

Fig. S1. Surface maps for all human and monkey seeds (thresholded at voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ). While the surface maps allow for a swift perusal of the general trends, it is recommended to use the slice maps presented in Figs. S2 and S3 for greater anatomical specificity.

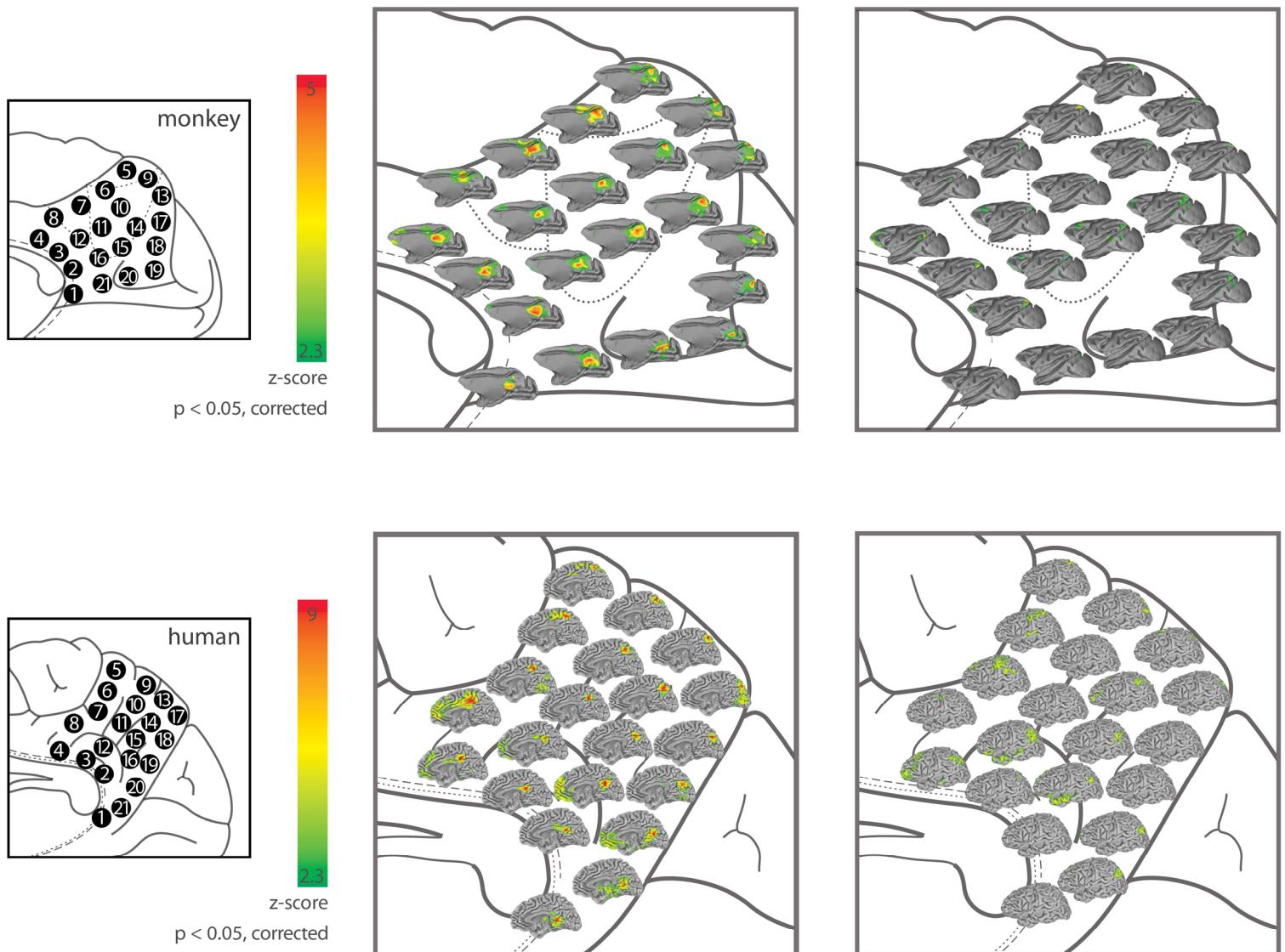
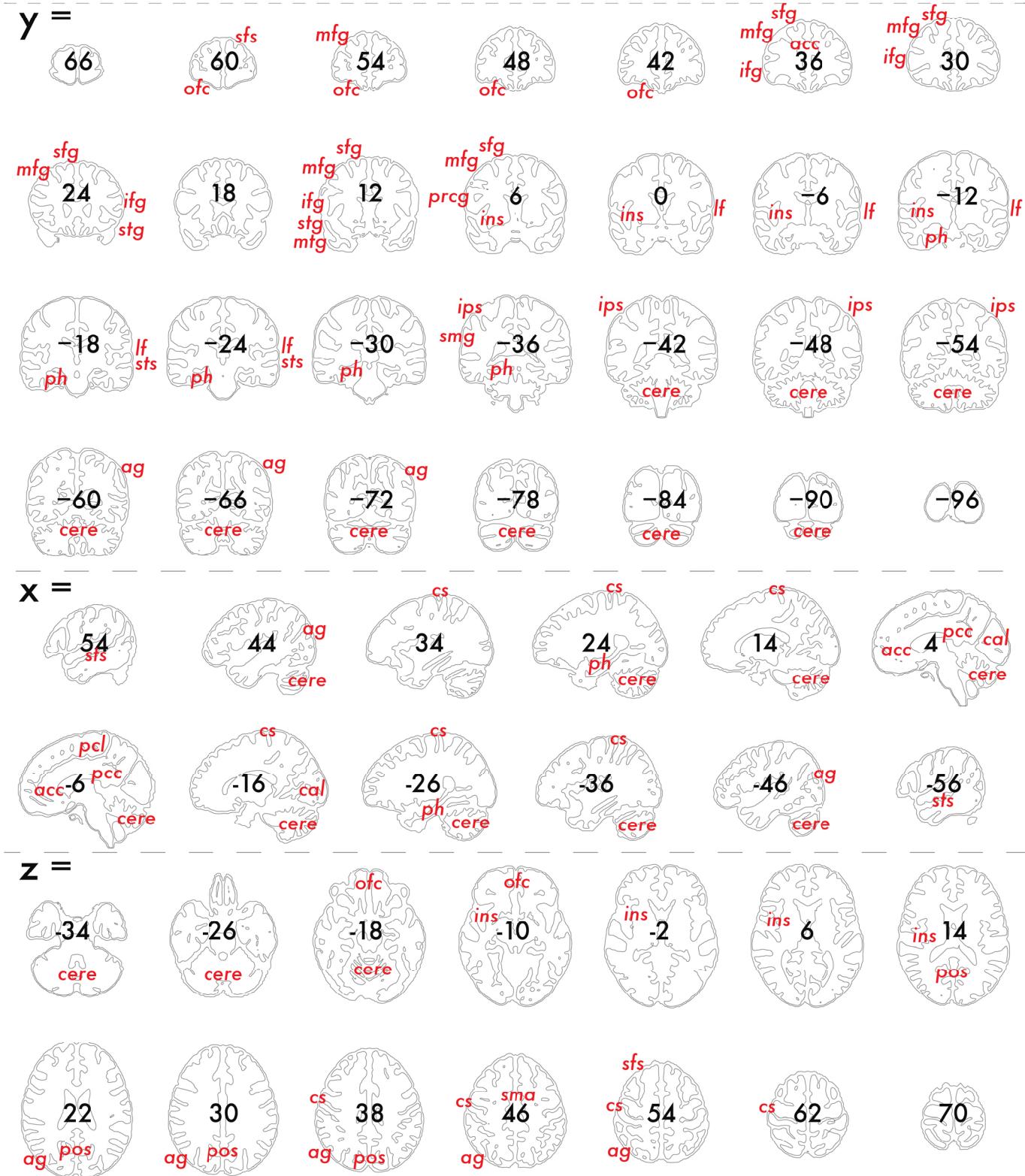
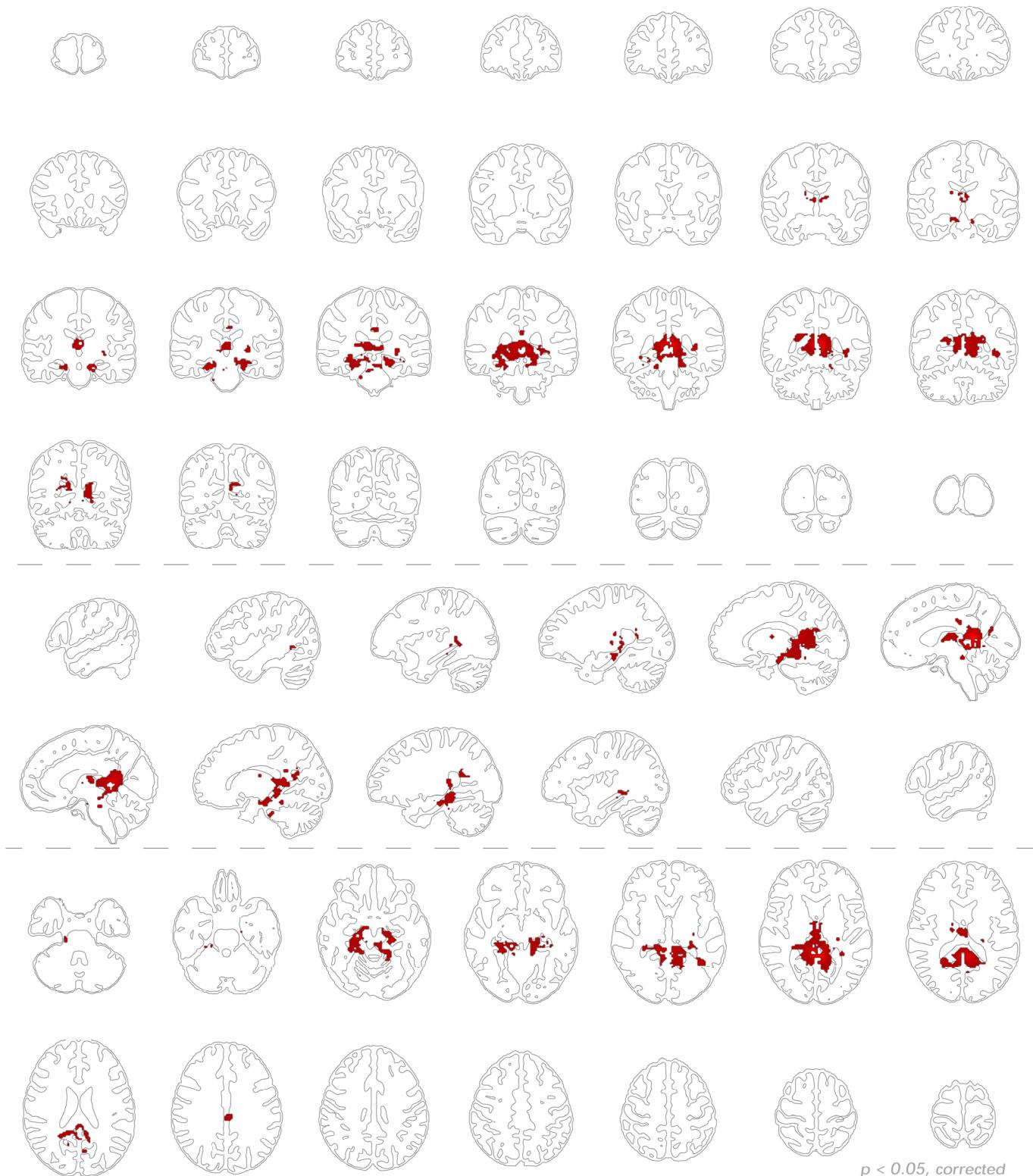
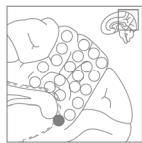


Fig. S2. Individual slice maps for each human seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score, >2.3; cluster corrected at P < 0.05) voxels superimposed. The first map is a figure legend depicting standard MNI152 slice coordinates and major anatomical landmarks. acc, anterior cingulate; ag, angular gyrus; cal, calcarine fissure; cs, central sulcus; cere, cerebellum; ifg, inferior frontal gyrus; ifs, inferior frontal sulcus; ins, insula; ips, intraparietal sulcus; itg, inferior temporal gyrus; its, inferior temporal sulcus; lf, lateral fissure; mfg, middle frontal gyrus; ofc, orbitofrontal cortex; pos, parieto-occipital sulcus; pcc, posterior cingulate; pcl, paracentral lobule; pocs, postcentral sulcus; prcg, precentral gyrus; prcs, precentral sulcus; ph, parahippocampal gyrus; sf, sylvian fissure; sfg, superior frontal gyrus; sfs, superior frontal sulcus; sma, supplementary motor area; smg, supramarginal gyrus; stg, superior temporal gyrus; sts, superior temporal sulcus.

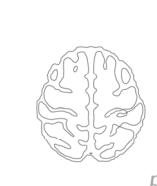
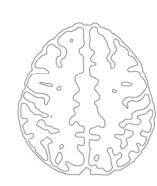
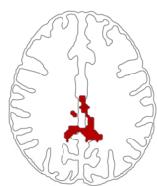
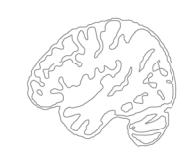
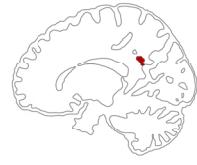
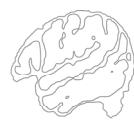
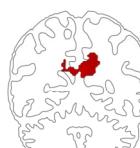
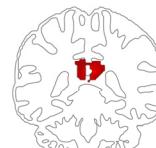
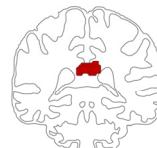
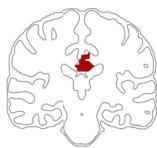
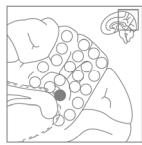


# Human Seed 1



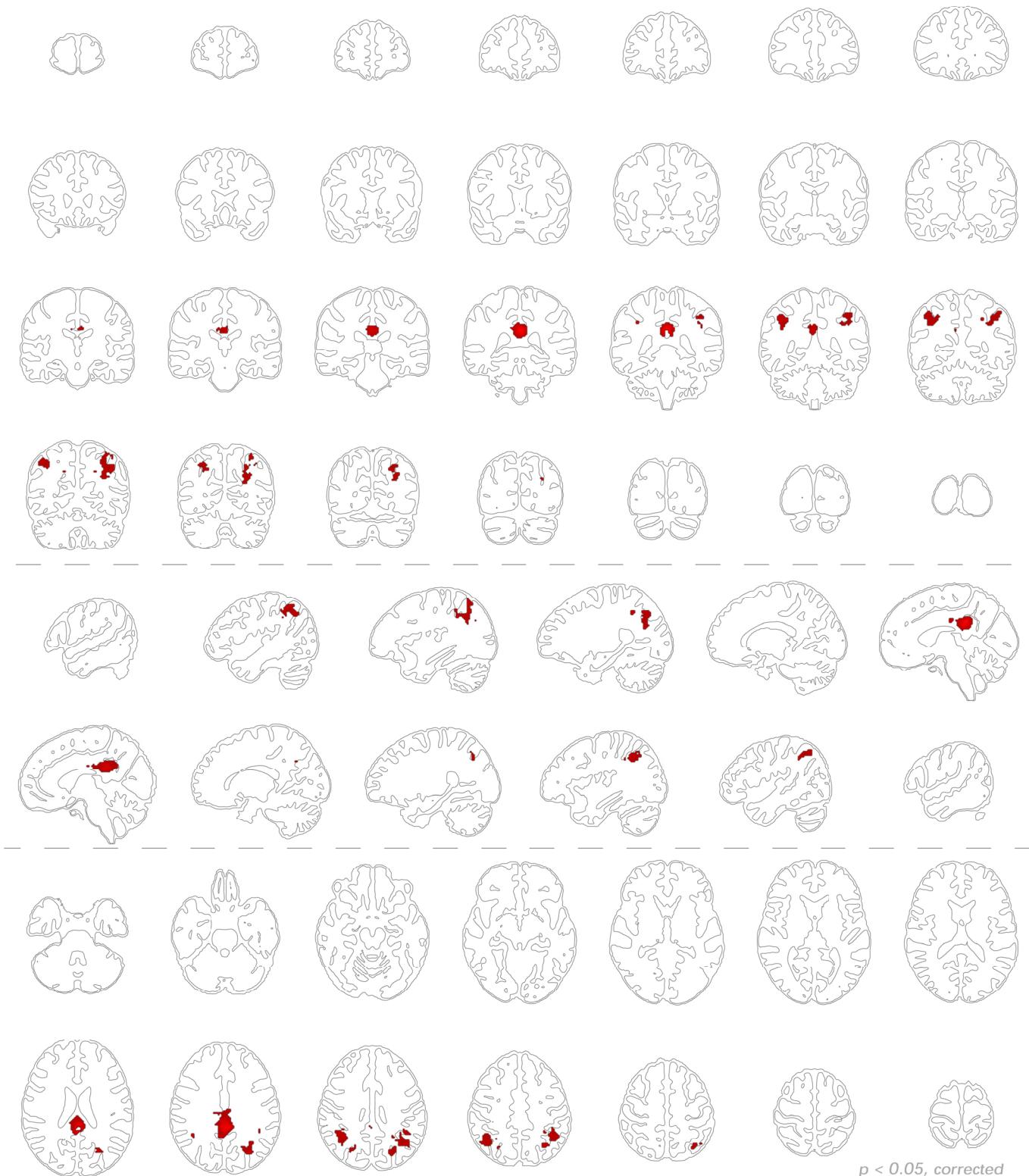
$p < 0.05$ , corrected

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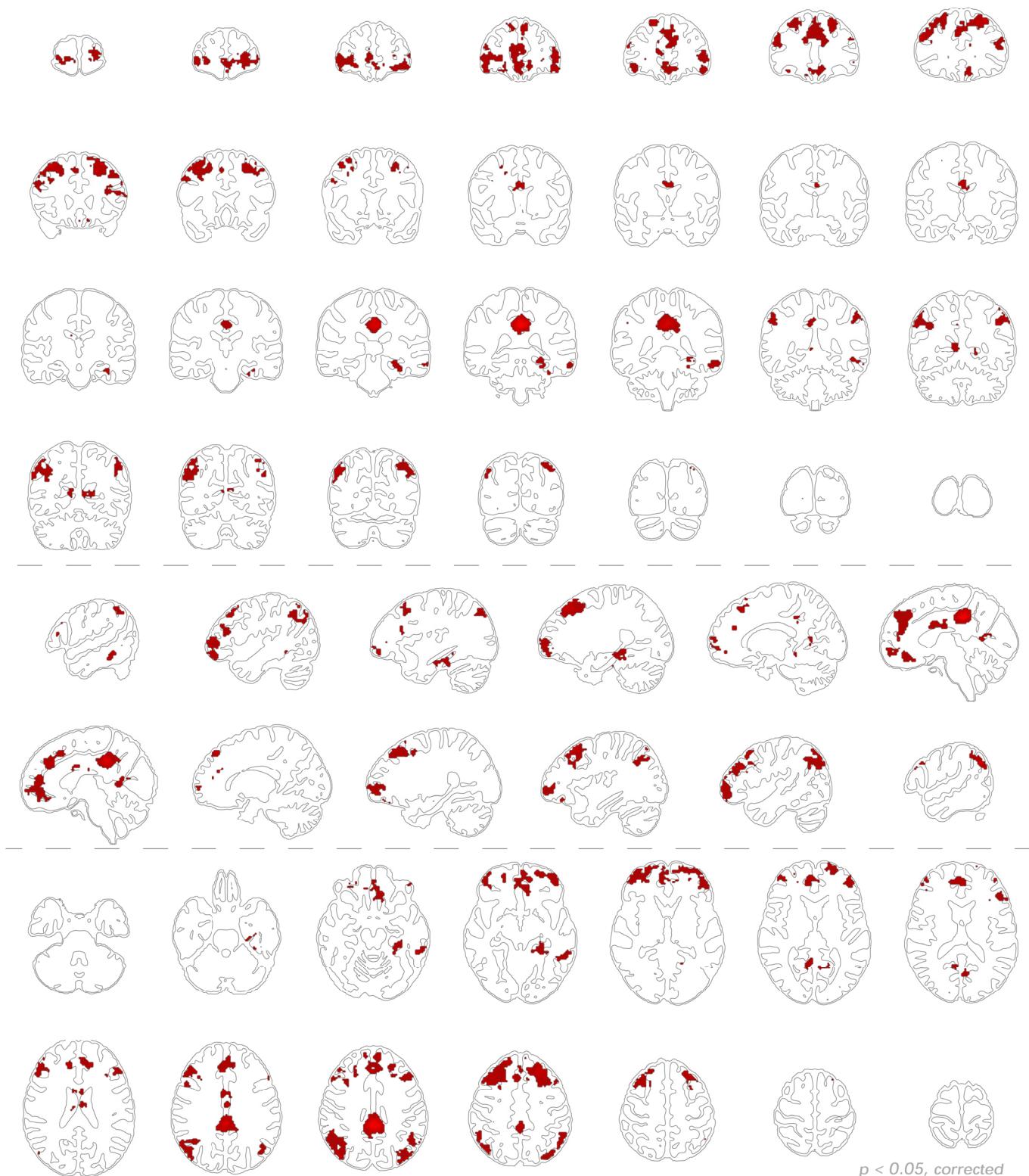
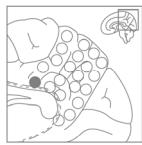
$p < 0.05$ , corrected

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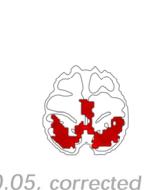
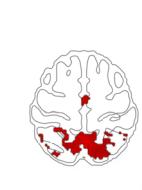
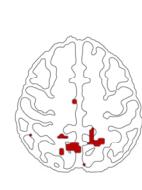
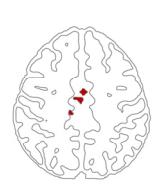
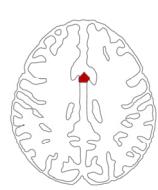
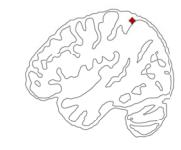
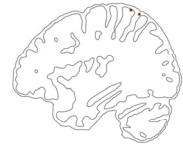
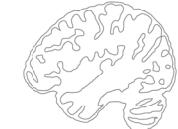
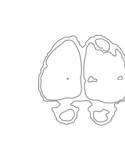
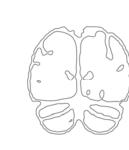
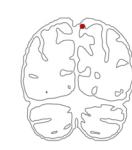
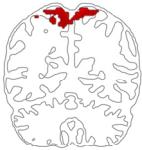
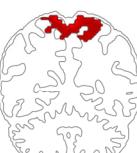
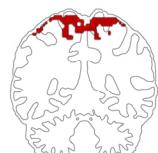
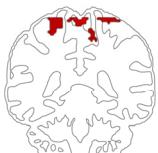
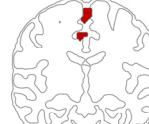
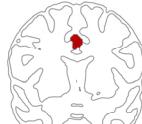
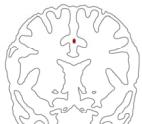
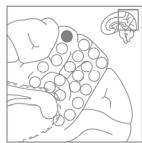
$p < 0.05$ , corrected

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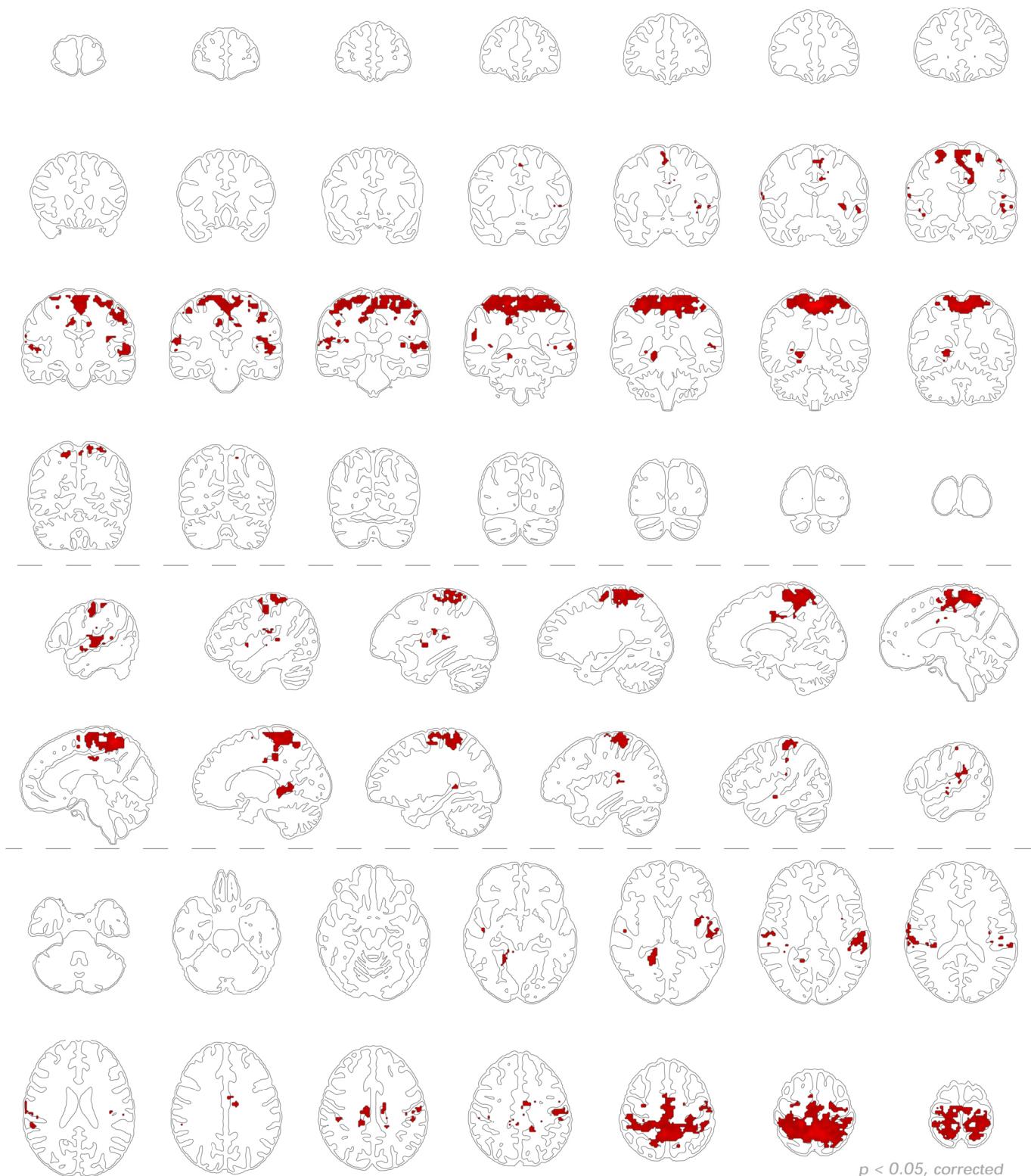
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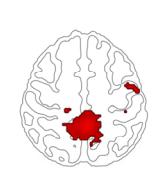
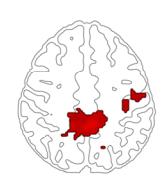
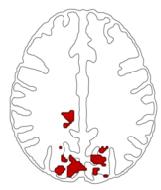
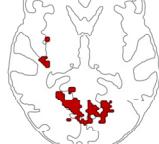
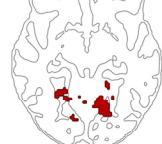
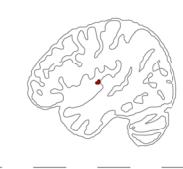
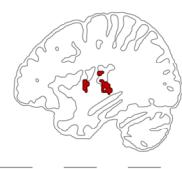
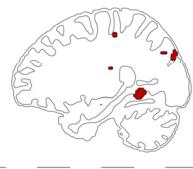
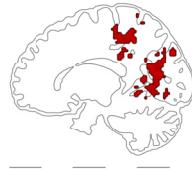
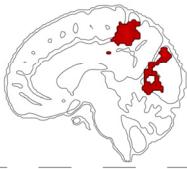
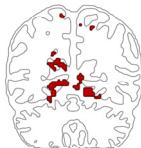
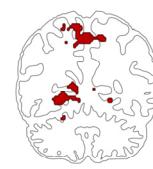
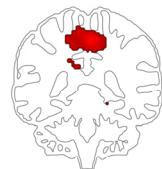
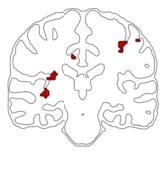
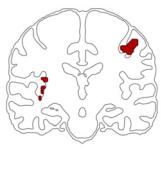
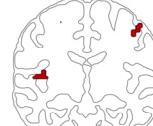
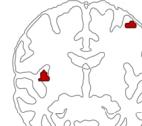
$p < 0.05$ , corrected

# Human Seed 6



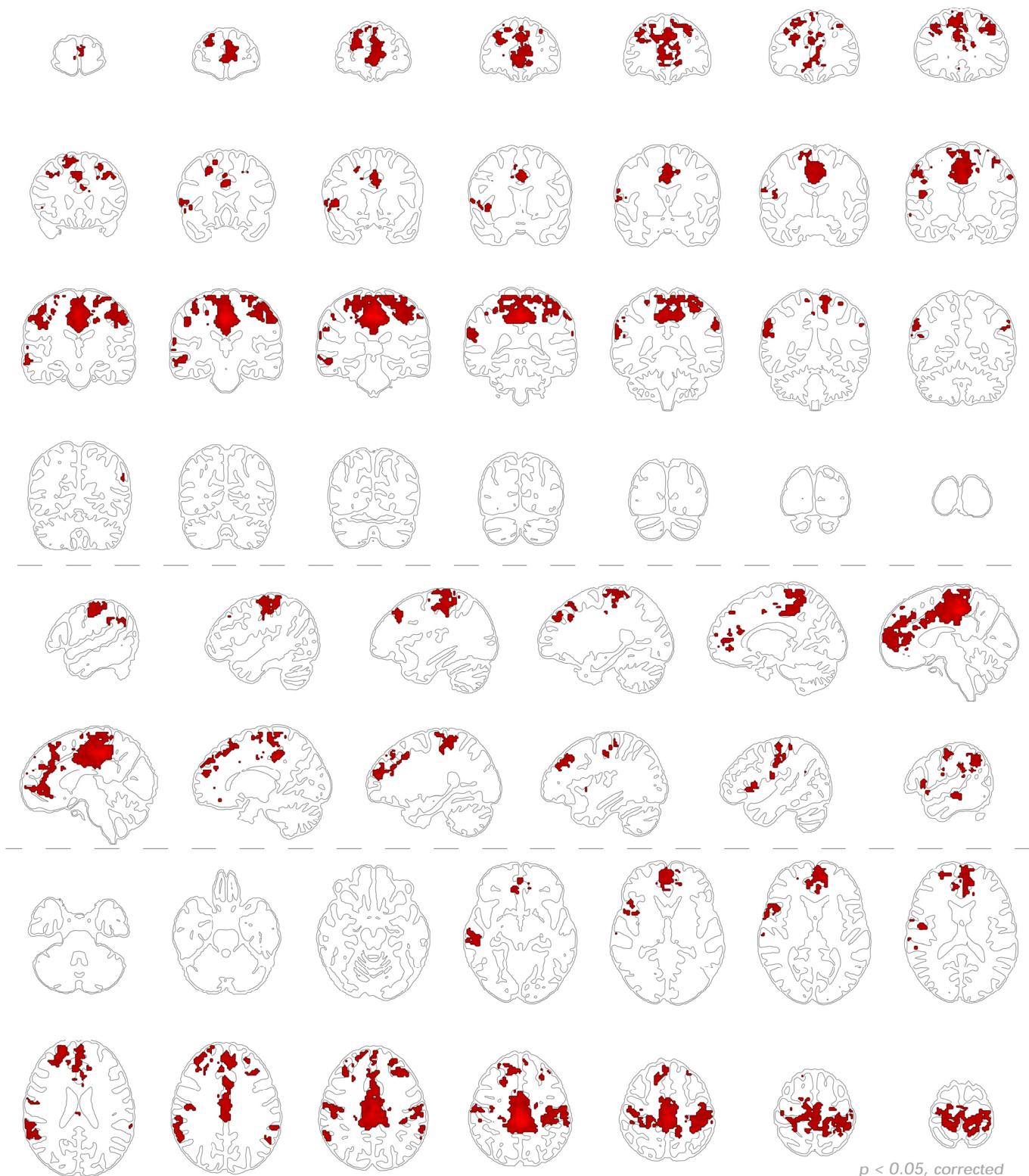
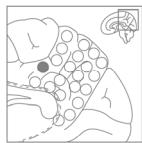
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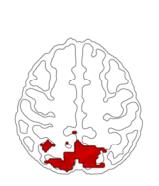
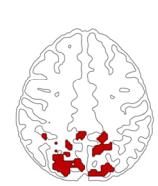
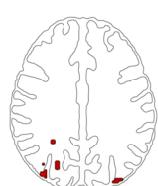
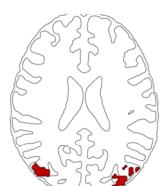
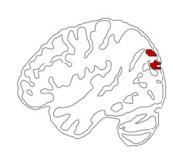
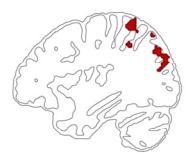
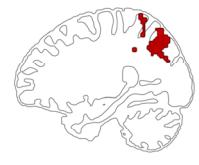
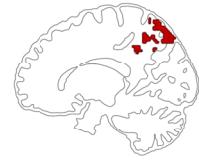
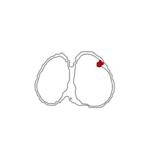
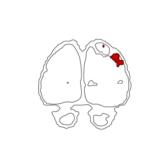
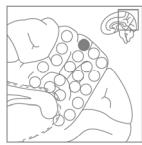
$p < 0.05$ , corrected

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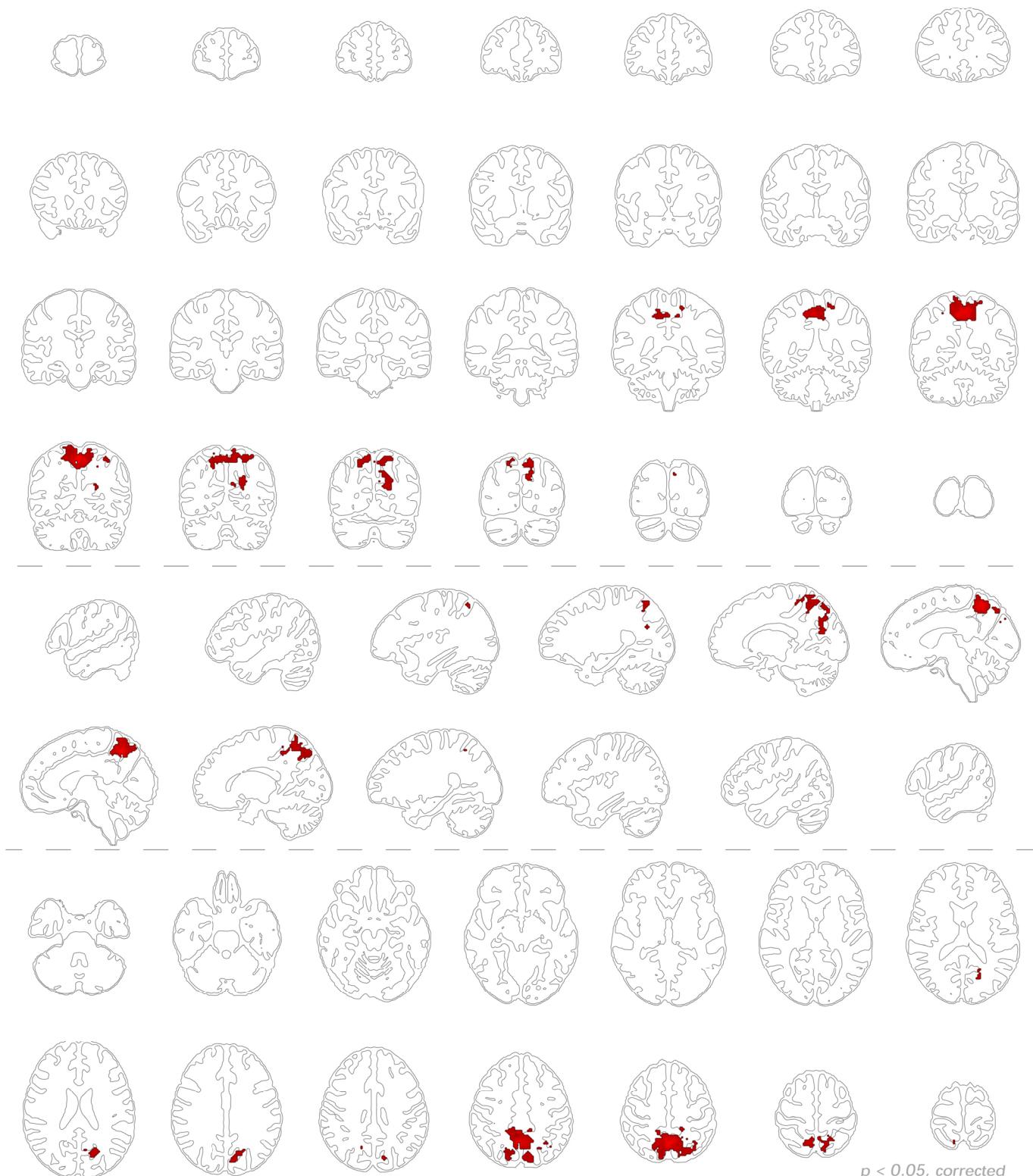
$p < 0.05$ , corrected

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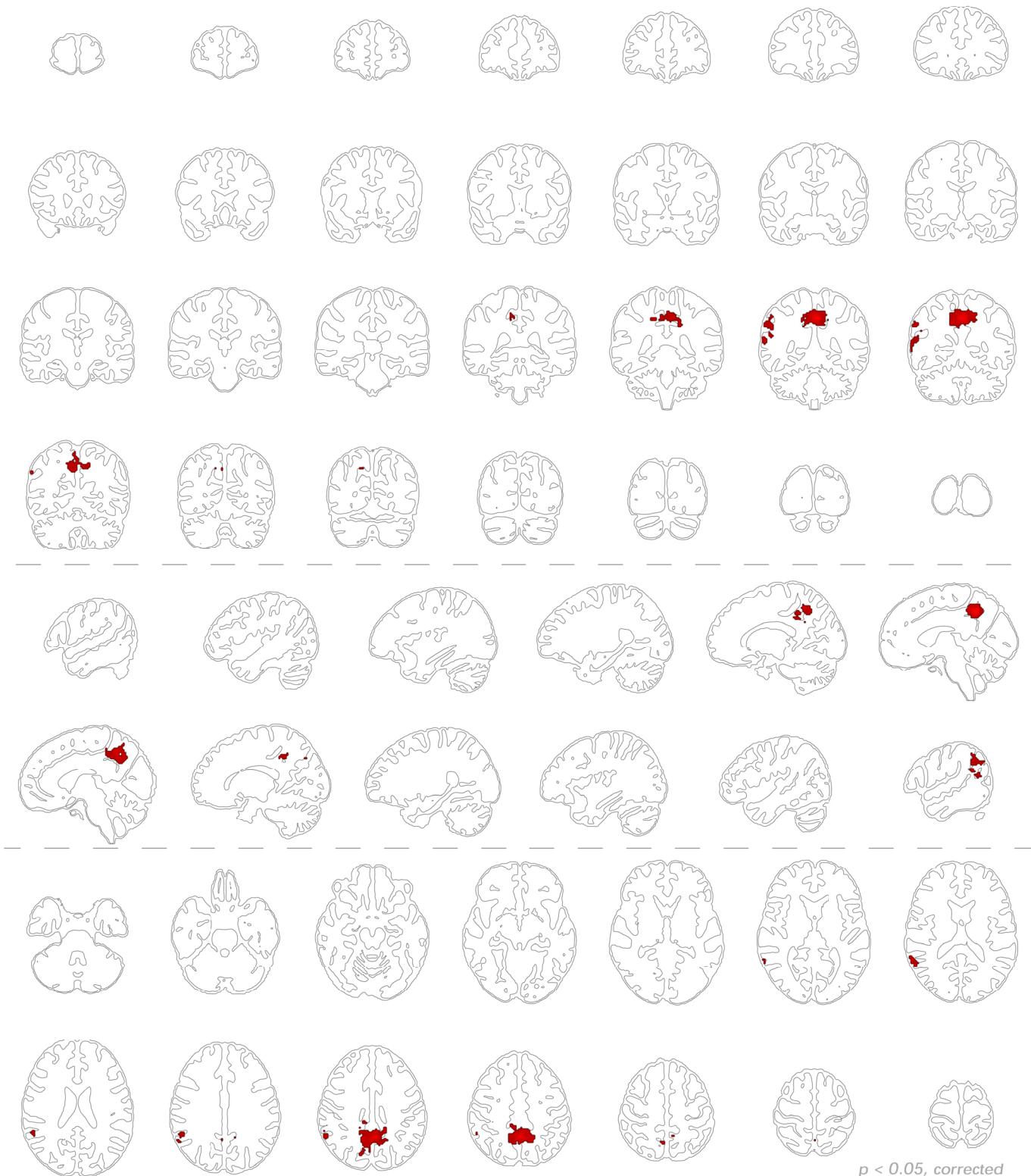
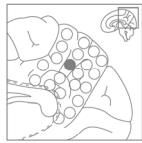
$p < 0.05$ , corrected

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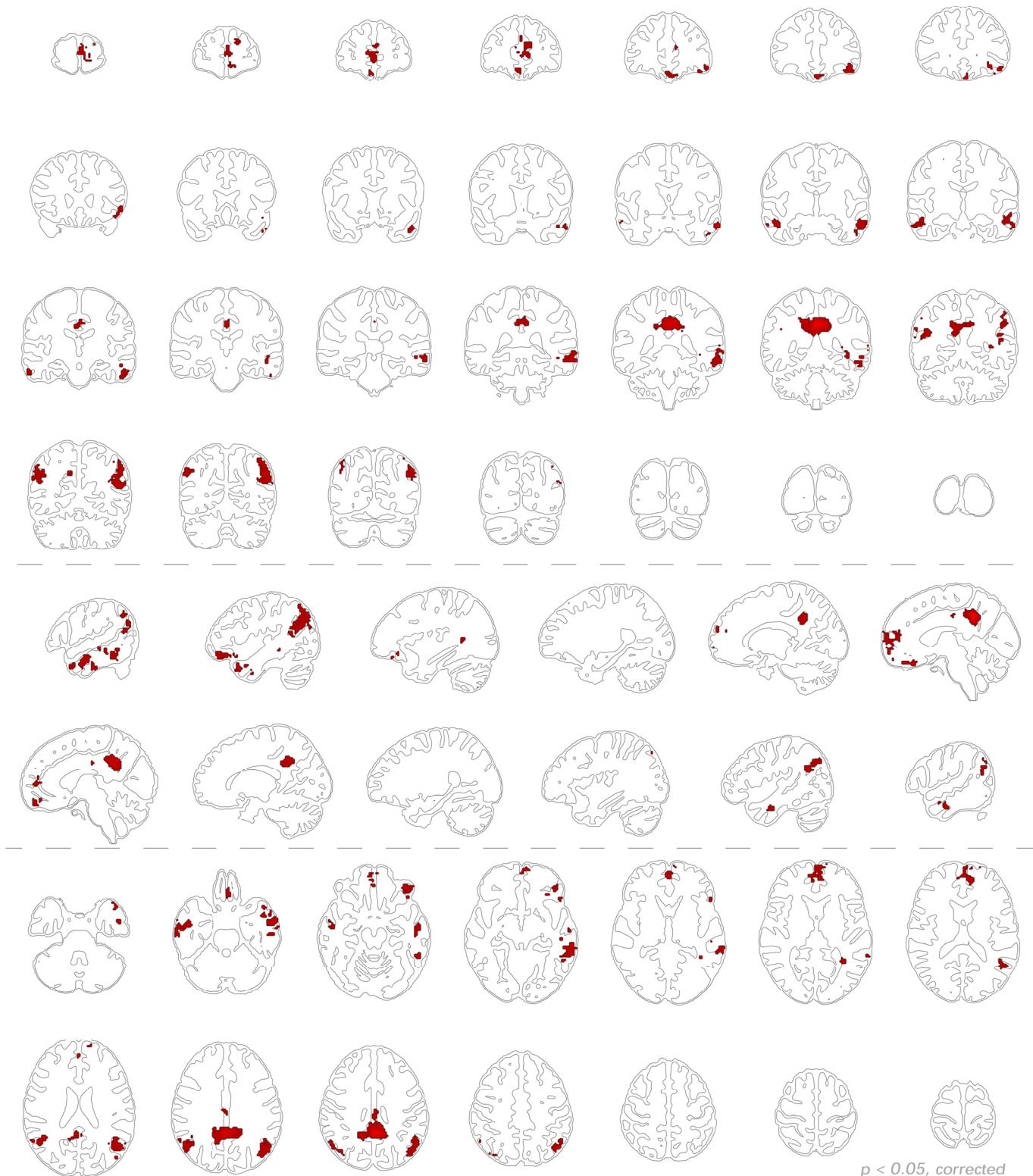
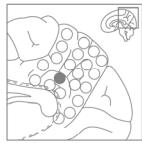
$p < 0.05$ , corrected

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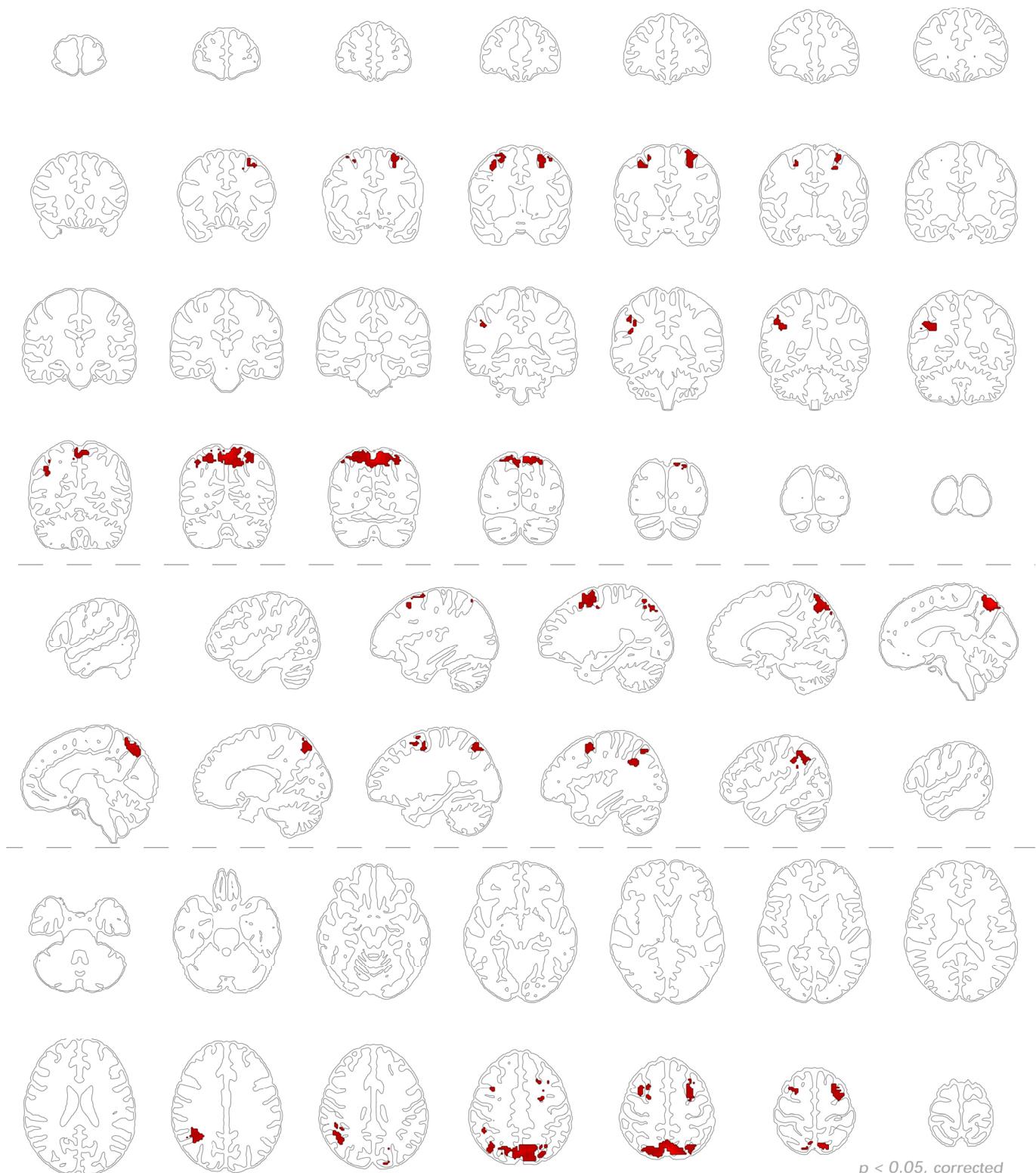
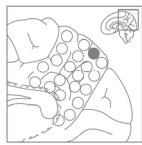
$p < 0.05$ , corrected

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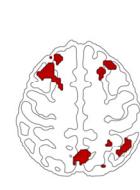
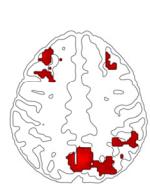
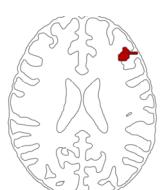
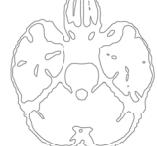
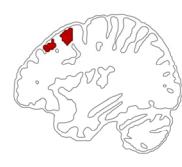
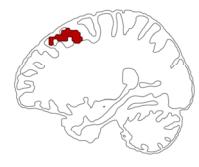
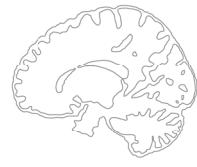
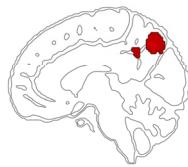
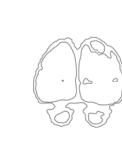
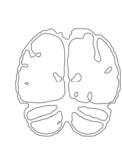
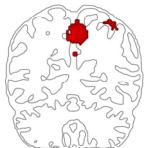
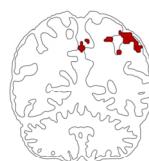
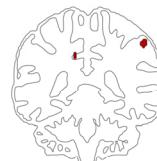
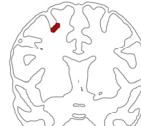
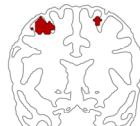
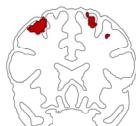
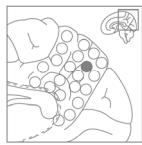
$p < 0.05$ , corrected

**Human  
Seed 13**



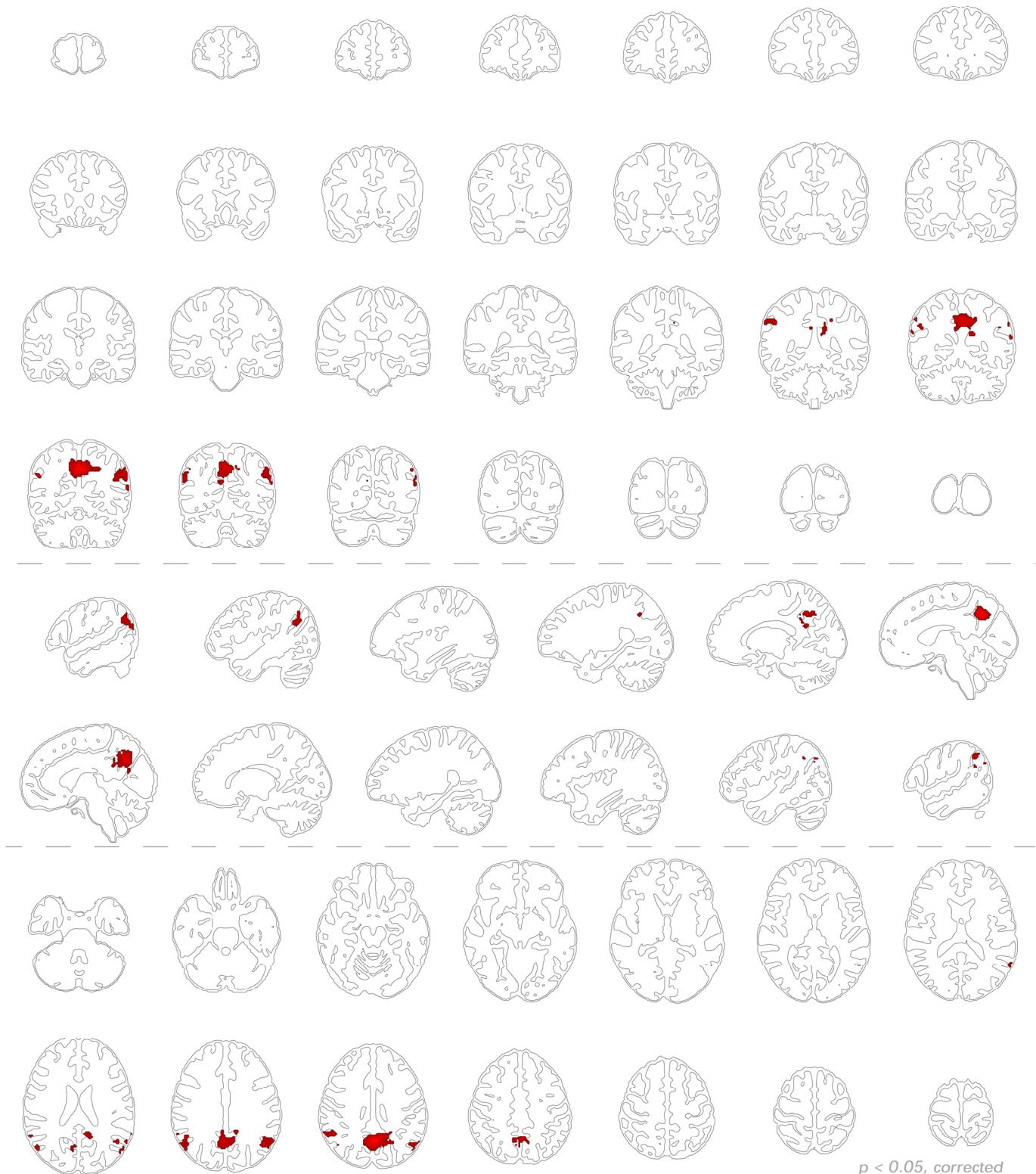
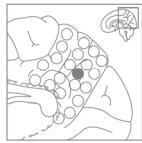
$p < 0.05$ , corrected

**Human  
Seed 14**



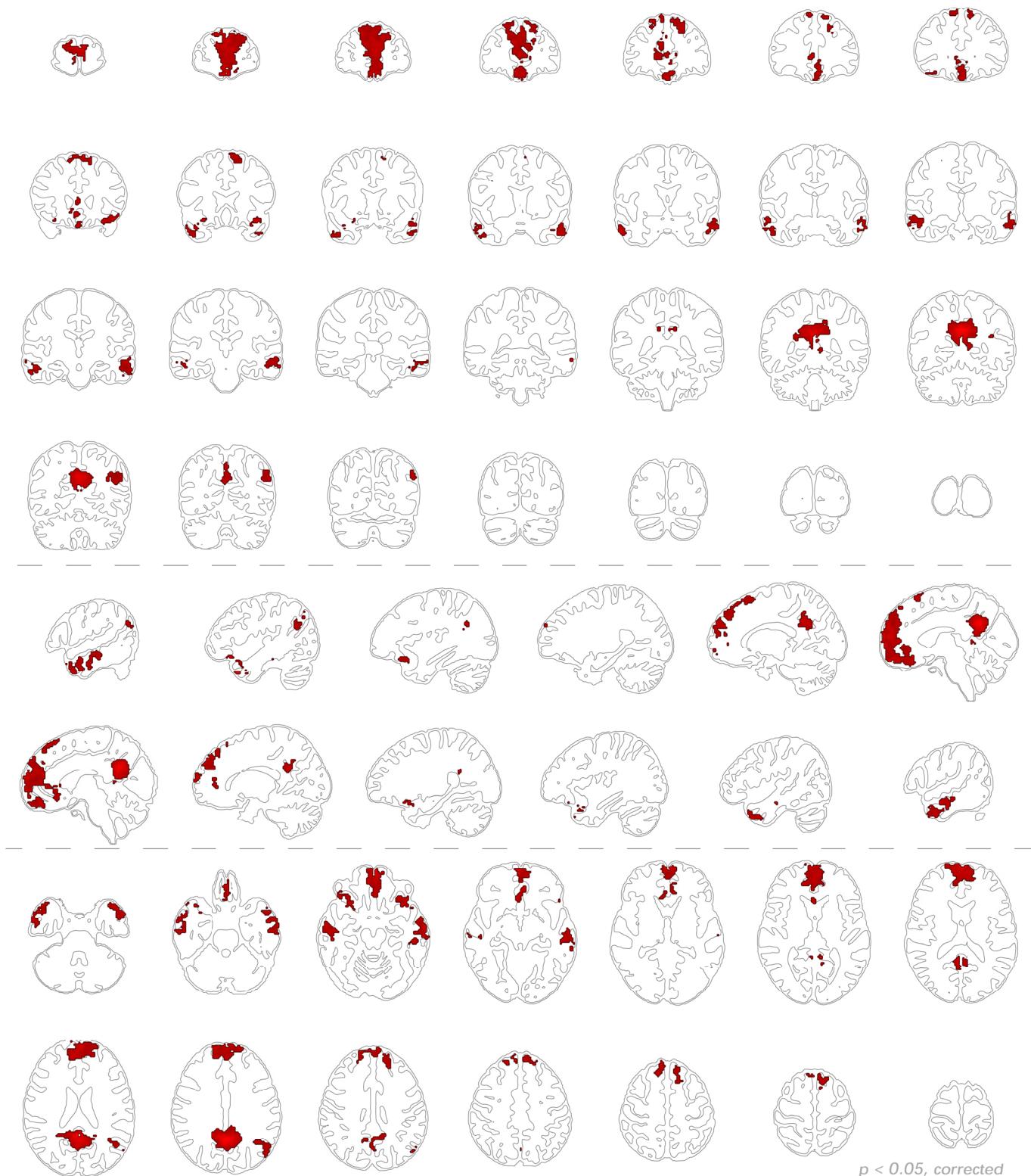
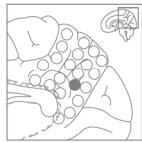
*p < 0.05, corrected*

**Human  
Seed 15**



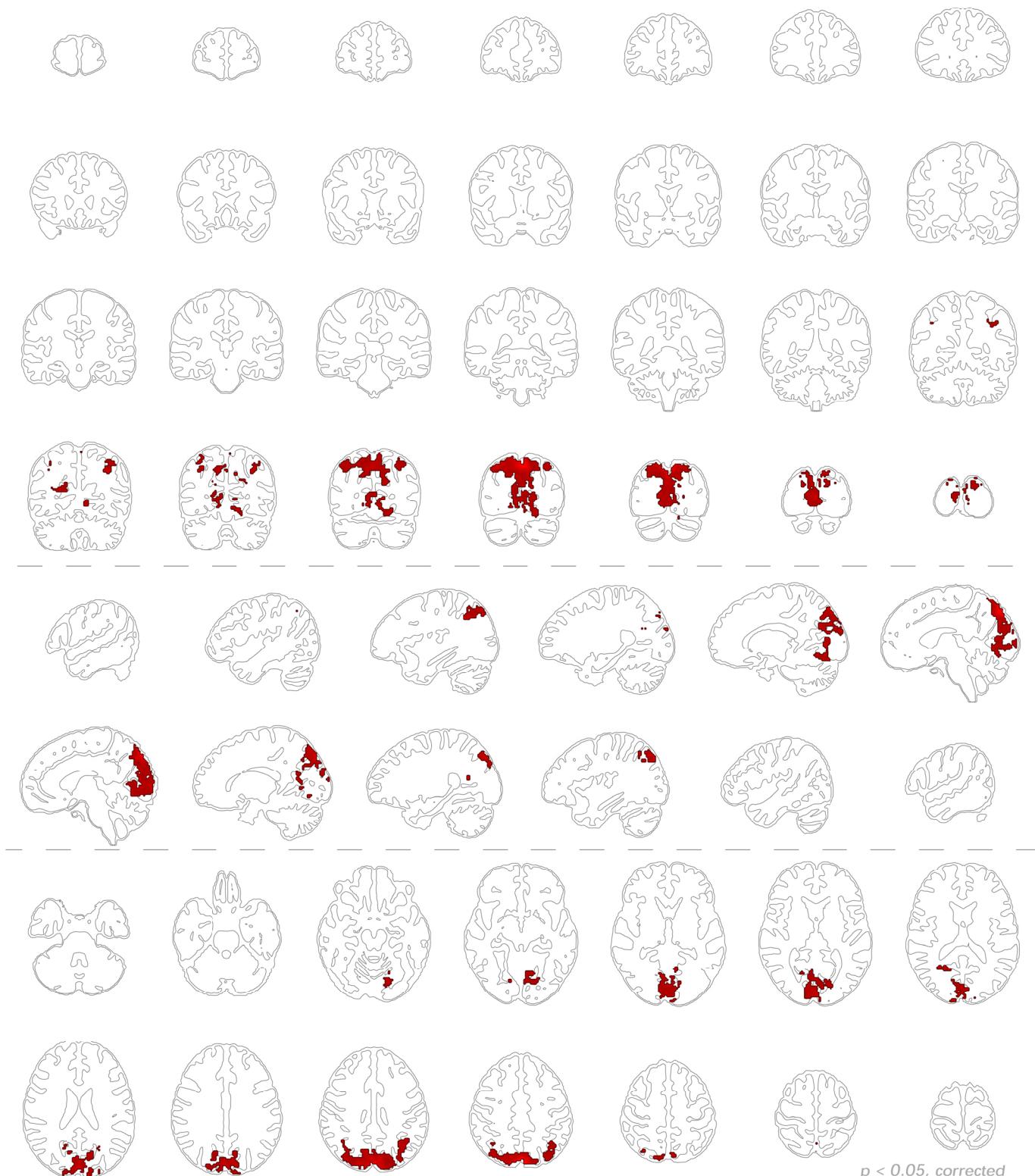
$p < 0.05$ , corrected

# Human Seed 16



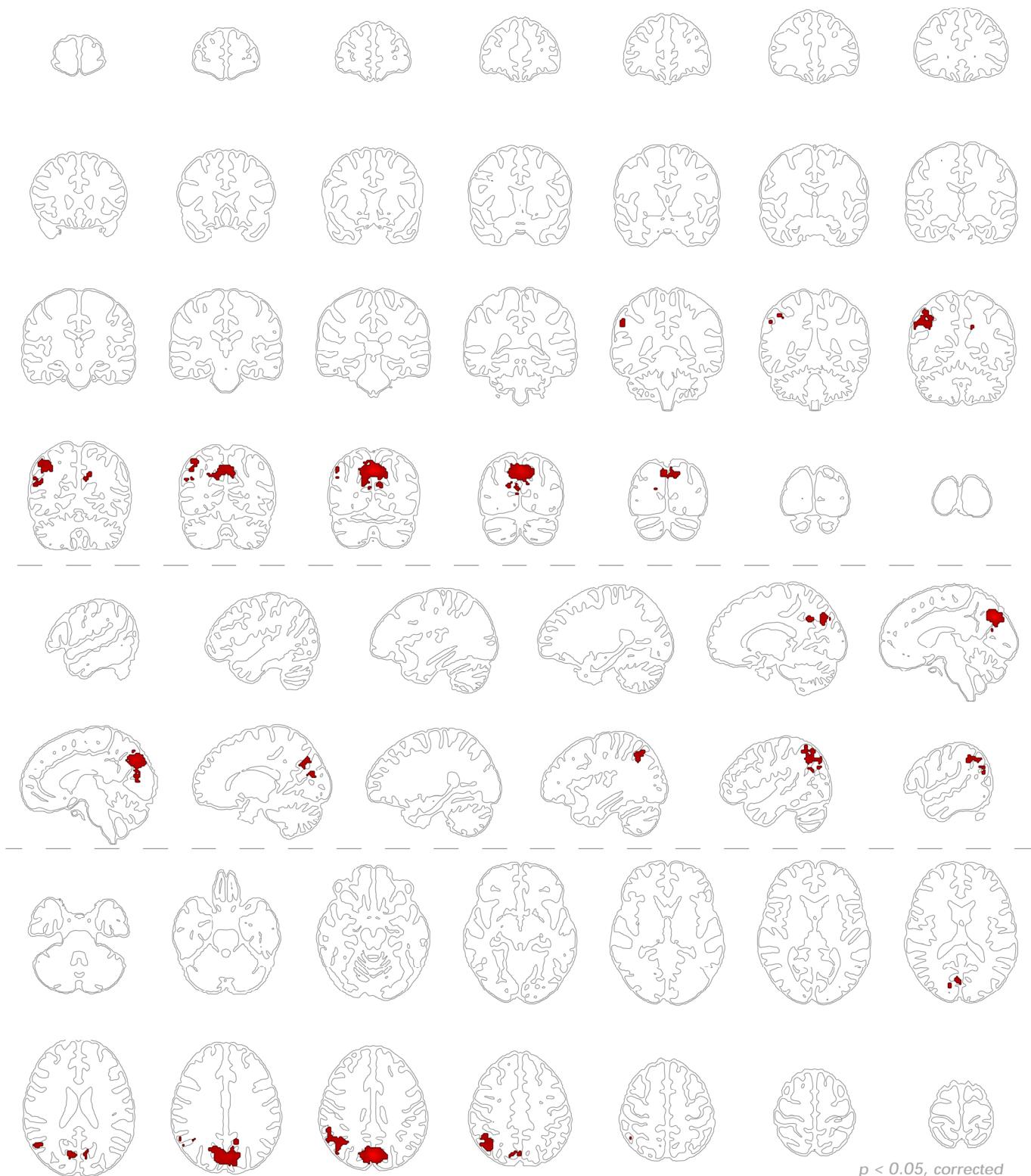
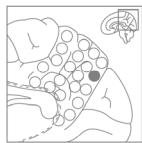
$p < 0.05$ , corrected

**Human  
Seed 17**



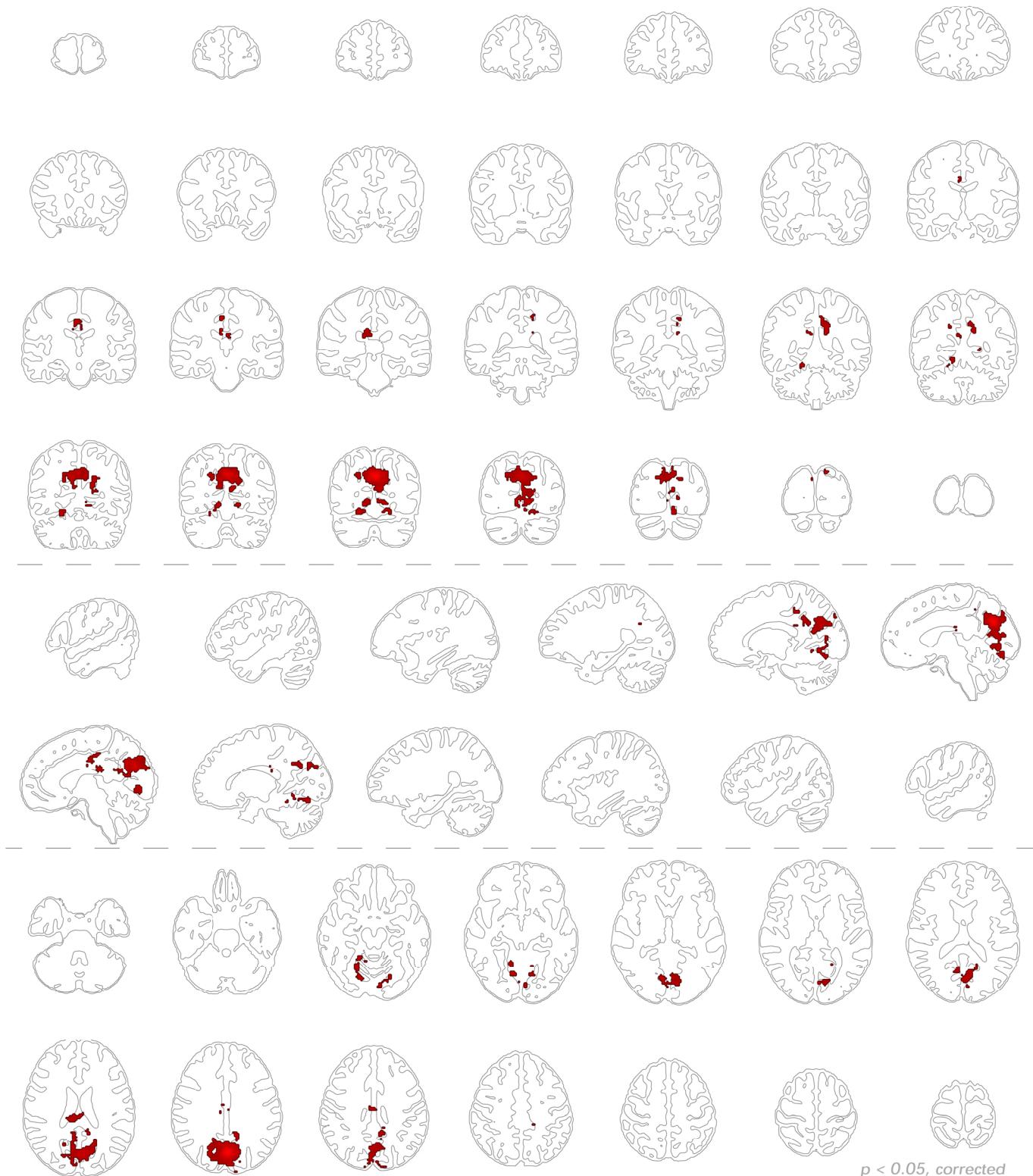
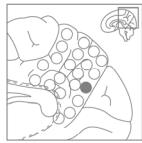
$p < 0.05$ , corrected

# Human Seed 18



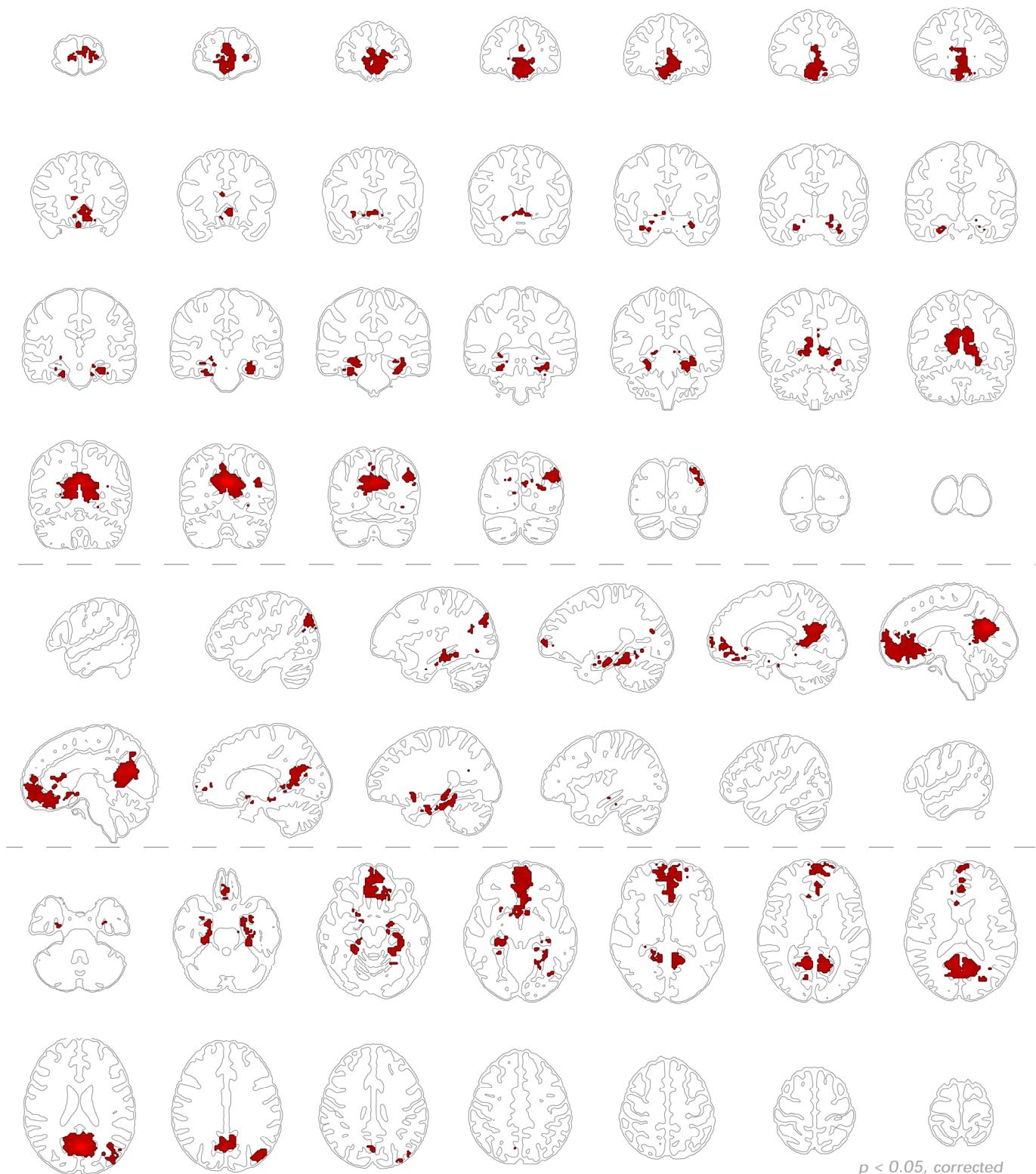
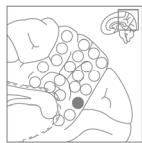
$p < 0.05$ , corrected

# Human Seed 19



$p < 0.05$ , corrected

# Human Seed 20



$p < 0.05$ , corrected

# Human Seed 21

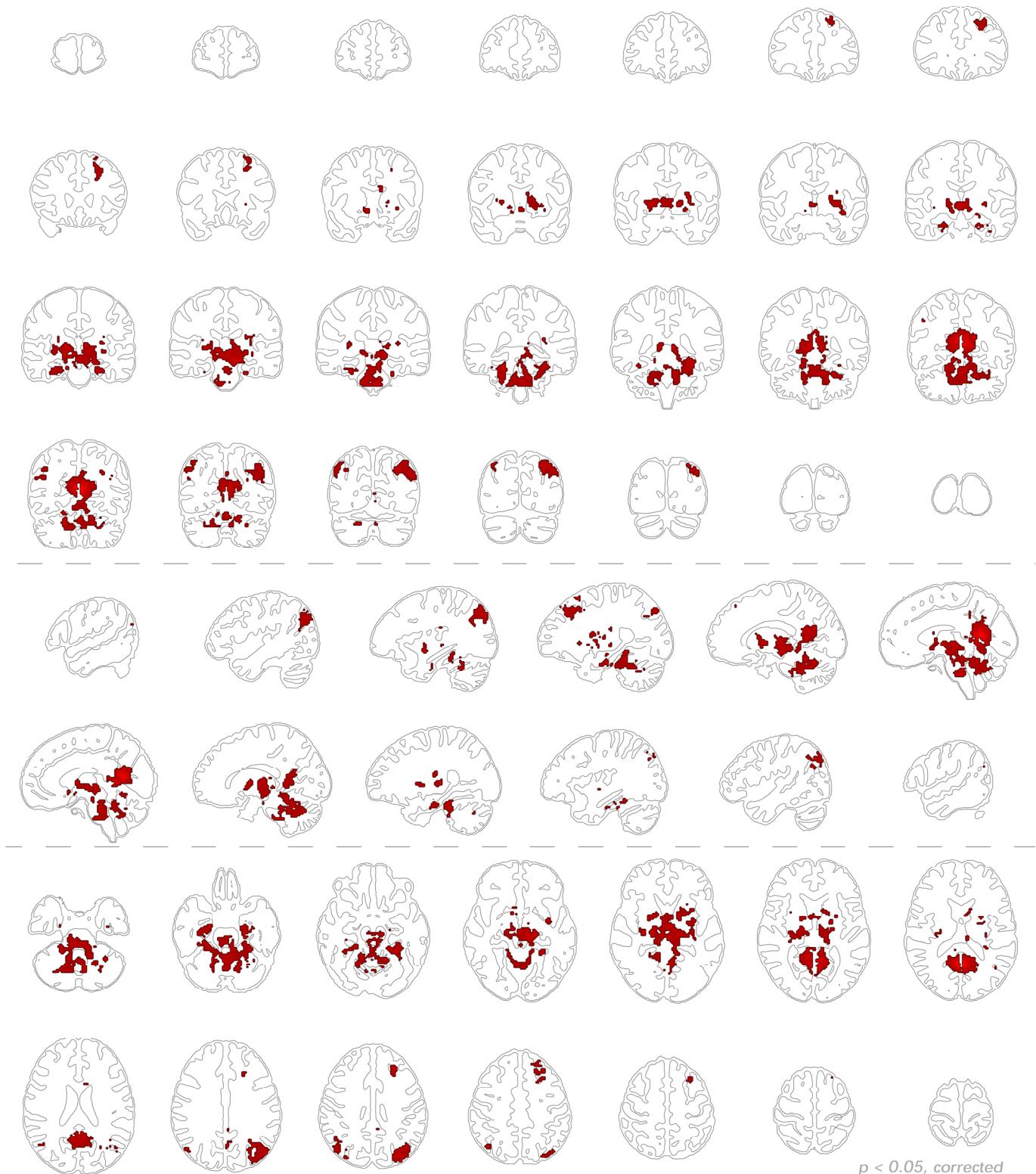
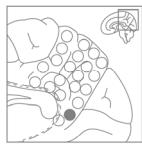


Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, If lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.

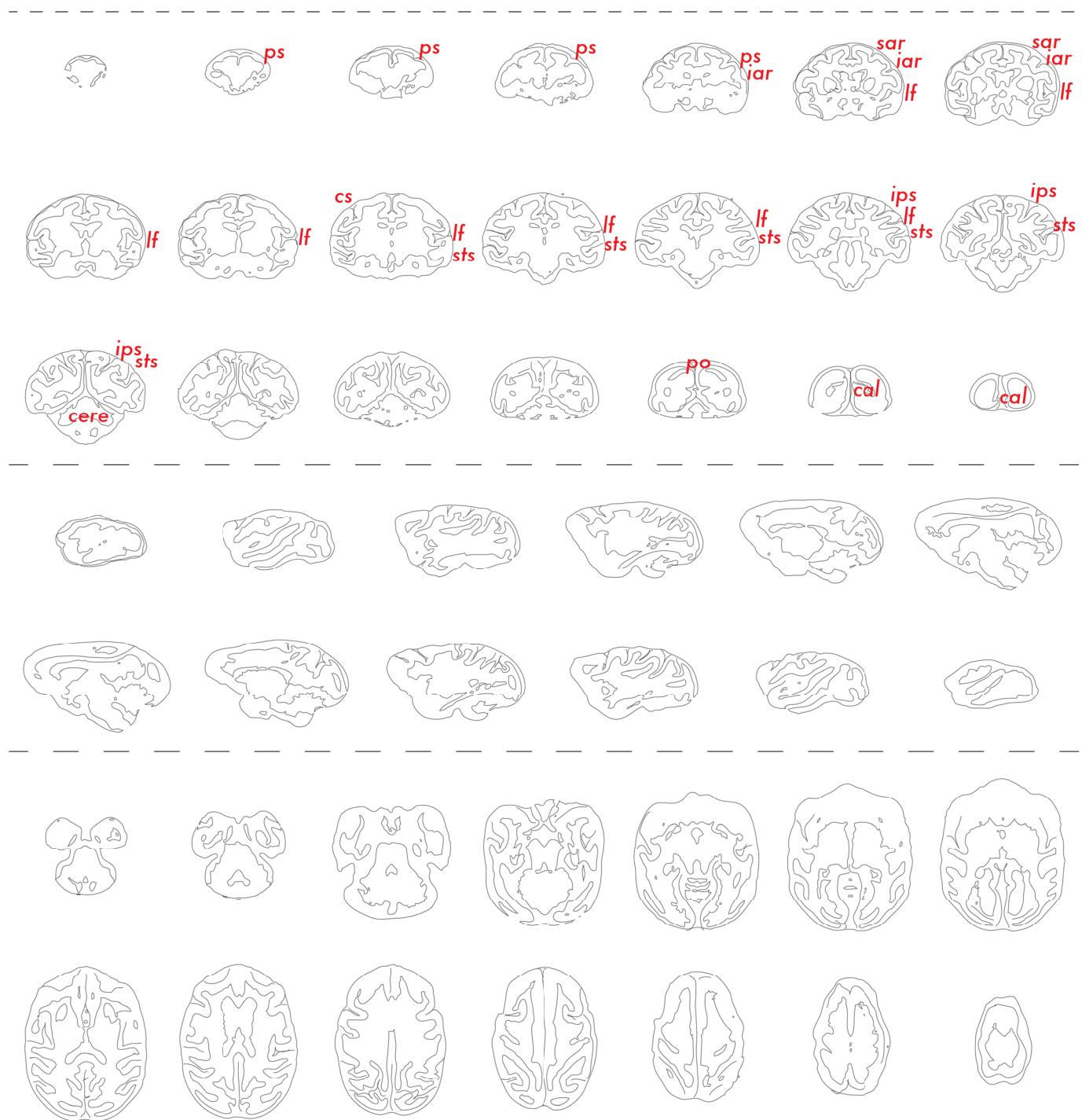
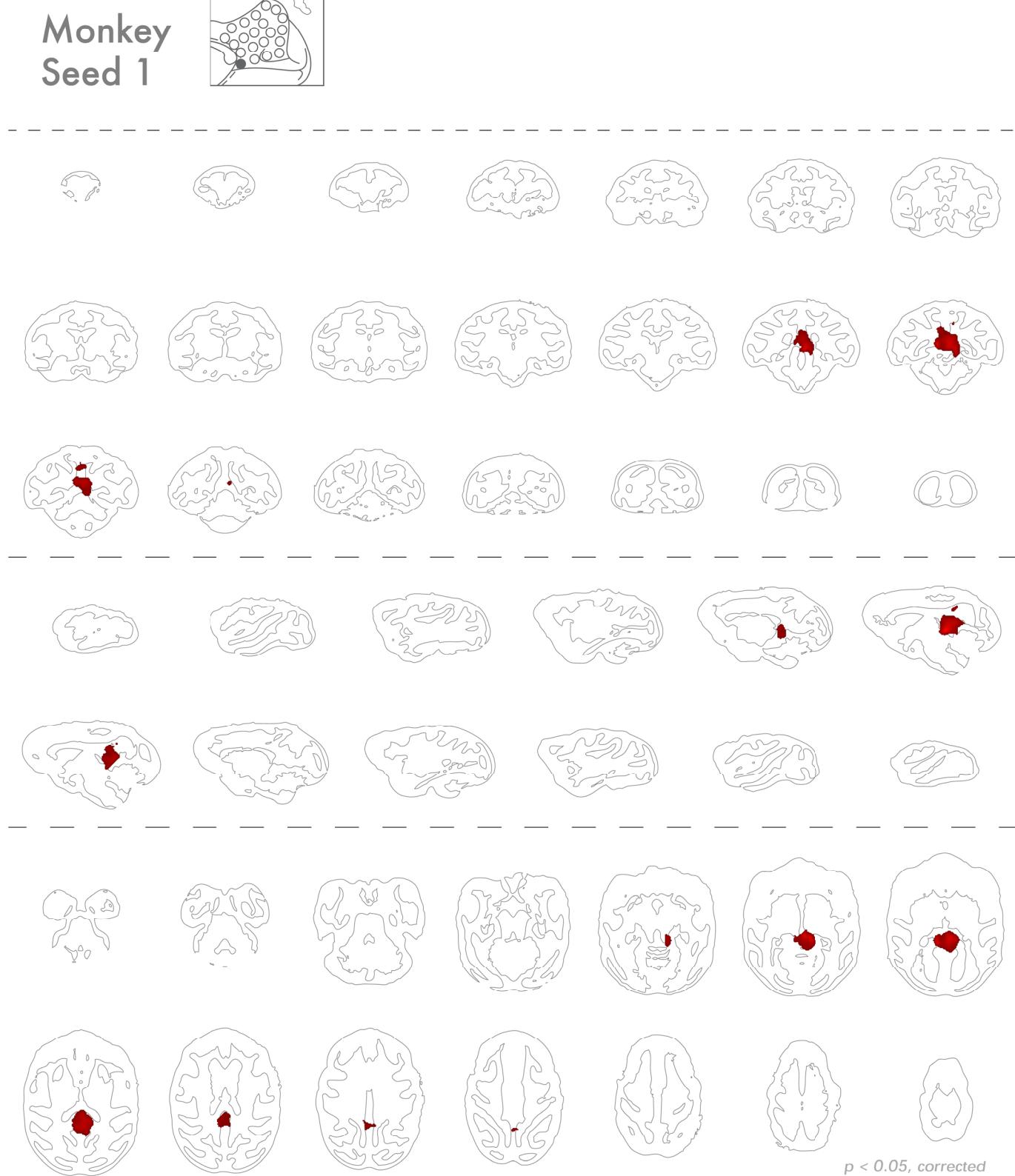


Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.



$p < 0.05, \text{ corrected}$

Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.

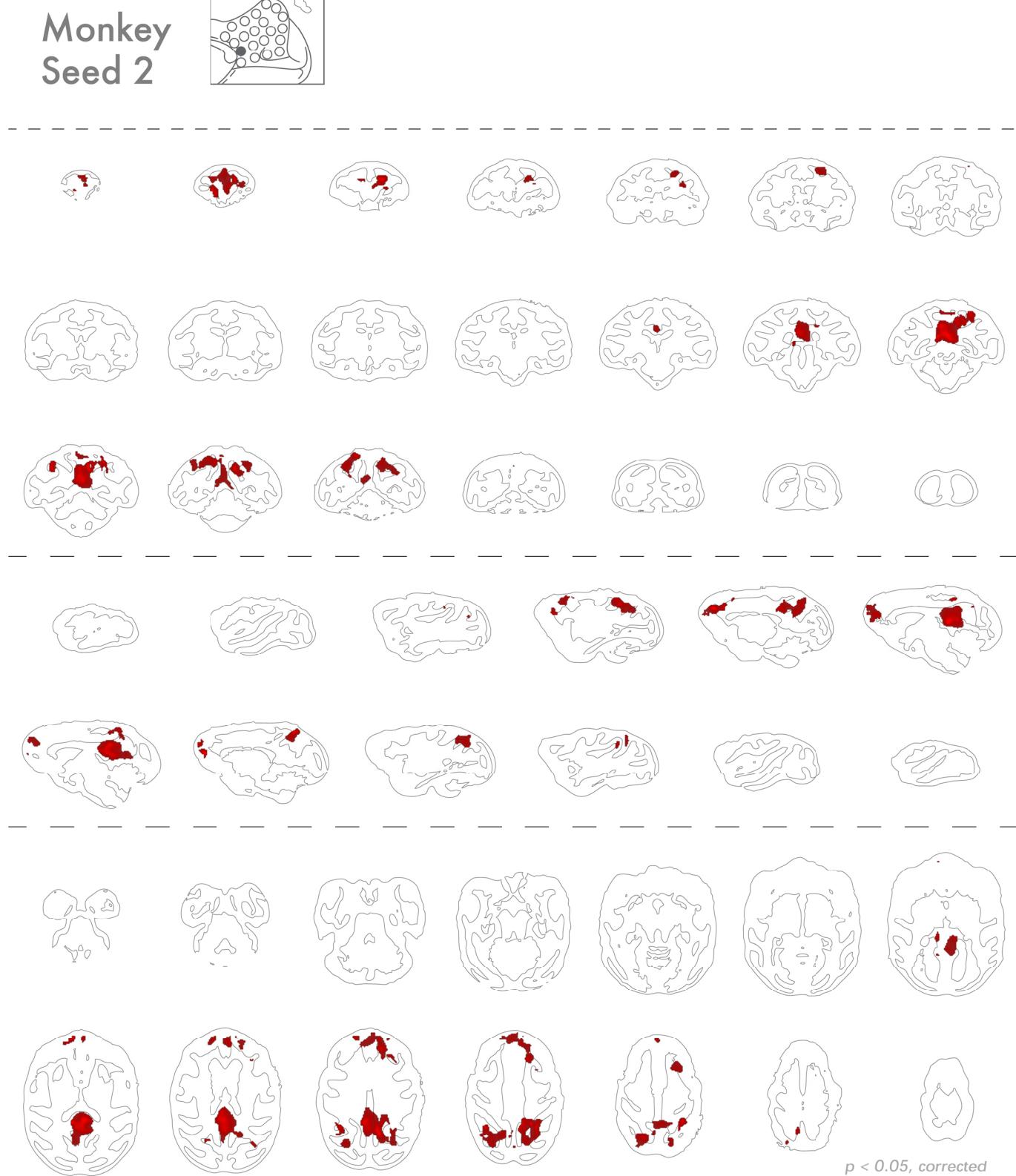


Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.

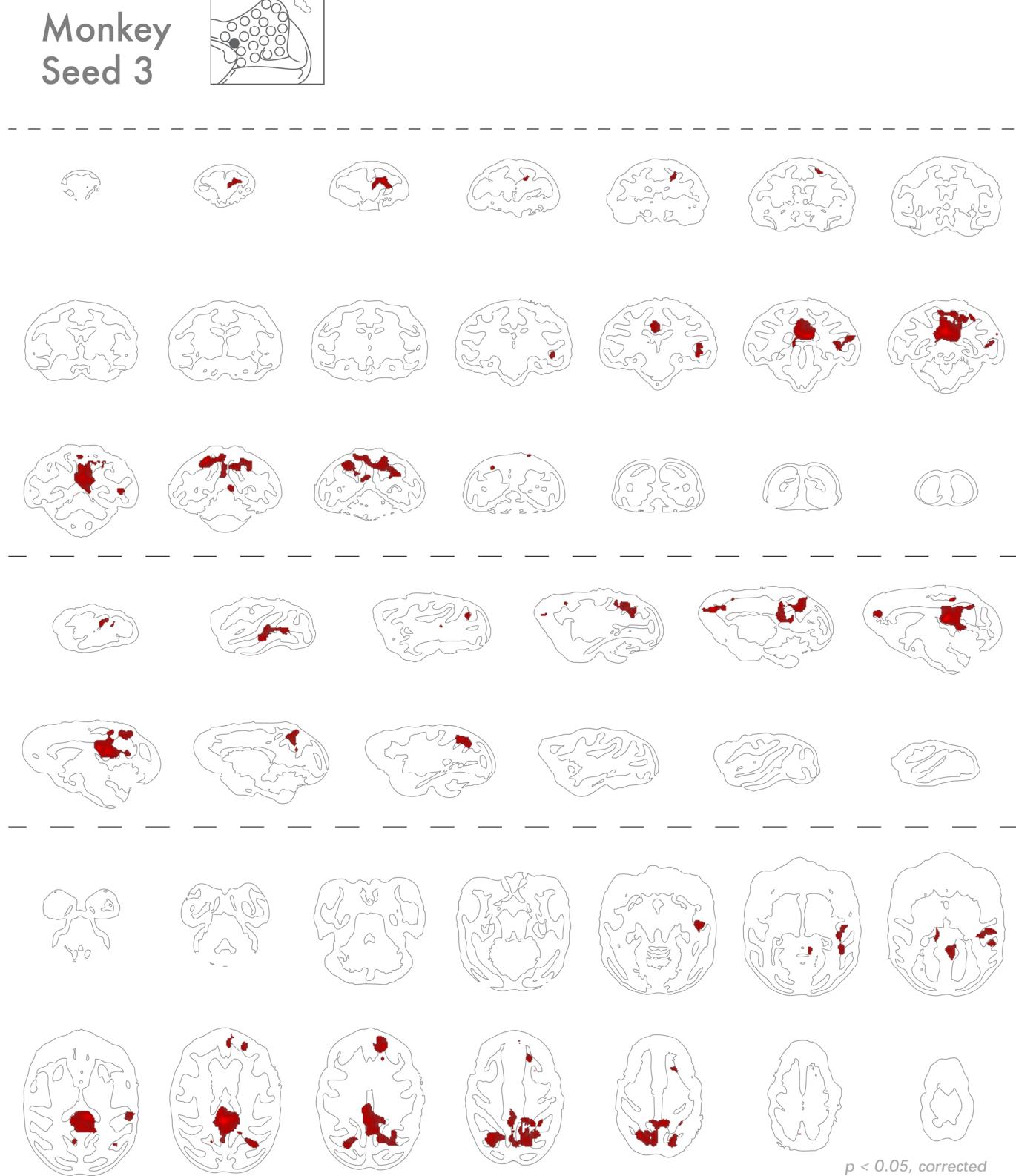


Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.

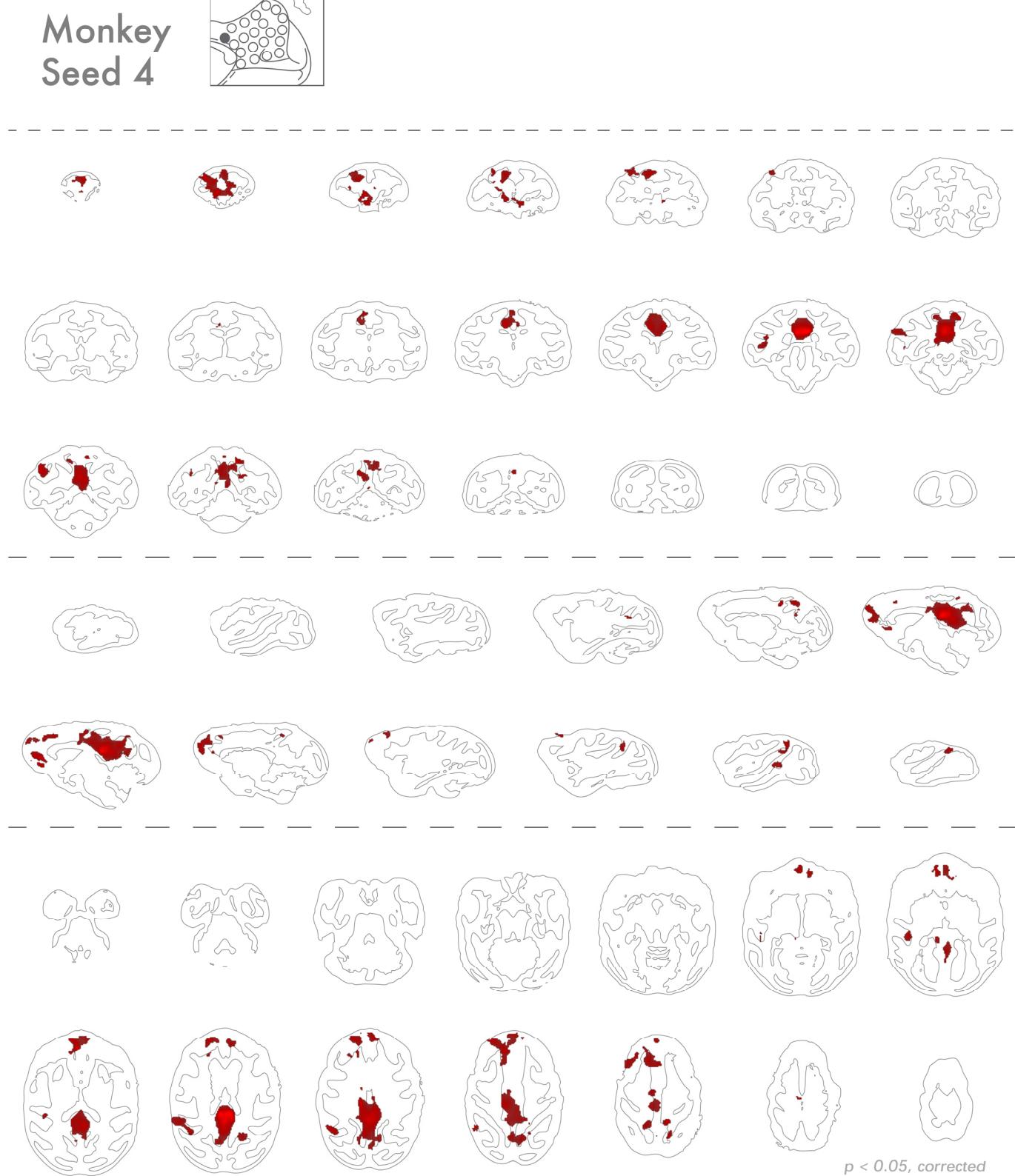
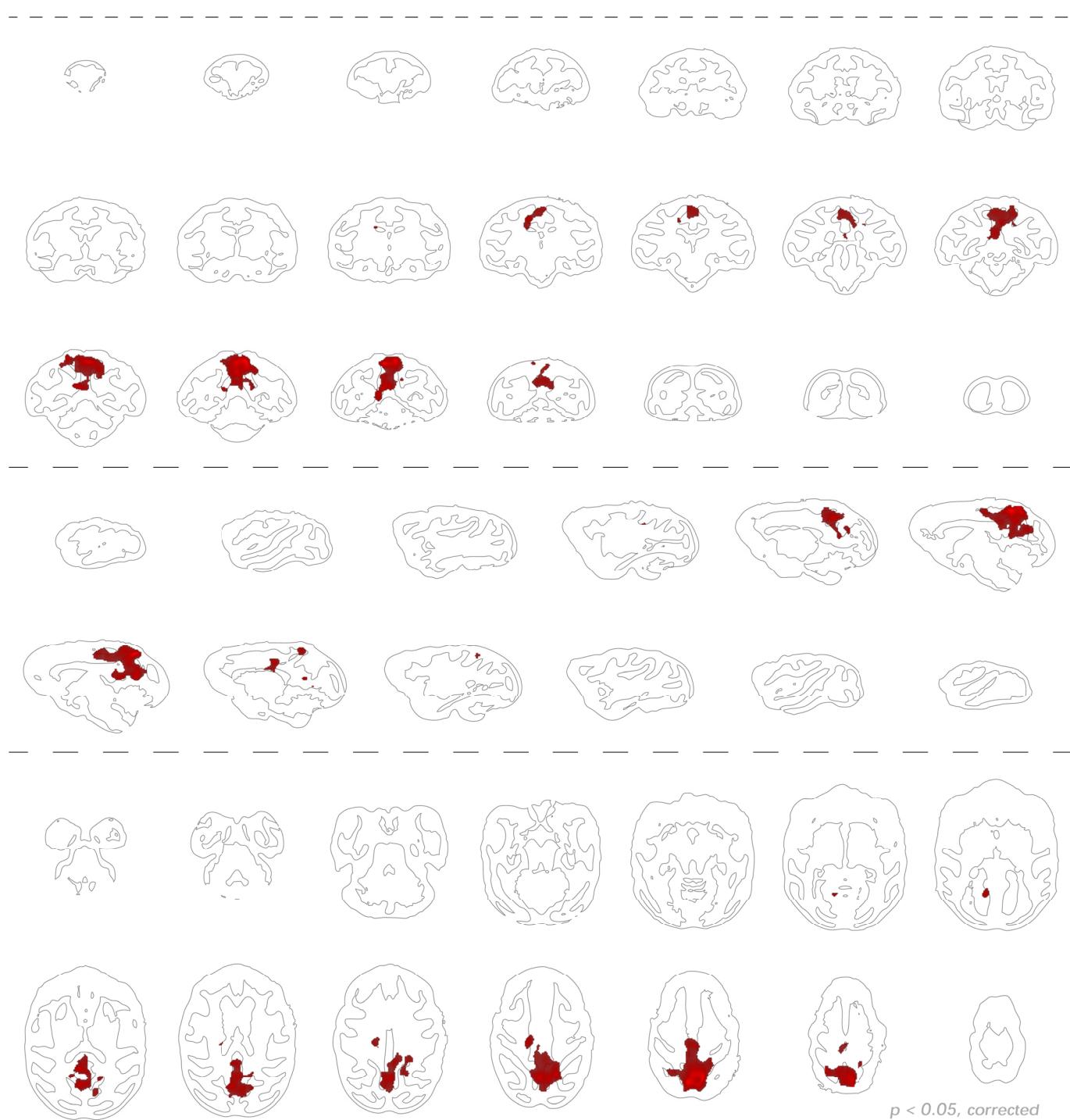
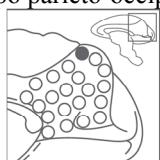


Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.

## Monkey Seed 5



$p < 0.05$ , corrected

Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.



Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.



Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.

## Monkey Seed 8

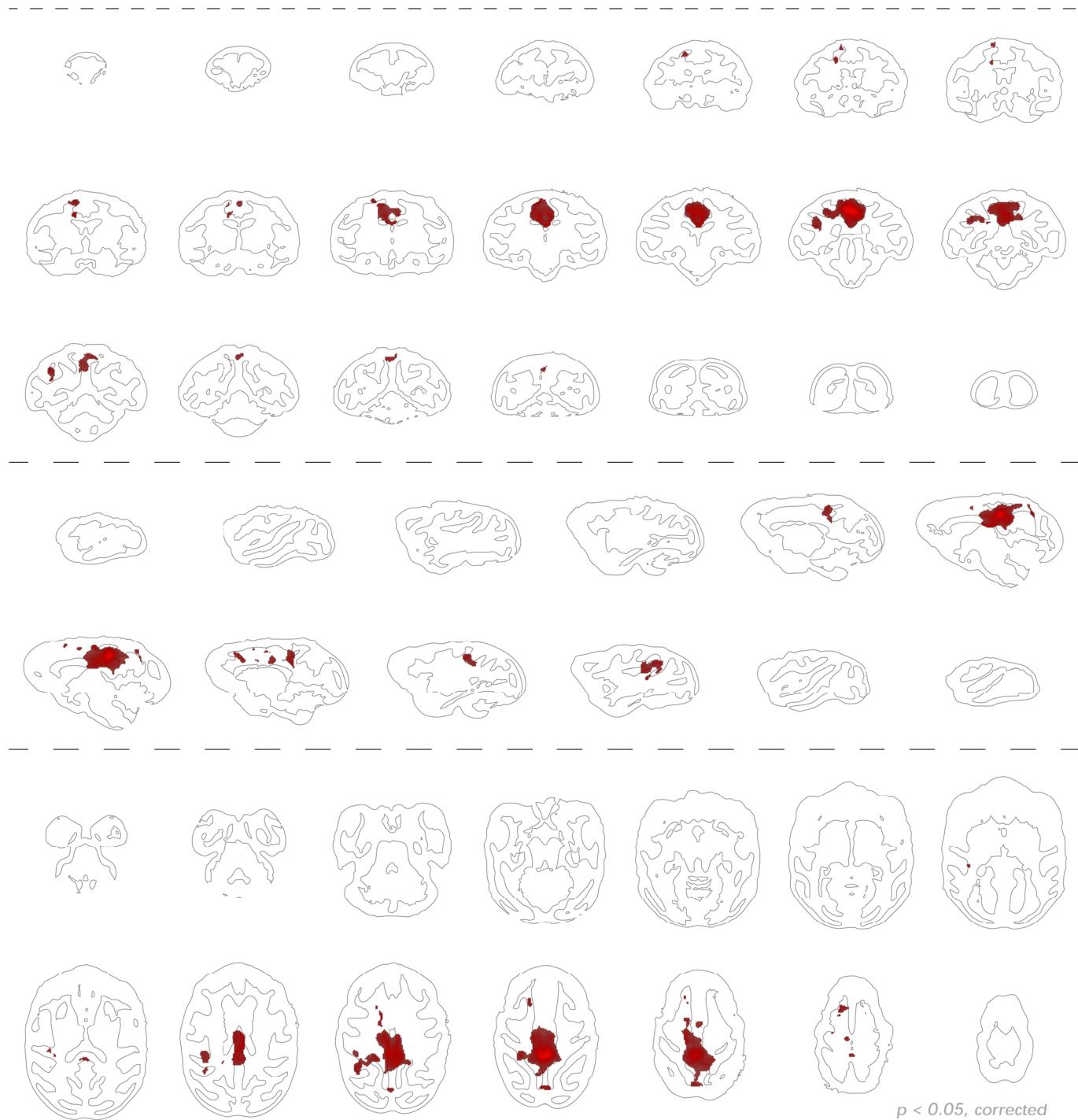
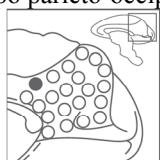


Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.

## Monkey Seed 9

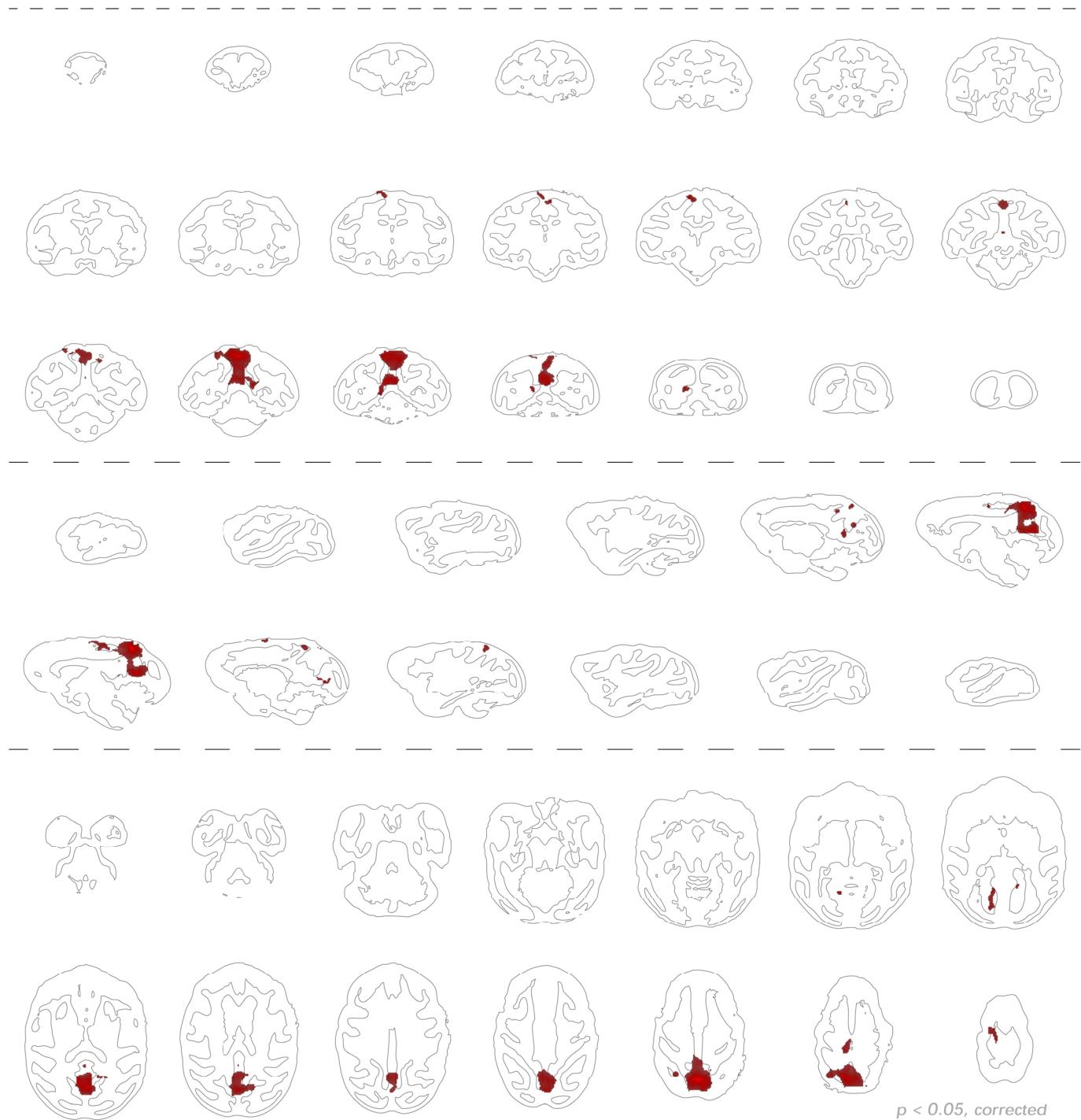
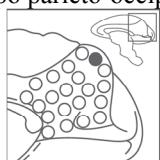


Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.

## Monkey Seed 10

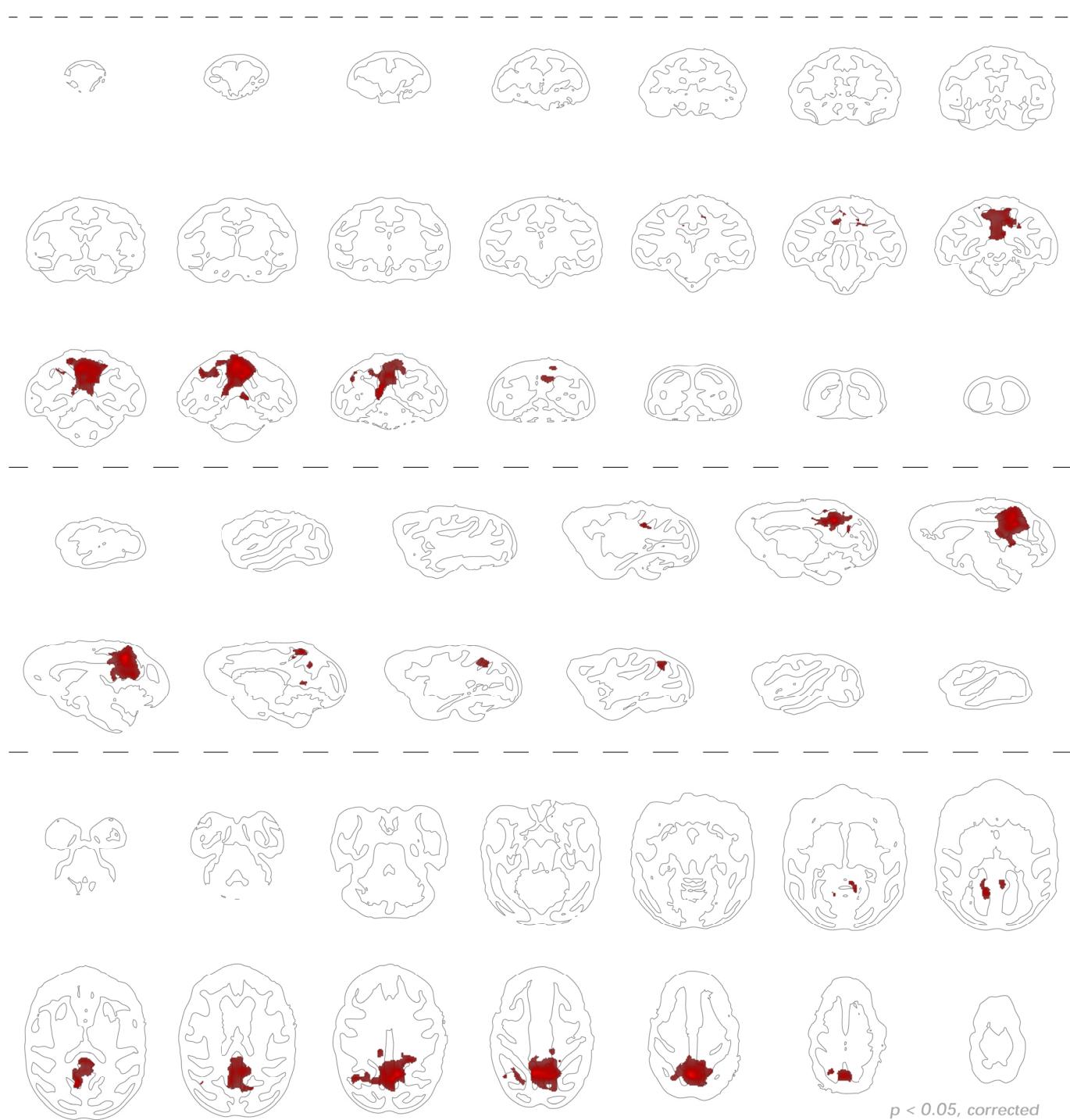
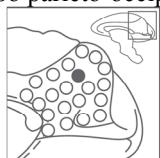


Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.

## Monkey Seed 11

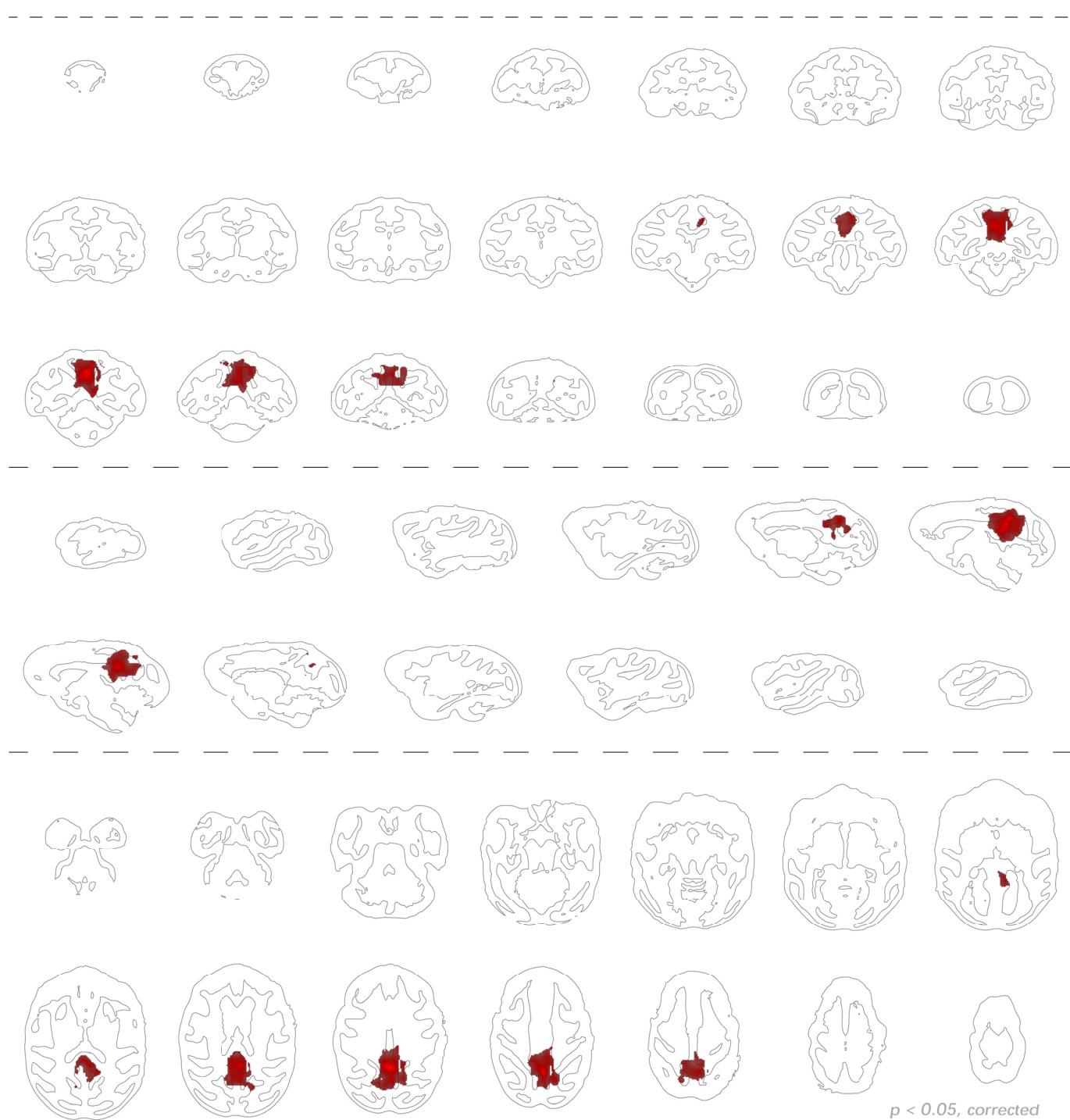
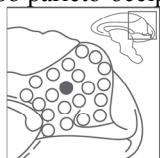


Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.

## Monkey Seed 12

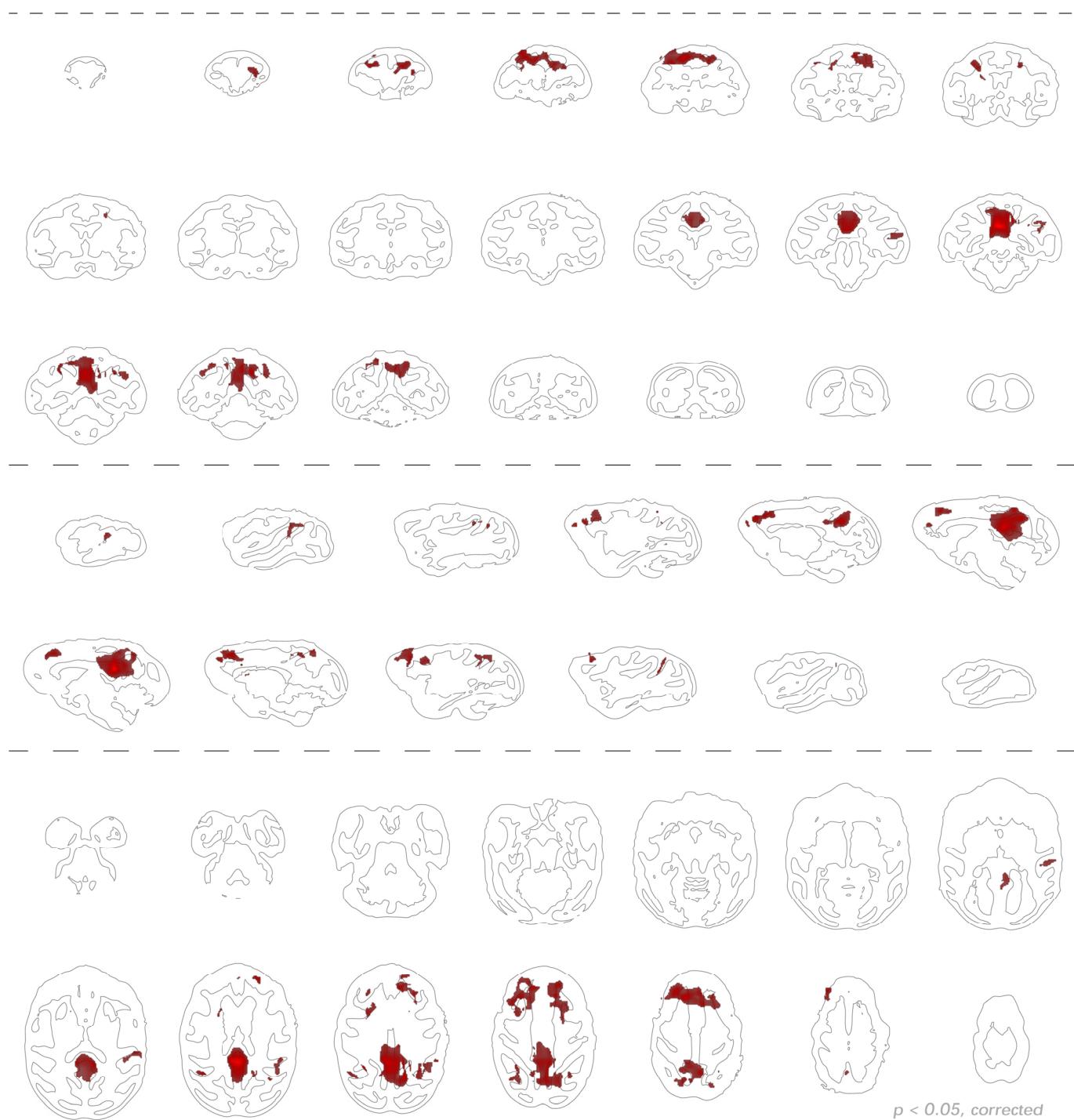
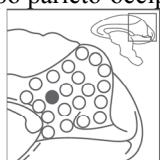


Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.

## Monkey Seed 13

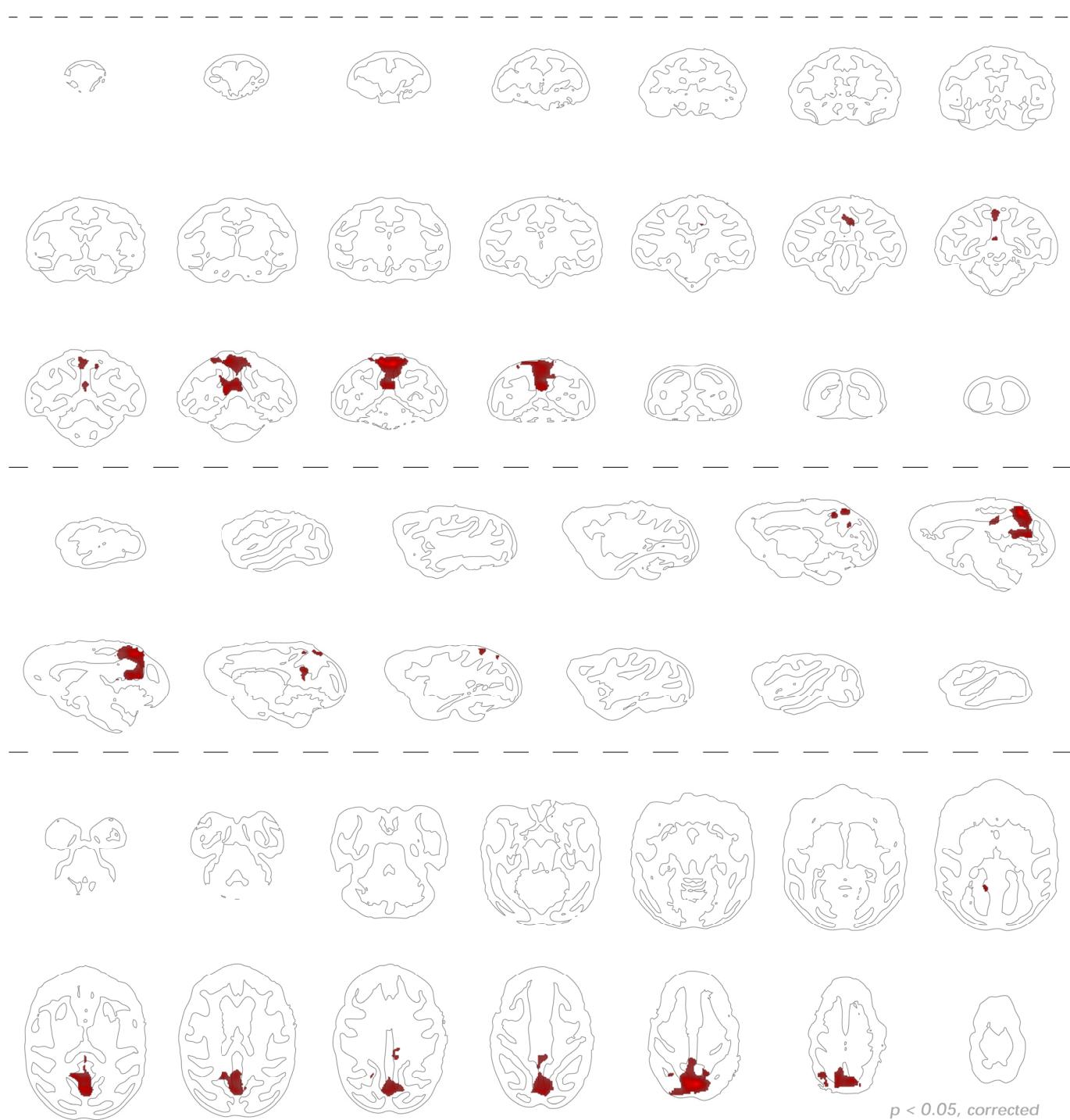
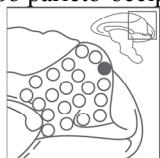


Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.

## Monkey Seed 14

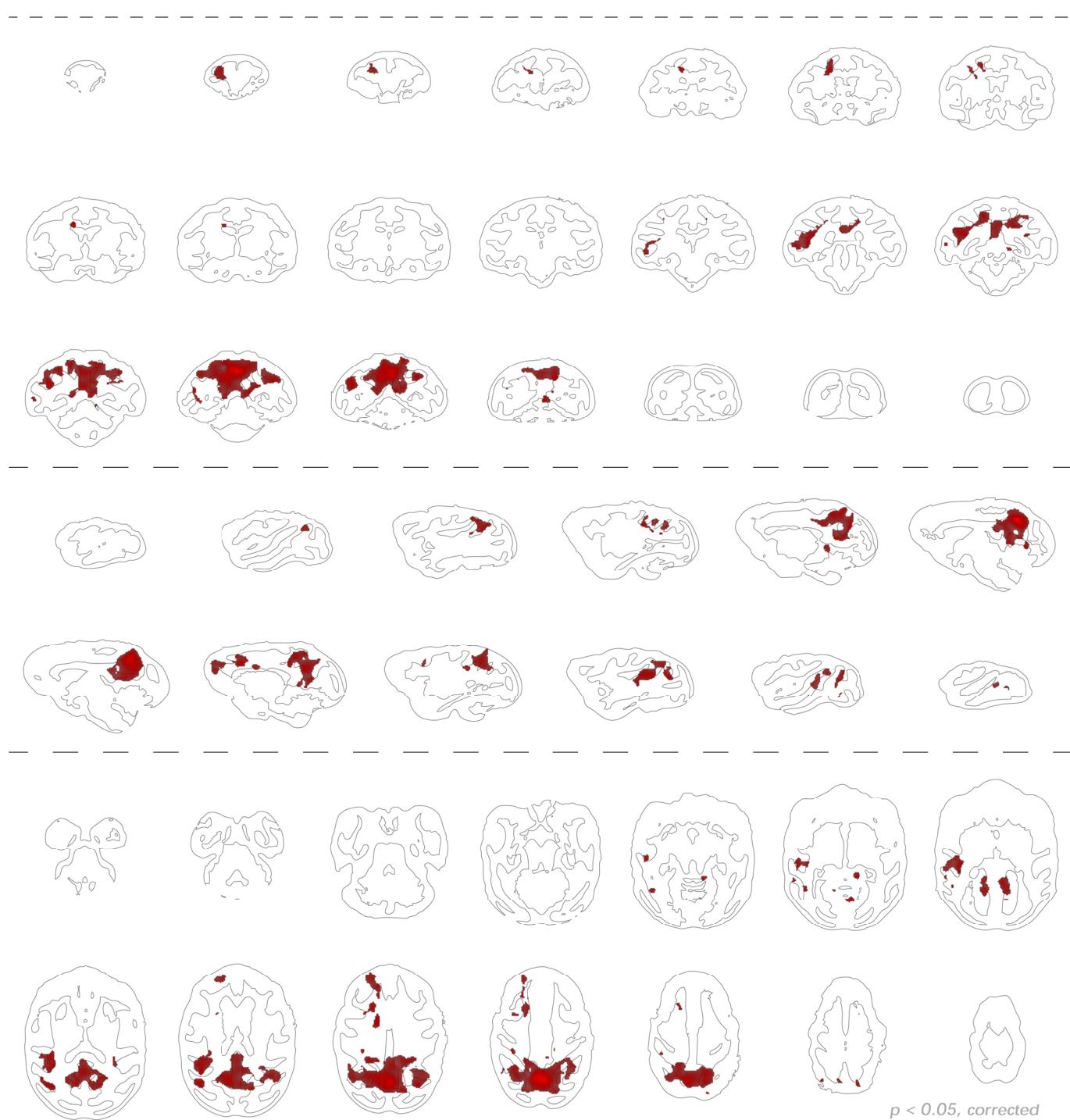
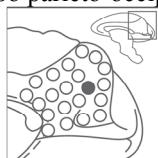


Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.

## Monkey Seed 15

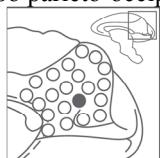


Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.

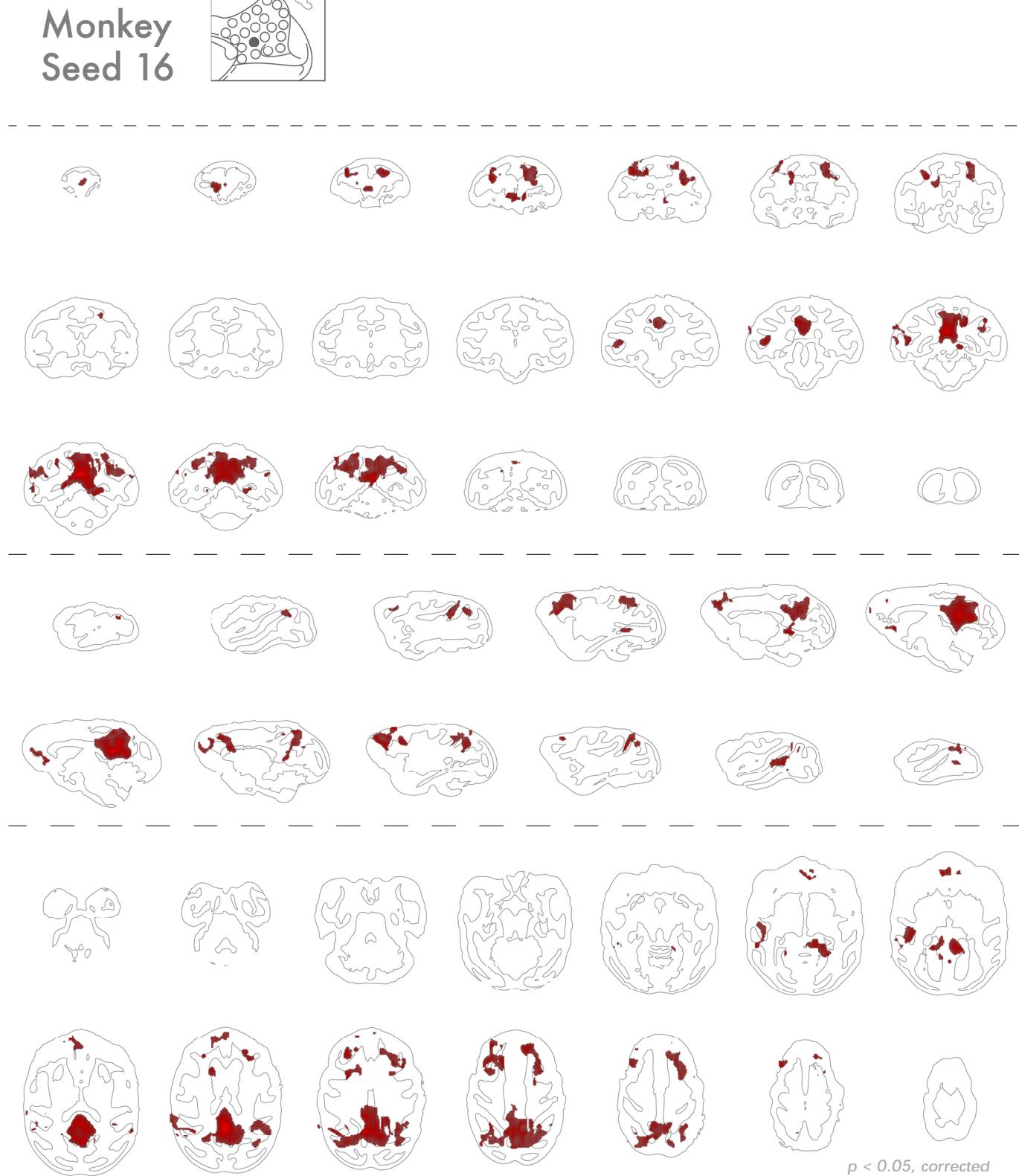


Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.

## Monkey Seed 17

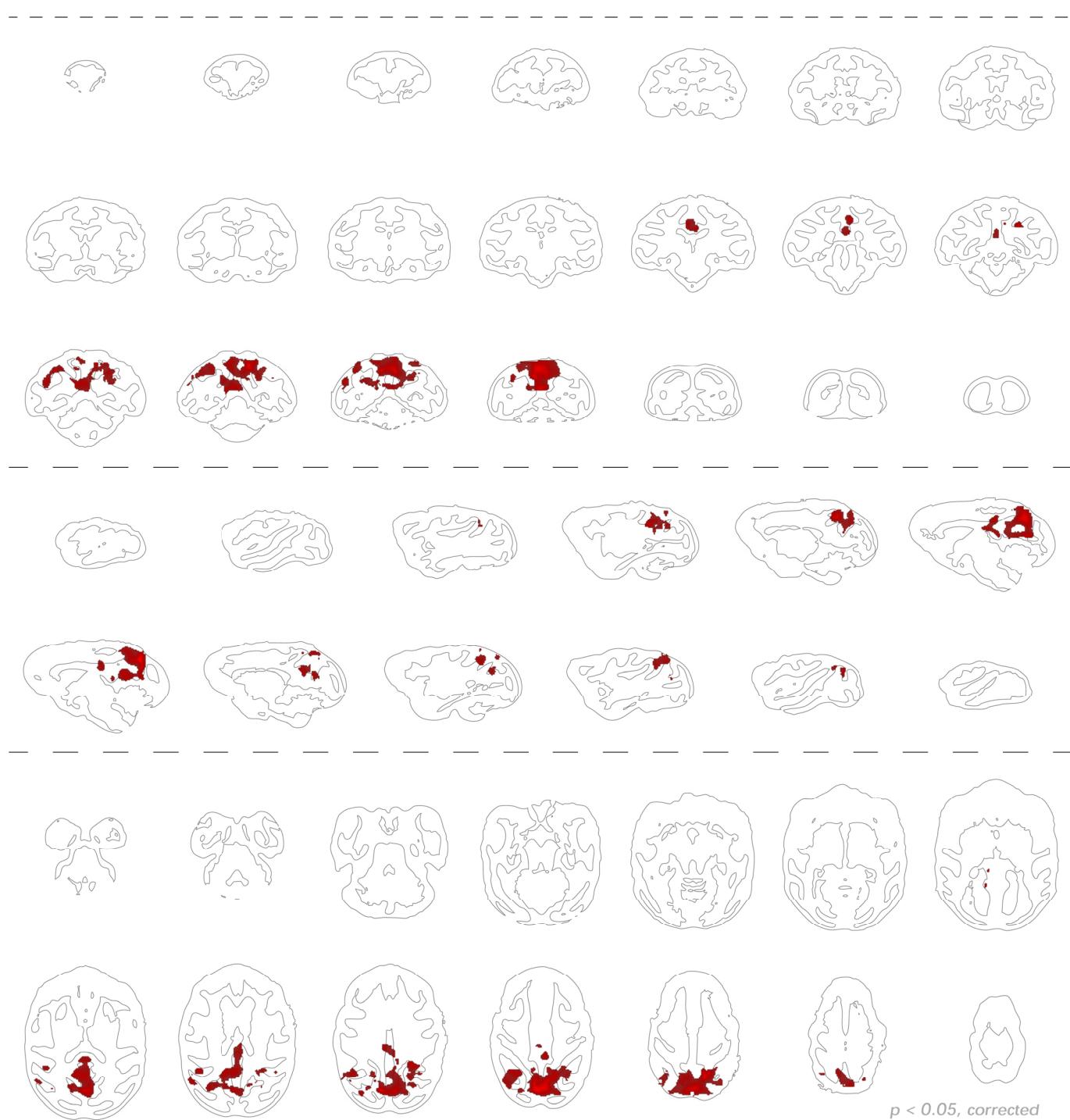
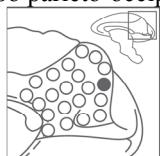


Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.

## Monkey Seed 18

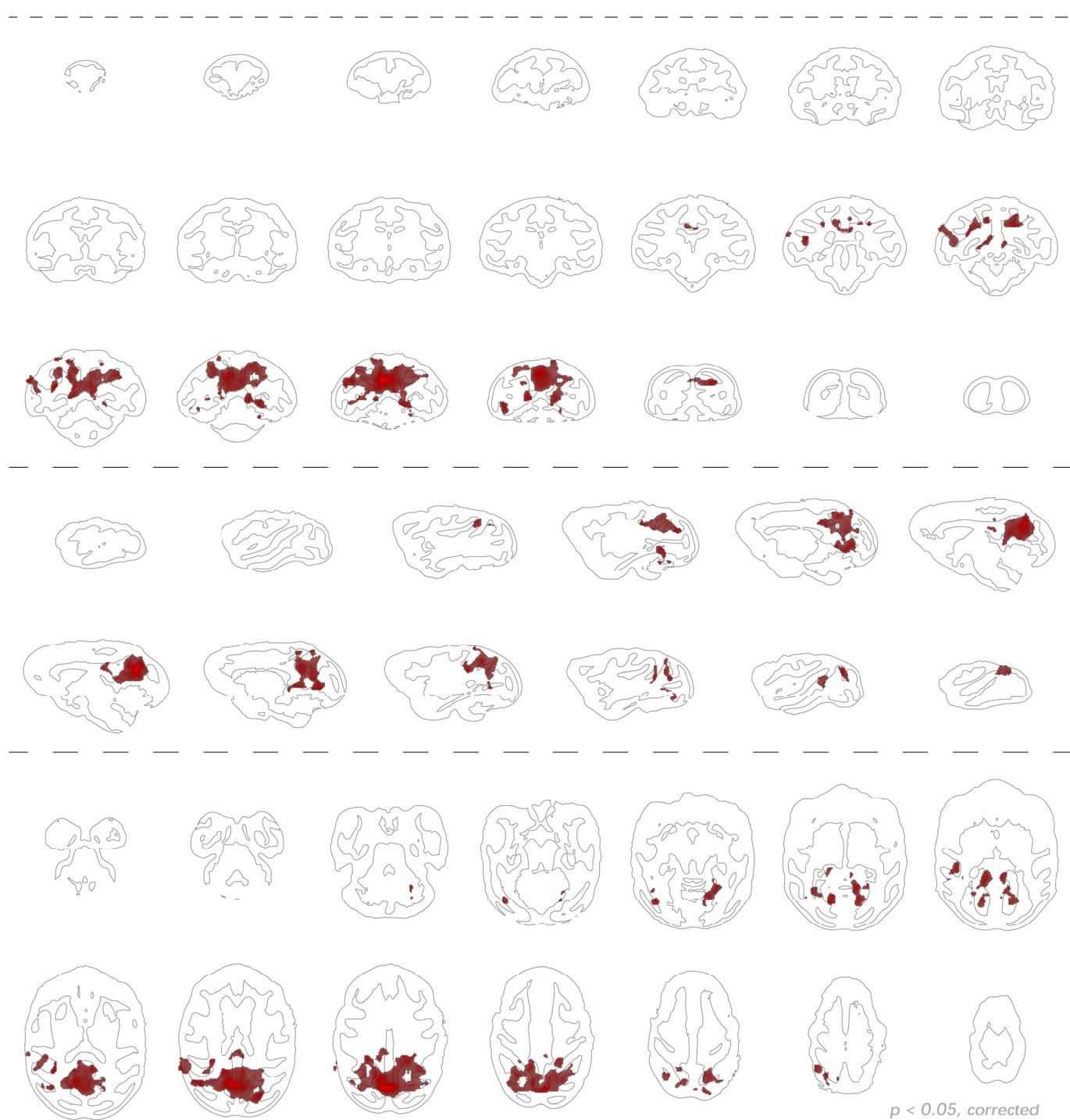
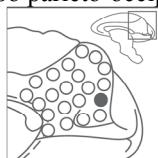
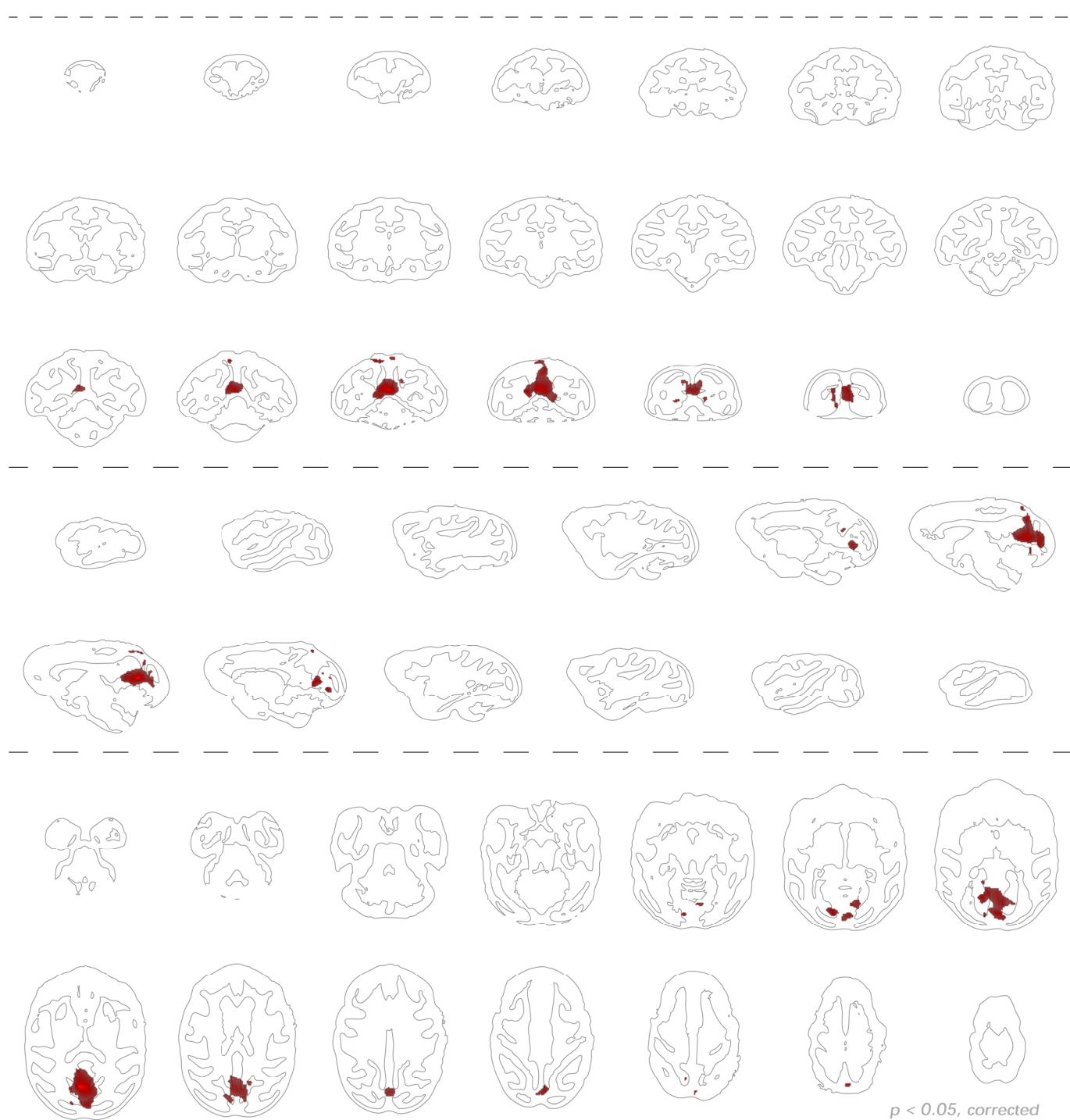
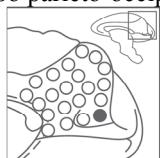


Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.

## Monkey Seed 19



$p < 0.05, \text{ corrected}$

Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.

## Monkey Seed 20

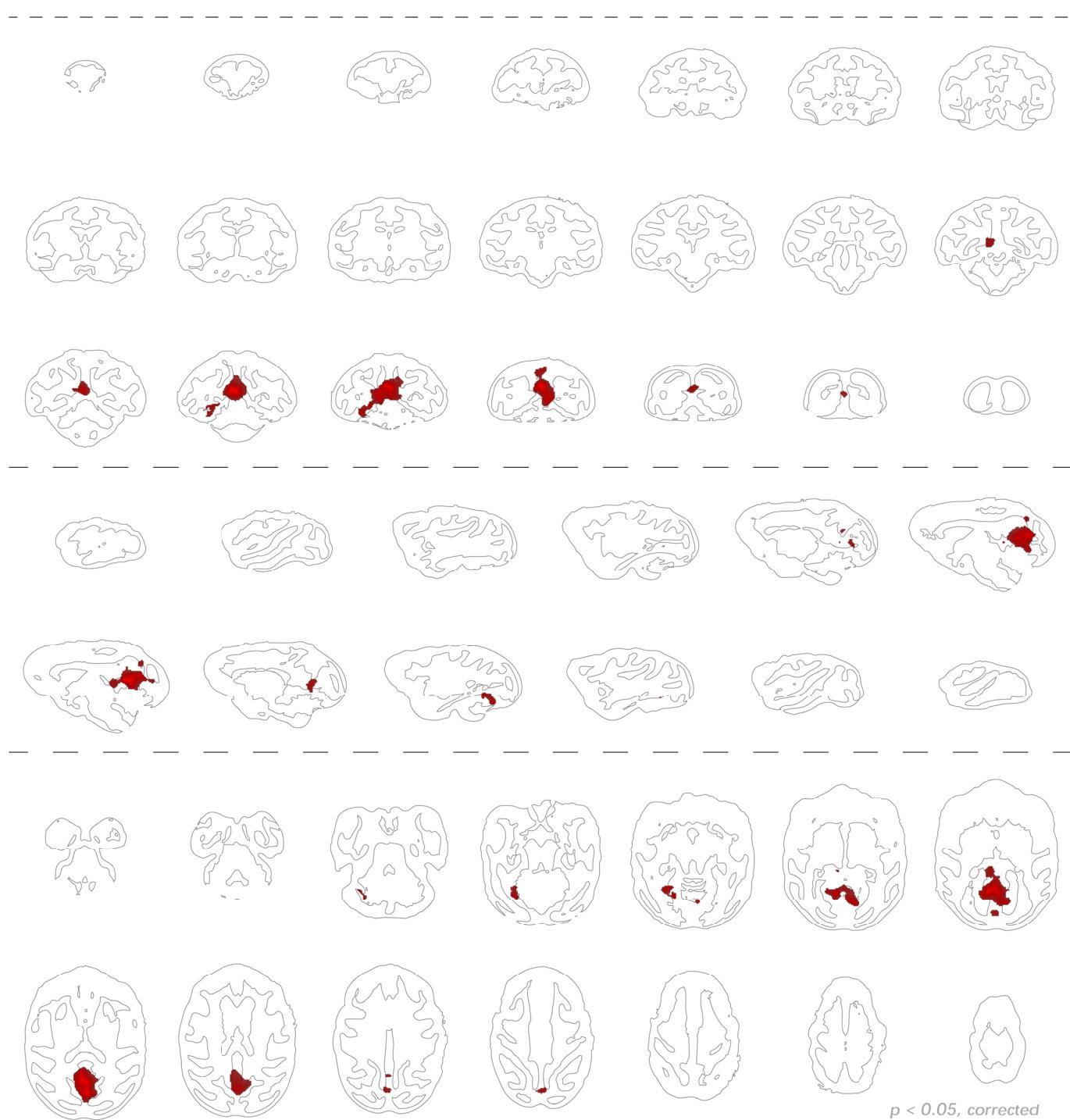
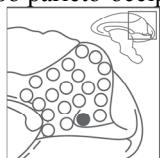


Fig. S3. Individual slice maps for each monkey seed region including coronal, sagittal, and axial slice traces with significant (voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ) voxels superimposed. The first map is a figure legend depicting major anatomical landmarks. cal calcarine sulcus, cere cerebellum, cs central sulcus, iar inferior arcuate sulcus, ips intraparietal sulcus, lf lateral fissure, po parieto-occipital sulcus, ps principal sulcus, sar superior arcuate sulcus, sts superior temporal sulcus.

## Monkey Seed 21

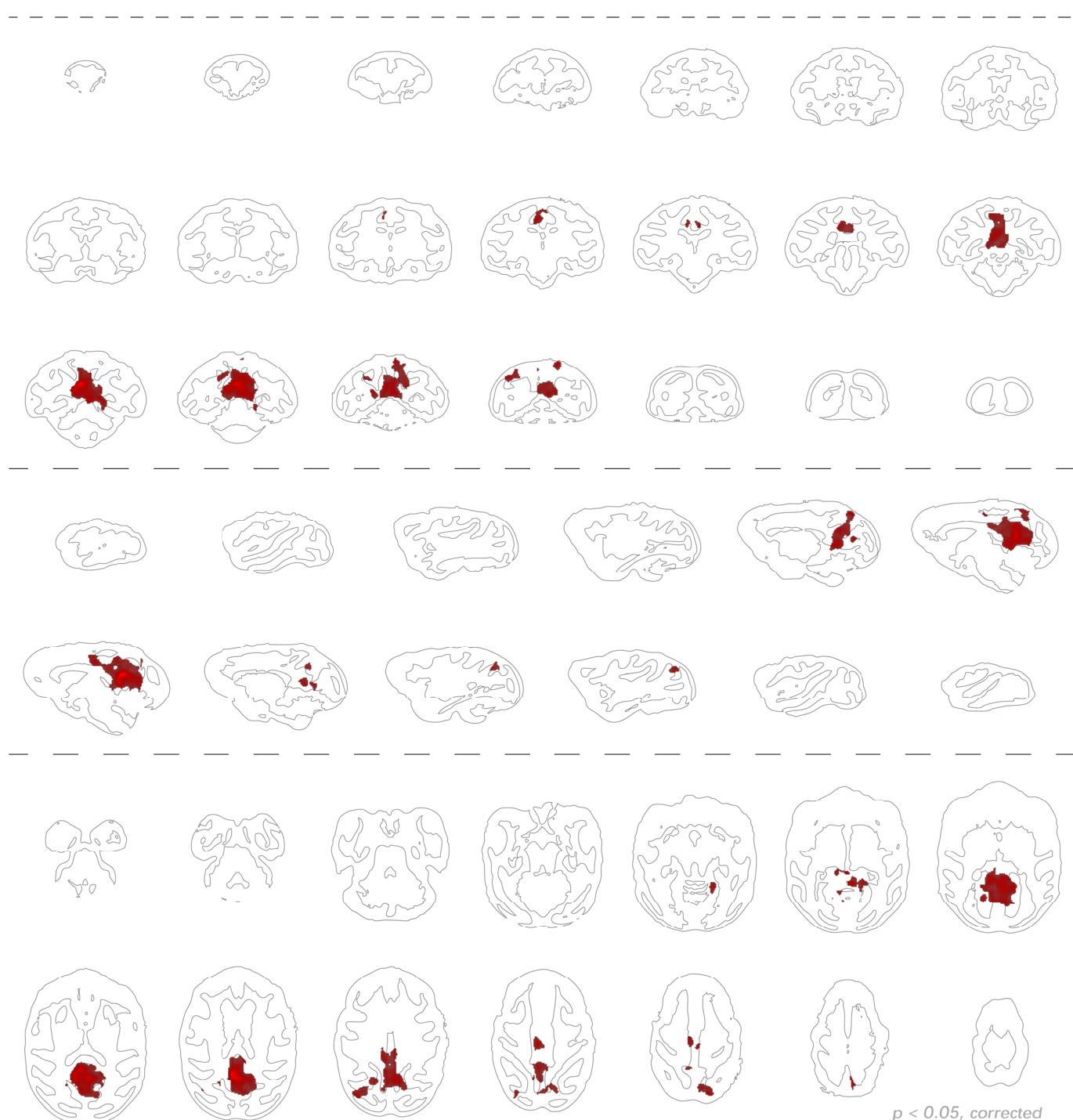


Fig. S4. Contrasts of human seed regions depicted in Fig. 3: sensorimotor (seed 6), cognitive (seed 14), visual (seed 17), and limbic (seed 4) (thresholded at voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ). The contrasts consist of: rows > columns. Original functional connectivity map for each seed falls along the diagonal.

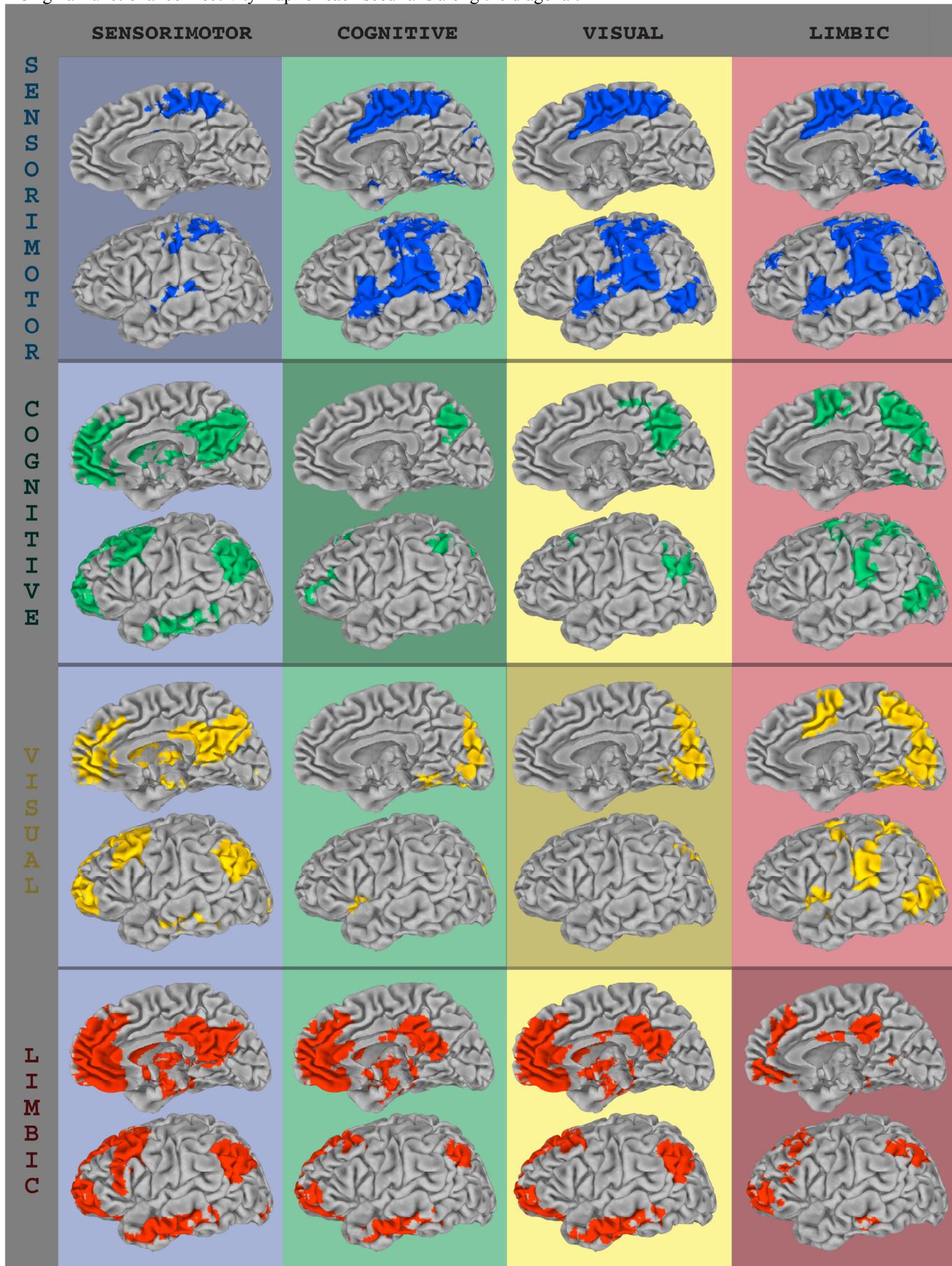


Fig. S5. Contrasts of monkey seed regions depicted in Fig. 3: sensorimotor (seed 6), cognitive (seed 15), visual (seed 19), and limbic (seed 4) (thresholded at voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ). The contrasts consist of: rows  $>$  columns. Original functional connectivity map for each seed falls along the diagonal.

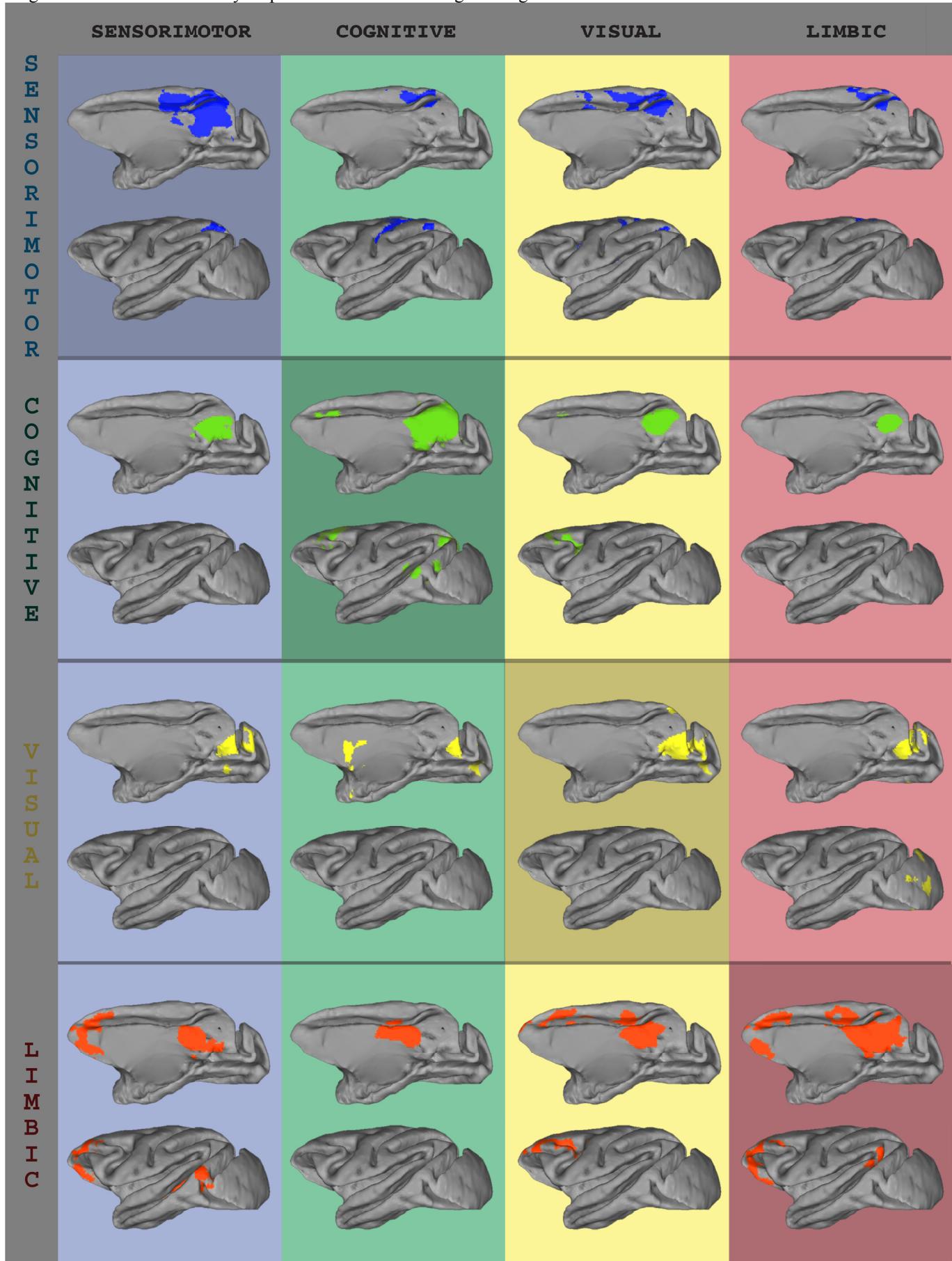


Fig. S6. (A) Average Cramer's V as an indication of clustering consistency, as described in methods. (B) Cluster results for cluster solutions of 4, 5, and 6 in both humans and monkeys. (C) Clustered functional connectivity for results of human and monkey 5 cluster solutions (thresholded at voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ), which were used as examples because they were the minimal solutions which contain three subdivisions within the precuneus.

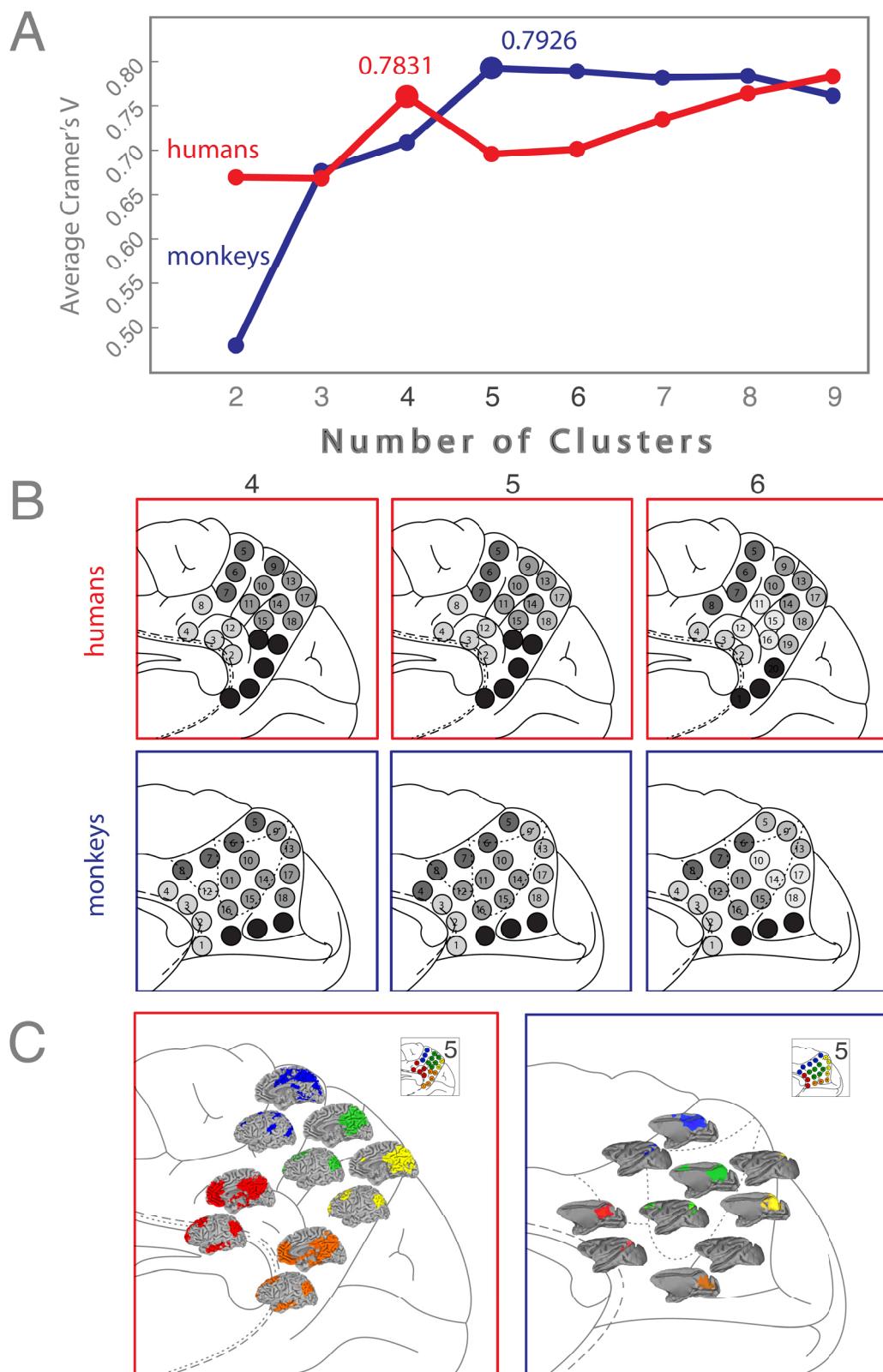


Fig. S7. (1.) A binarized mask was created extending at least 8 mm beyond the traditional anatomical boundaries of the PMC using 3% thresholding of the FSL distribution of the Harvard-Oxford neuroanatomical atlas. (2.) Thresholded RSFC results from human seeds depicted in Fig. 3 (seeds 6, 14, 17, and 4) were turned into ROI masks after subtracting any voxels which fell within the PMC mask. (3.) RSFC results for the extra-PMC seed regions associated with each PMC subdivision (thresholded at voxel Z score,  $>2.3$ ; cluster corrected at  $P < 0.05$ ). The rightmost column depicts the voxelwise RSFC results in a close-up on the PMC. (4.) Each voxel within PMC is color-coded by the PMC subdivision which had the largest Z score for that voxel. The four original PMC seed locations are roughly superimposed.

