

## Supplementary Table 1. Regions of activation in the PFC (within-group)

### Downregulation: Healthy adults, k = 264, t-crit = 2.98

Cluster 1: 1774 voxels, peak at (-16 52 32), t = 8.25, z = 1.47, p < 0.001

Label	Voxels	mean T
brodmann area 45	180	4.17
brodmann area 47	294	3.71
brodmann area 11	31	3.68
brodmann area 8	16	3.65
brodmann area 9	195	3.60
brodmann area 32	134	3.48
brodmann area 10	228	3.43

Cluster 2: 1517 voxels, peak at (48 26 4), t = 6.18, z = 1.54, p < 0.001

Label	Voxels	mean T
brodmann area 47	185	3.58
brodmann area 45	137	4.15
brodmann area 46	11	4.01

### Downregulation: Bipolar disorder, k = 286, t-crit = 3.05

Cluster 1: 1512 voxels, peak at (-50 24 -6), t = 7.31, z = 1.67, p < 0.001

Label	Voxels	mean T
brodmann area 47	210	3.85
brodmann area 45	112	3.64
brodmann area 44	30	3.50
brodmann area 46	11	3.27

Cluster 2: 1495 voxels, peak at (50 38 -12), t = 6.39, z = 1.99, p < 0.001

Label	Voxels	mean T
brodmann area 47	195	4.16
brodmann area 45	121	3.69
brodmann area 46	25	3.27
brodmann area 11	22	4.25

Cluster 3: 537 voxels, peak at (6 44 34), t = 5.56, z = 1.29, p = 0.001

Label	Voxels	mean T
brodmann area 9	199	3.81
brodmann area 32	19	3.60
brodmann area 8	17	3.16
brodmann area 10	8	3.33
brodmann area 6	3	3.40

### Upregulation: Healthy adults: k = 319, t-crit = 2.98

Cluster 1: 1056 voxels, peak at (-14 10 62), t = 5.26, z = 1.32, p < 0.001

Label	Voxels	mean T
brodmann area 6	345	3.45
brodmann area 8	58	3.29

Cluster 2: 676 voxels, peak at (-46 32 -6), t = 4.17, z = 1.22, p < 0.001

Label	Voxels	mean T
brodmann area 47	71	3.37
brodmann area 44	21	3.08
brodmann area 45	15	3.25

### Upregulation: Bipolar disorder, k = 274, t-crit = 3.05

Cluster 1: 2756 voxels, peak at (-44 10 50), t = 8.78, z = 1.26, p < 0.001

Label	Voxels	mean T
brodmann area 47	266	4.03
brodmann area 6	194	3.92
brodmann area 9	103	3.53
brodmann area 45	52	3.42
brodmann area 13	39	3.27
brodmann area 8	29	4.37
brodmann area 46	9	3.82

Cluster 2: 481 voxels, peak at (-4 60 26), t = 4.67, z = 1.75, p = 0.002

Label	Voxels	mean T
brodmann area 9	168	3.55
brodmann area 10	48	3.60
brodmann area 32	13	3.28

Cluster 3: 296 voxels, peak at (52 26 0), t = 4.25, z = 1.80, p = 0.034

Label	Voxels	mean T
brodmann area 47	41	3.51
brodmann area 45	38	3.54

### Upregulation: Schizophrenia, k = 261, t-crit = 3.11

Cluster 1: 354 voxels, peak at (-42 -6 38), t = 4.41, z = 1.01, p = 0.007

Label	Voxels	mean T
brodmann area 6	84	4.44
brodmann area 44	23	3.34
brodmann area 9	9	4.08

List of significant clusters and associated Brodmann regions with a mean T-value greater than the t-critical (FWER  $p < 0.05$ )