**Supplemental information**

**Title: Pre-treatment ongoing cortical oscillatory activity predicts improvement of tinnitus after partial peripheral reafferentation with hearing aids**

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**Supplementary Figure S1.** Unaided air conduction thresholds and aided hearing thresholds with hearing aids. The hearing thresholds of the participants are successfully improved after wearing hearing aids, and the functional gain are about 7 dB at low frequencies (250, 500 Hz) and 18 dB at mid and high frequencies (1, 2, 3, 4 kHz).



**Supplementary Figure S2. Source-localized correlation analysis between the percentage improvements in the numerical rating scale (NRS) of tinnitus-related distress and the resting-state quantitative electroencephalography data before wearing hearing aids (HAs) in subgroup analysis.** In both subgroups (A and B) divided by the odd- or even-number of enrollment order, the percentage improvements in NRS tinnitus-related distress correlated negatively with the pre-HA source-localized activities at the right inferior parietal lobule, right parahippocampus, and right posterior cingulate cortex for the gamma frequency band.



**Supplementary Figure S3. Source-localized correlation analysis between the percentage improvements in the numerical rating scale (NRS) of tinnitus perception and the resting-state quantitative electroencephalography data before wearing hearing aids (HAs) in subgroup analysis.** In both subgroups (A and B) divided by the odd- or even-number of enrollment order, the activities of the bilateral subgenual anterior cingulate cortex exhibited marginally significant negative correlations with the percentage improvements in NRS tinnitus perception for the beta 3 frequency band.