Supplemental Material

for "[^{11}C]PBR28 radiotracer kinetics are not driven by alterations in cerebral blood flow"

by Christin Y Sander et al. in the Journal of Cerebral Blood Flow and Metabolism

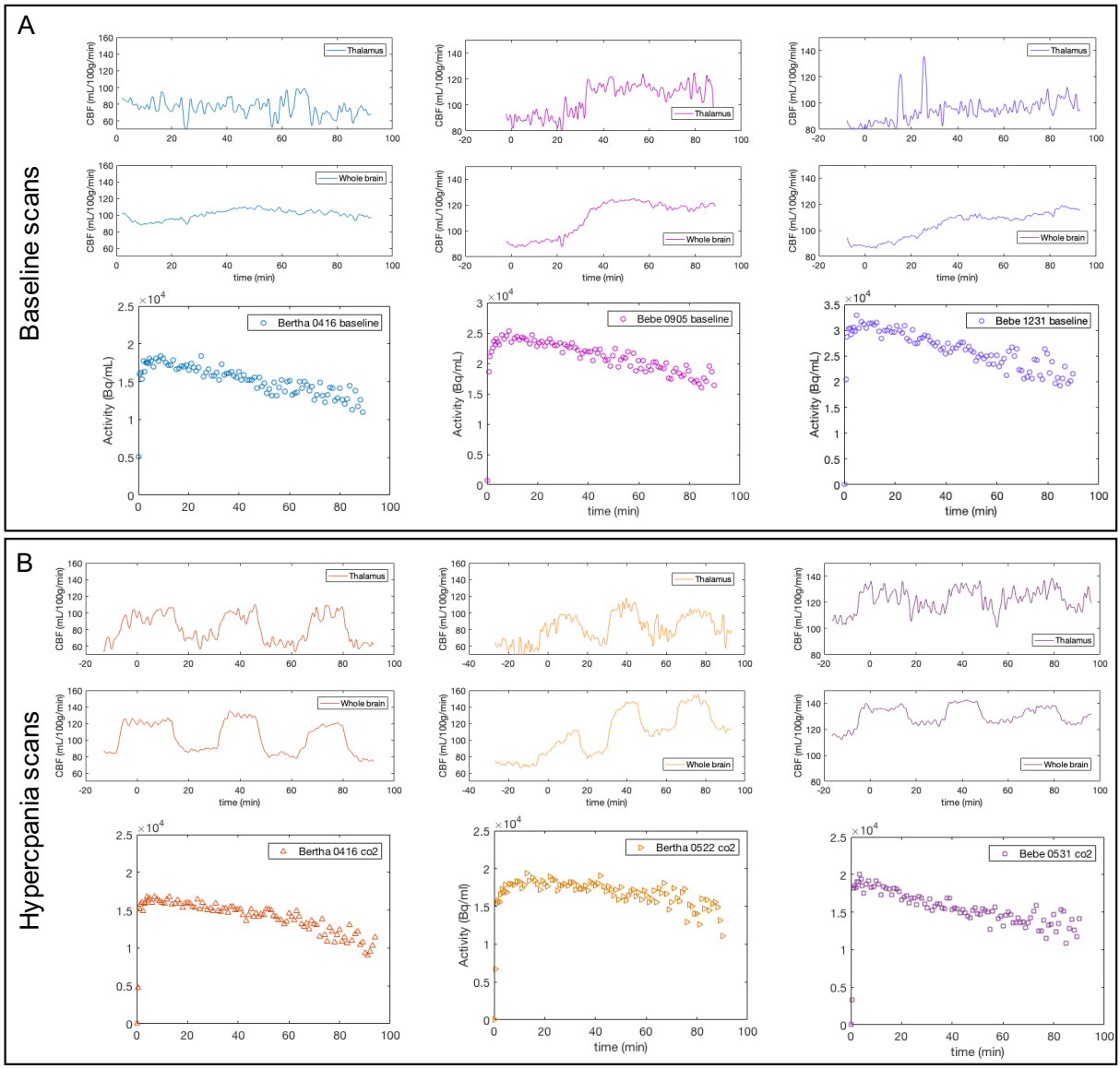

Figure S1: Timecourses of cerebral blood flow measurements (CBF) in thalamus and whole brain together with simultaneously acquired [^{11}C]PBR28 time activity curves in thalamus for baseline *(A)* and hypercapnia scans *(B)* shown for each of the three sessions in two animals. During the hypercapnia scans *(B)*, intervals of alternating induced high vs. low CBF are clearly visible without any changes in the corresponding time activity curves.

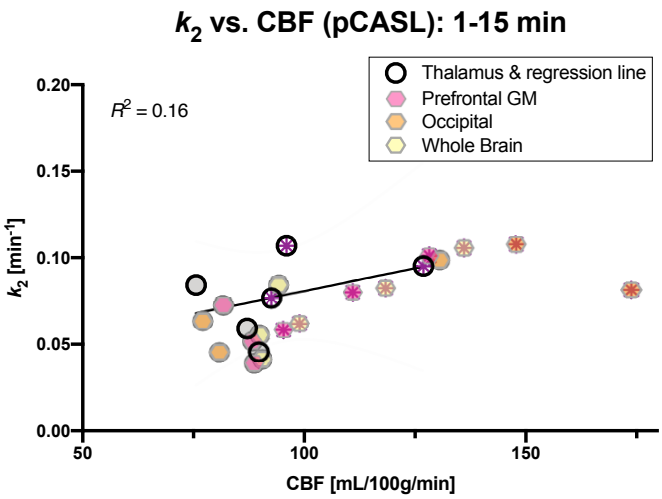

Figure S2: Comparison between the tissue-to-plasma rate constant k_2 and cerebral blood flow from the first 15 min of [^{11}C]PBR28 acquisition in the non-human primates. Datapoints with a star denote hypercapnia sessions. A linear regression between the tissue-to-plasma rate constant k_2 and cerebral blood flow (CBF) did not show evident correlations (regression line displayed for the thalamus).

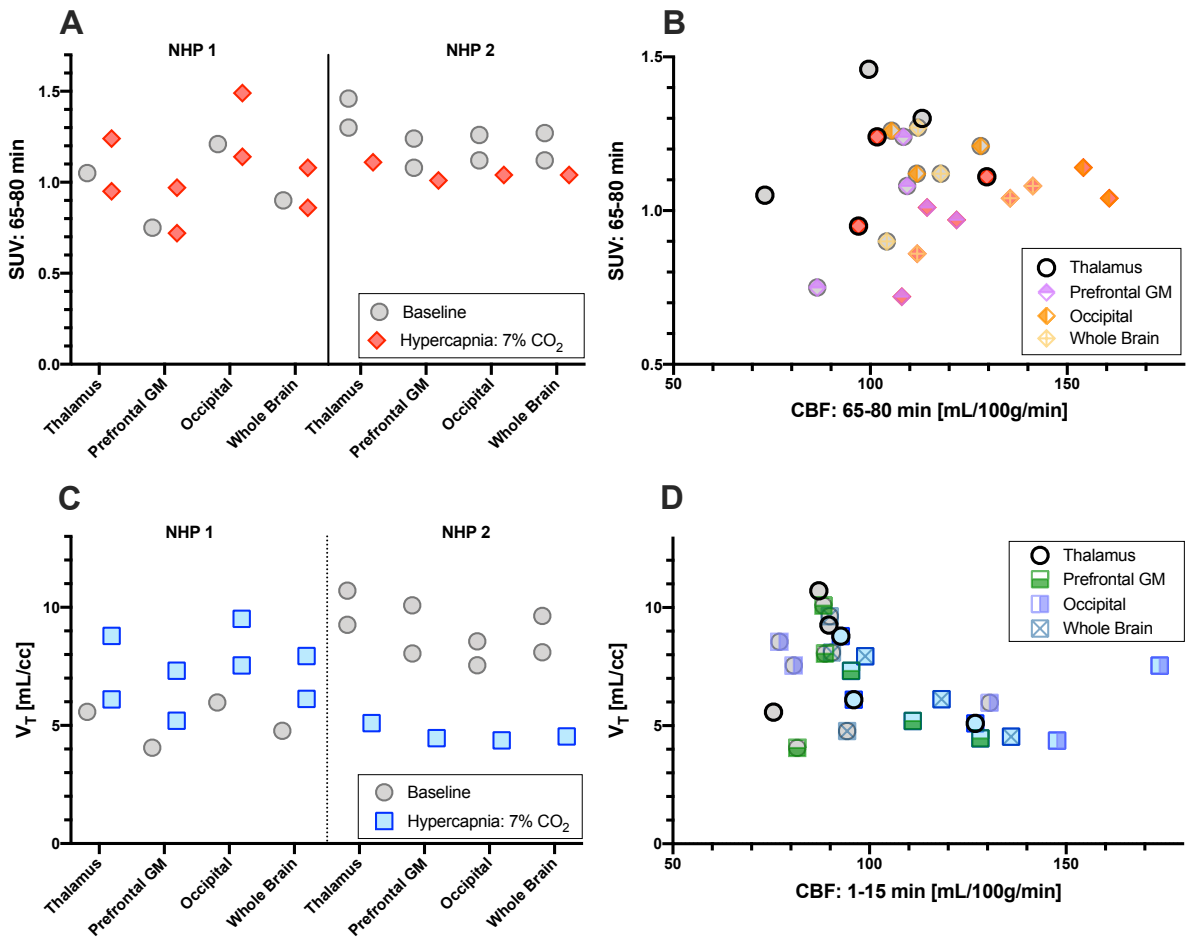

Figure S3: *(A)* Absolute standard uptake values (SUV) for the 65-80 min scan interval show small variations but no consistent pattern between baseline and hypercapnia conditions. *(B)* Linear regressions between SUV and cerebral blood flow (CBF) from the 65-80 min scan interval do not show evident correlation in any of the regions. *(C)* The volume of distribution outcome measure also shows variations between sessions, but no systematic differences for baseline vs. hypercapnia conditions. *(D)* The volume of distribution shows a small negative correlation to CBF from the first 1-15 min scan interval in all regions, which is of opposite sign compared to an expected increase in CBF. This may be driven by the variability in volume of distribution values; a larger sample size is needed for statistical inference.