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| **eTable1 1. Correlation between BPND of [11C]-PK11195 in various brain regions with symptom severity scores in QFS patients, CFS patients, and HC** |
| **QFS** |
| **Brain Region** | **BDI-PC** | **CDC Complaints** | **CIS Fatigue** | **SIP-8** |
| **Brainstem** | 0.17 | 0.66\* | 0.17 | 0.43 |
| **Orbitofrontal cortex** | 0.03 | 0.46 | 0.70\* | 0.49 |
| **Middle frontal gyrus** | 0.34 | 0.39 | 0.83\*\* | 0.39 |
| **Straight frontal gyrus** | 0.00 | 0.59 | 0.45 | 0.50 |
| **Inferior frontal gyrus** | 0.10 | 0.21 | 0.78\*\* | 0.39 |
| **Superior frontal gyrus** | 0.08 | 0.47 | 0.64\* | 0.54 |
| **Primary motor cortex** | 0.16 | 0.44 | 0.74\* | 0.43 |
| **Rostral anterior cingulate** | 0.01 | 0.61 | 0.56 | 0.48 |
| **Caudal anterior cingulate** | 0.13 | 0.64\* | 0.46 | 0.52 |
| **Posterior cingulate** | 0.07 | 0.57 | 0.27 | 0.45 |
| **Insula** | 0.92 | 0.65\* | 0.47 | 0.48 |
| **Hippocampus** | 0.03 | 0.60 | 0.27 | 0.38 |
| **Amygdala** | 0.04 | 0.71\* | 0.21 | 0.51 |
| **Temporal lobe** | 0.02 | 0.35 | 0.78\*\* | 0.40 |
| **Primary somatosensory cortex** | 0.30 | 0.38 | 0.83\*\* | 0.37 |
| **Parietal lobe** | 0.21 | 0.42 | 0.77\*\* | 0.36 |
| **Occipital lobe** | -0.02 | 0.47 | 0.53 | 0.37 |
| **Caudate nucleus** | -0.37 | 0.17 | 0.08 | -0.12 |
| **Nucleus accumbens** | 0.08 | 0.56 | 0.34 | 0.44 |
| **Lentiform nucleus** | 0.05 | 0.62 | 0.39 | 0.42 |
| **Thalamus** | 0.06 | 0.54 | 0.21 | 0.36 |
| **Cerebellum** | 0.09 | 0.54 | 0.37 | 0.40 |
| **Midbrain** | 0.08 | 0.57 | 0.11 | 0.34 |
| **Pons** | 0.20 | 0.69\* | 0.17 | 0.39 |

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| **CFS** |
| **Brain Region** | **BDI-PC** | **CDC Complaints** | **CIS Fatigue** | **SIP-8** |
| **Brainstem** | 0.16 | -0.38 | -0.24 | 0.01 |
| **Orbitofrontal cortex** | 0.05 | -0.30 | -0.38 | -0.24 |
| **Middle frontal gyrus** | 0.09 | -0.38 | -0.45 | -0.20 |
| **Straight frontal gyrus** | 0.06 | -0.27 | -0.30 | -0.18 |
| **Inferior frontal gyrus** | 0.09 | -0.31 | -0.42 | -0.25 |
| **Superior frontal gyrus** | 0.07 | -0.35 | -0.49 | -0.20 |
| **Primary motor cortex** | 0.03 | -0.38 | -0.51 | -0.24 |
| **Rostral anterior cingulate** | 0.21 | -0.52 | -0.40 | -0.21 |
| **Caudal anterior cingulate** | 0.22 | -0.40 | -0.41 | -0.30 |
| **Posterior cingulate** | 0.14 | -0.43 | -0.47 | -0.30 |
| **Insula** | 0.18 | -0.42 | -0.36 | -0.19 |
| **Hippocampus** | 0.15 | -0.36 | -0.25 | -0.18 |
| **Amygdala** | 0.18 | -0.34 | -0.23 | -0.13 |
| **Temporal lobe** | 0.04 | -0.38 | -0.40 | -0.13 |
| **Primary somatosensory cortex** | 0.01 | -0.41 | -0.51 | -0.24 |
| **Parietal lobe** | -0.00 | -0.47 | -0.54 | -0.16 |
| **Occipital lobe** | 0.01 | -0.49 | -0.48 | -0.12 |
| **Caudate nucleus** | 0.07 | -0.73\* | -0.78\* | -0.27 |
| **Nucleus accumbens** | 0.12 | -0.45 | -0.39 | -0.14 |
| **Lentiform nucleus** | 0.11 | -0.41 | -0.35 | -0.07 |
| **Thalamus** | 0.20 | -0.59 | -0.46 | -0.05 |
| **Cerebellum** | -0.03 | -0.33 | -0.42 | -0.07 |
| **Midbrain** | 0.05 | -0.48 | -0.41 | 0.05 |
| **Pons** | -0.08 | -0.18 | -0.19 | 0.22 |

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| **HC** |
| **Brain Region** | **BDI-PC** | **CDC Complaints** | **CIS Fatigue** | **SIP-8** |
| **Brainstem** | - | -0.14 | 0.43 | - |
| **Orbitofrontal cortex** | - | -0.12 | 0.37 | - |
| **Middle frontal gyrus** | - | -0.03 | 0.51 | - |
| **Straight frontal gyrus** | - | -0.19 | 0.32 | - |
| **Inferior frontal gyrus** | - | -0.02 | 0.53 | - |
| **Superior frontal gyrus** | - | -0.02 | 0.53 | - |
| **Primary motor cortex** | - | -0.03 | 0.55 | - |
| **Rostral anterior cingulate** | - | -0.14 | 0.39 | - |
| **Caudal anterior cingulate** | - | -0.08 | 0.39 | - |
| **Posterior cingulate** | - | -0.10 | 0.41 | - |
| **Insula** | - | -0.42 | 0.48 | - |
| **Hippocampus** | - | -0.14 | 0.43 | - |
| **Amygdala** | - | -0.10 | 0.46 | - |
| **Temporal lobe** | - | -0.08 | 0.46 | - |
| **Primary somatosensory cortex** | - | 0.01 | 0.52 | - |
| **Parietal lobe** | - | 0.00 | 0.54 | - |
| **Occipital lobe** | - | -0.01 | 0.51 | - |
| **Caudate nucleus** | - | 0.11 | 0.67 | - |
| **Nucleus accumbens** | - | -0.21 | 0.26 | - |
| **Lentiform nucleus** | - | -0.08 | 0.43 | - |
| **Thalamus** | - | -0.06 | 0.42 | - |
| **Cerebellum** | - | -0.12 | 0.46 | - |
| **Midbrain** | - | -0.08 | 0.45 | - |
| **Pons** | - | -0.10 | 0.46 | - |

Table showing correlations between BPND of [11C]-PK11195 in various brain with symptom severity scores in CFS patients and QFS patients. A Pearson correlation was used.

Abbreviations: *BPND* = non-displaceable binding potential; *QFS* = Q fever fatigue syndrome; CFS = chronic fatigue syndrome; *HC* = healthy controls; *BDI-PC* = Beck Depression Inventory for Primary Care; *CDC* = Centers for Disease Control; *CIS* = Checklist Individual Strength; *SIP-8* = Sickness Impact Profile-8.

\* *P* < 0.05.

\*\* *P* < 0.01.