### Supplementary Table 1. PMDD group and HC group depression mood subtract neutral frontal mid-back picture condition t-test activation differential area.

| Central position | MNI coordinate | Voxel | t   | BA |
|------------------|----------------|-------|-----|----|
| the middle frontal gyrus | -30 48 -12 | 588   | 3.321 | 11 |
| middle gyrus      | 39 42 -15 | 957   | 3.963 | 47 |
| cingulate gyrus   | -6 -24 30  | 1072  | 4.154 | 23 |

Note: PMDD, premenstrual dysphoric disorder; HC, healthy control; MNI, Montreal Neurological Institute; BA, Brodmann area.

### Supplementary Table 2. PMDD group and HC group anger mood subtract neutral frontal mid-back picture condition t-test activation differential area.

| Brain region           | MNI coordinates | Voxel | t    | BA |
|------------------------|-----------------|-------|------|----|
| Superior frontal gyrus | 24 42 51        | 225   | -3.4197 | 8  |
| Middle frontal gyrus   | -42 45 0        | 188   | 2.8693 | 10 |
| paracentral lobule     | -6 -33 60       | 142   | -3.1293 | 6  |
| Precuneus              | -9 -57 45       | 730   | -3.6001 | 7  |
| Temporal lobe          | 72 -30 6        | 138   | 2.4814 | 42 |
| Right cerebellum       | 24 -39 -21      | 185   | -2.8195 | 48 |
| Left cerebellum        | -21 -57 -18     | 200   | 2.9857 | 37 |

Note: PMDD, premenstrual dysphoric disorder; HC, healthy control; MNI, Montreal Neurological Institute; BA, Brodmann area.