-DPA-713 and ^{11}C-(*R*)-PK11195 normalized for f_p in whole brain obtained through occupancy plot.

Parameters	^{11}C-DPA-713	^{11}C-(*R*)-PK11195
V_T^{HAB}/f_p (mL/cm^3)	46.4 ± 19.0	124 ± 39
V_T^{MAB}/f_p (mL/cm^3)	26.4 ± 3.1	114 ± 32
V_T^{LAB}/f_p (mL/cm^3)	14.0 ± 4.8	89 ± 27
V_{ND} (mL/cm^3)	5.43 (4.20-6.67)	53.7 (38.7-68.7)
BP_{ND}^{HAB}	7.36 ± 2.28	1.31 ± 0.73