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Supplemental Information

**Functionally homologous representation
of vocalizations in the auditory
cortex of humans and macaques**

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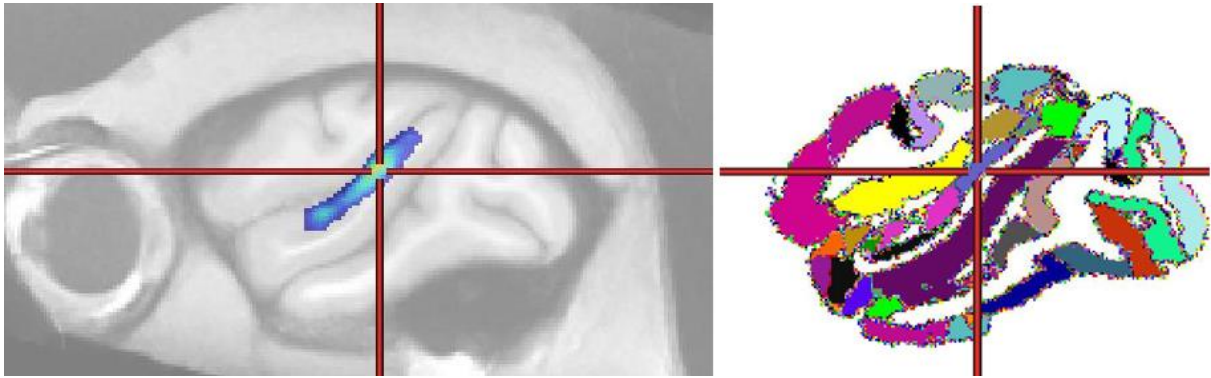


Figure S1. Auditory activation in macaque core areas. Related to Figure 1.

Left: statistical map of the contrast of all sounds vs. silence (in color, $p < 0.05$ corrected) superimposed on a T1-weighted image of the macaque brain viewed along a parasagittal slice. Right: Parcellation from the D99 macaque brain template at the same slice. Maximum activation in core areas, indicated by a red cross, is centred on area A1 (purple region).

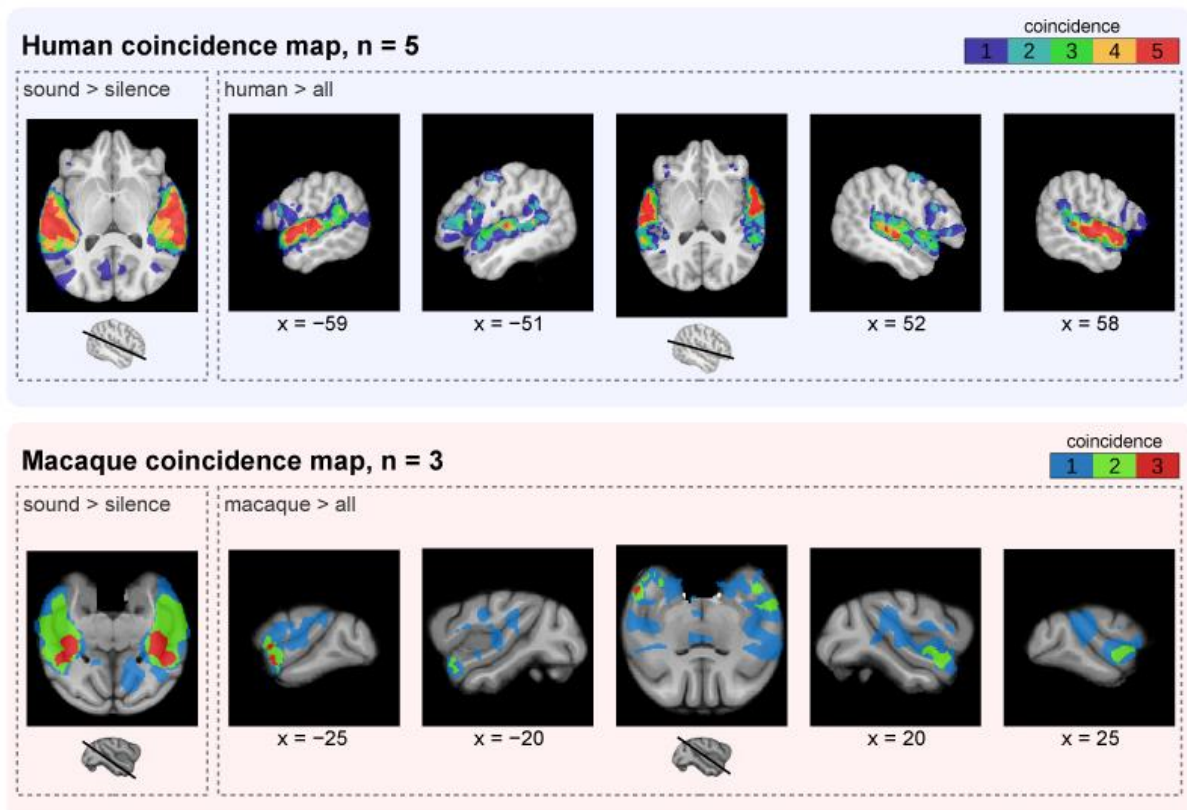


Figure S2. Coincidence maps in humans and macaques. Related to Figure 1.

Coincidence maps indicating in colorscale the number of participants with significant ($p < 0.05$ corrected) activation at each voxel. Top: humans; Bottom: macaques. Leftmost panels: contrast of all sounds vs. silence; other panels show the contrast of CVs vs. all other sounds viewed on one axial (central panel) and two sagittal slices in each hemisphere (negative x values for the left hemisphere). Note the high inter-individual consistency in macaque A1 and left aTVA.

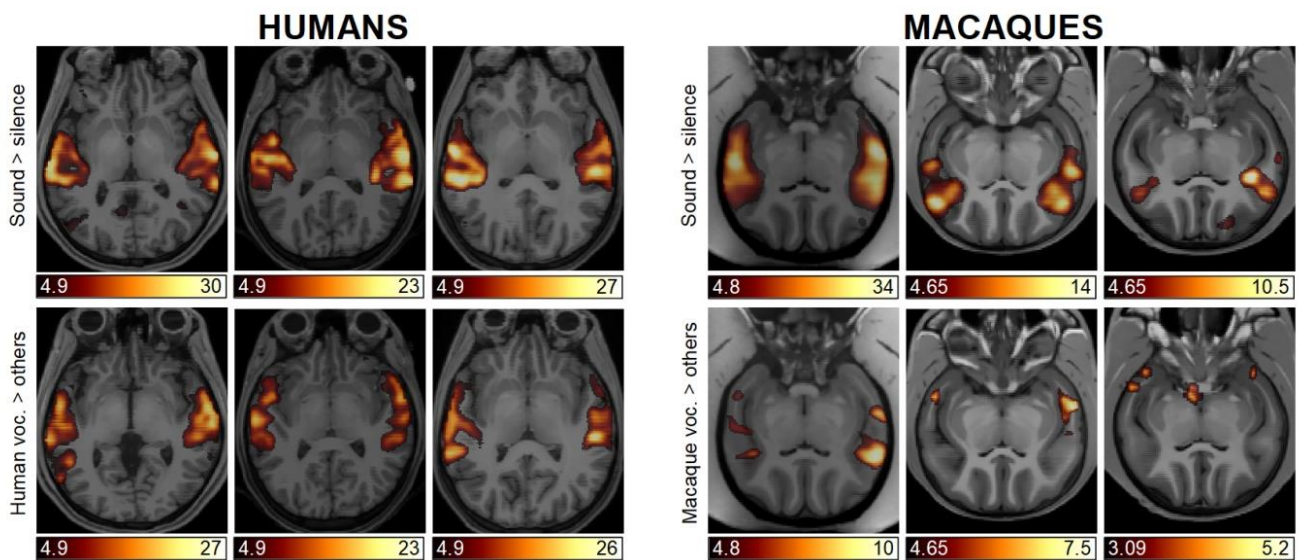


Figure S3. Individual maps in humans and macaques. Related to Figure 1.

Individual contrast maps in 3 human (left) and the 3 macaque participants (right) shown in an axial slice with the t-value for the All sounds vs. silence contrast (top row) and for the CV vs. all other sounds contrast (bottom row) overlaid in colourscale on the individual T1-weighted anatomical scan.

HUMAN BRAIN					MACAQUE BRAIN				
Tvalue	MNI coordinates	HarvardOxford labels	Aglieri (2018) labels	Lobe	Tvalue	Inia19 coordinates	D99 labels	AC map labels	Lobe
42,8	-64 -15 1	superior temporal gyrus, posterior		Left temporal	8,66	-24 2 -3.5	STGr	Ts2	Left temporal
37,0	-65 -8 1	superior temporal gyrus, anterior	Left aTVA	Left temporal	6,34	-20.5 10.5 -8	TGdg	Ts1	Left temporal
30,4	-62 1 -3	superior temporal gyrus, anterior		Left temporal	6,03	-18 -13.5 8.5	A1	A1	Left temporal
28,9	-65 -24 5	superior temporal gyrus, posterior	Left mTVA	Left temporal	5,70	-18.5 -9 0.5	RM	RM	Left temporal
22,5	-65 -42 15	supramarginal gyrus, posterior		Left temporal	5,27	-0.5 3.5 -6	subcortical		Left subcortical
21,6	-70 -32 5	middle temporal gyrus, posterior (STS)		Left temporal	5,00	-26 -3.5 4	1-2		Left parietal
15,8	-53 -44 8	supramarginal gyrus, posterior (STS)	Left pTVA	Left temporal	5,00	-11 -12.5 -11	TF		Left subcortical
14,1	-54 -43 24	supramarginal gyrus, posterior		Left temporal	4,80	-8 7 -5.5	subcortical		Left subcortical
13,8	-53 31 5	inferior frontal gyrus, pars triangularis	Left aFVA	Left frontal	4,79	-21.5 -2.5 10	F1_(4)		Left frontal
13,1	-62 -69 13	inferior temporal gyrus, anterior		Left temporal	4,34	-17 13 6	12m		Left frontal
11,9	-2 3 62	juxtapositional lobule cortex (SMA)		Left frontal	9,15	24.5 -15 9	CL	CL	Right temporal
11,6	-50 12 15	inferior frontal gyrus, pars opercularis	Left mFVA	Left frontal	7,76	26 -3 -2.5	RFB	Ts2	Right temporal
10,6	-54 -2 55	precentral gyrus	Left pFVA	Left frontal	6,94	5 28 5.5	10o		Right frontal
9,5	-60 33 16	inferior frontal gyrus, pars triangularis		Left frontal	6,92	22 4.5 -3.5	RTP	Ts2	Right temporal
9,4	-47 2 -12	planum polare		Left temporal	6,37	18 16 2	12o		Right frontal
8,2	-57 17 25	inferior frontal gyrus, pars opercularis		Left frontal	5,85	20.5 -15.5 7	PGa	A1	Right temporal
8,1	-47 23 7	inferior frontal gyrus, pars opercularis		Left frontal	5,48	0.5 15.5 0	14c		Right frontal
7,7	-33 27 6	insular cortex		Left insula	5,46	19.5 0 7	SII		Right parietal
7,7	-39 -33 14	planum temporale		Left temporal	5,32	12 9 1.5	13I		Right frontal
7,6	-54 22 -21	temporal pole		Left temporal	5,15	20 -8.5 19	1-2		Right parietal
7,0	-5 -18 46	cingulate gyrus, posterior		Left parietal	5,14	20.5 -10 1.5	CM	A1	Right temporal
6,9	-55 -3 22	precentral gyrus		Left frontal	4,98	21 6 -7.5	TGdg	Ts1	Right temporal
6,6	-39 -4 -42	temporal fusiform cortex, anterior		Left temporal					
6,2	-46 10 -22	temporal pole		Left temporal					
5,8	-12 -82 -41	cerebellum		Left cerebellum					
5,1	-27 -67 -48	cerebellum		Left cerebellum					
5,0	-44 -14 18	central opercular cortex		Left insula					
4,7	-45 -5 -43	inferior temporal gyrus, anterior		Left frontal					
32,6	66 -15 -2	superior temporal gyrus, posterior (STS)		Right temporal					
31,2	61 7 -5	superior temporal gyrus, anterior	Right aTVA	Right temporal					
26,4	59 -26 4	superior temporal gyrus, posterior (STS)	Right mTVA	Right temporal					
22,6	54 -32 7	supramarginal gyrus, posterior	Right pTVA	Right temporal					
12,8	60 -39 18	supramarginal gyrus, posterior		Right temporal					
11,4	2 10 63	juxtapositional lobule cortex (SMA)		Right frontal					
11,4	72 -23 14	superior temporal gyrus, posterior		Right temporal					
11,4	72 -30 6	superior temporal gyrus, posterior (STS)		Right temporal					
10,5	60 40 4	frontal pole		Right frontal					
10,2	54 0 52	precentral gyrus	Right pFVA	Right frontal					
10,1	50 18 24	inferior frontal gyrus, pars opercularis	Right aFVA	Right frontal					
9,8	48 10 -16	temporal pole		Right temporal					
9,0	0 3 66	juxtapositional lobule cortex (SMA)		Right frontal					
8,4	70 -49 22	angular gyrus		Right temporal					
8,0	51 25 -3	inferior frontal gyrus, pars triangularis	Right aFVA	Right frontal					
8,0	57 -26 11	planum temporale		Right temporal					
7,2	67 7 24	precentral gyrus		Right frontal					
7,0	16 -80 -40	cerebellum		Right cerebellum					
6,8	42 1 -41	inferior temporal gyrus, anterior		Right frontal					
6,5	3 32 57	superior frontal gyrus		Right frontal					
6,4	10 54 45	frontal pole		Right frontal					
6,3	27 -71 -53	cerebellum		Right cerebellum					
6,2	59 23 21	inferior frontal gyrus, pars opercularis		Right frontal					
5,9	37 9 -21	temporal pole		Right temporal					
5,9	32 34 -23	frontal orbital cortex		Right frontal					
5,7	55 14 3	inferior frontal gyrus, pars opercularis		Right frontal					
5,6	6 13 71	superior frontal gyrus		Right temporal					
5,6	30 -65 -19	cerebellum		Right cerebellum					
5,6	13 -84 -42	cerebellum		Right cerebellum					
5,5	73 -41 -4	middle temporal gyrus, temporooccipital		Right temporal					

Table S1. CV > non-CV maxima of each species at $p < 0.05$ corrected. Related to Figure 1.