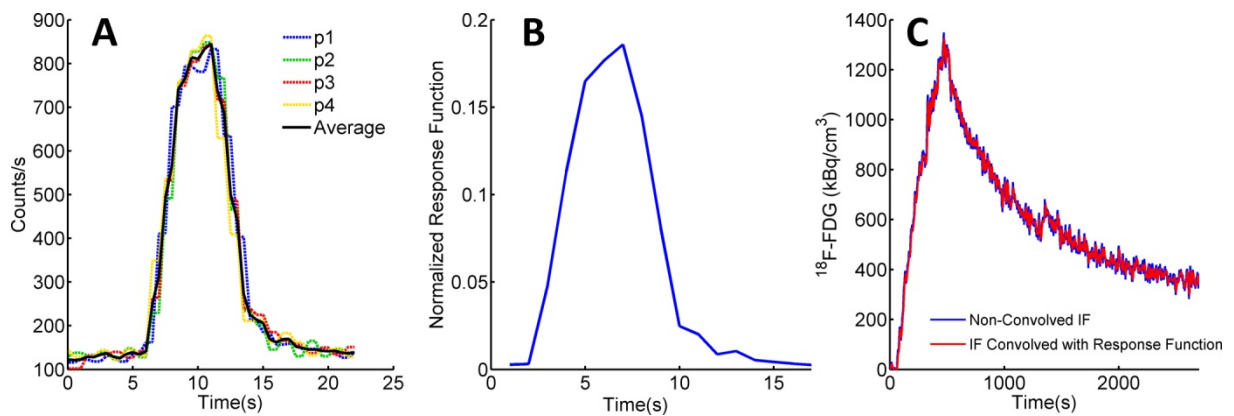


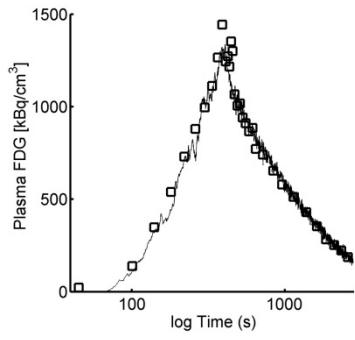
Supplemental Figure 1. PET/CT of a mouse head after application of 11 MBq FDG.

PET data were averaged from 0 to 45 min. The skull visible on CT (white) was used as an additional landmark in the delineation of the cerebrum VOI. Note the inhomogeneous FDG uptake that could result in differences in  $CMR_{glc}$  depending on the choice of region of interest. Coronal and transversal sections.



Supplemental Figure 2. Dispersion measurements with the coincidence counter.

**(A)** Step-function responses of 5 s duration were measured and averaged. **(B)** Normalized (integral = 1) average response (NRF) to a 5sec-step function simulating the response function to an input. **(C)** Convolution of an experimental IF with the NRF did not result in major deviations from the experimental IF. The experimental IF was used as a surrogate for an IF without dispersion here.



Supplemental Figure 3. Image-derived input function (squares) and counter input function (line) from Figure 2 with logarithmic time scale.