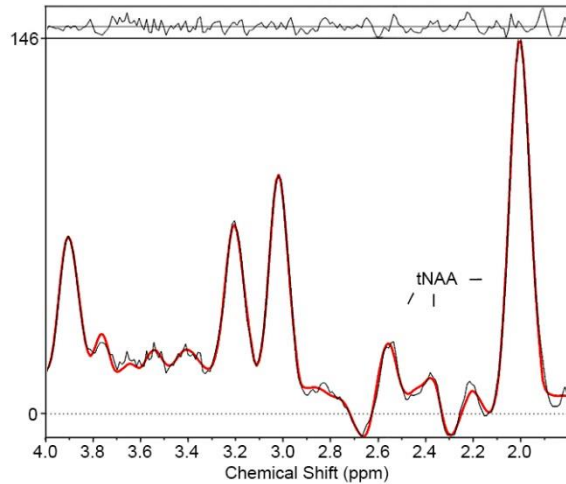
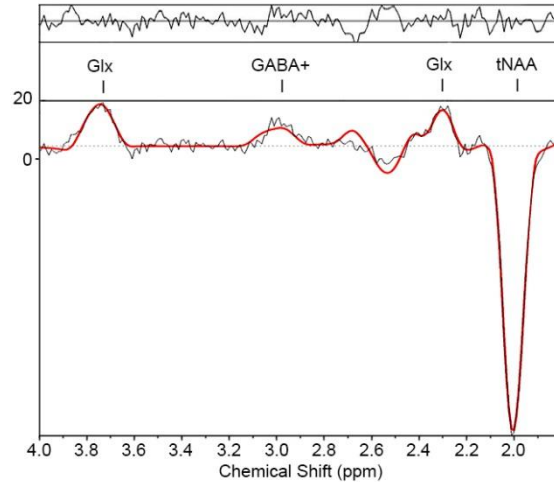


*Supplementary Material*

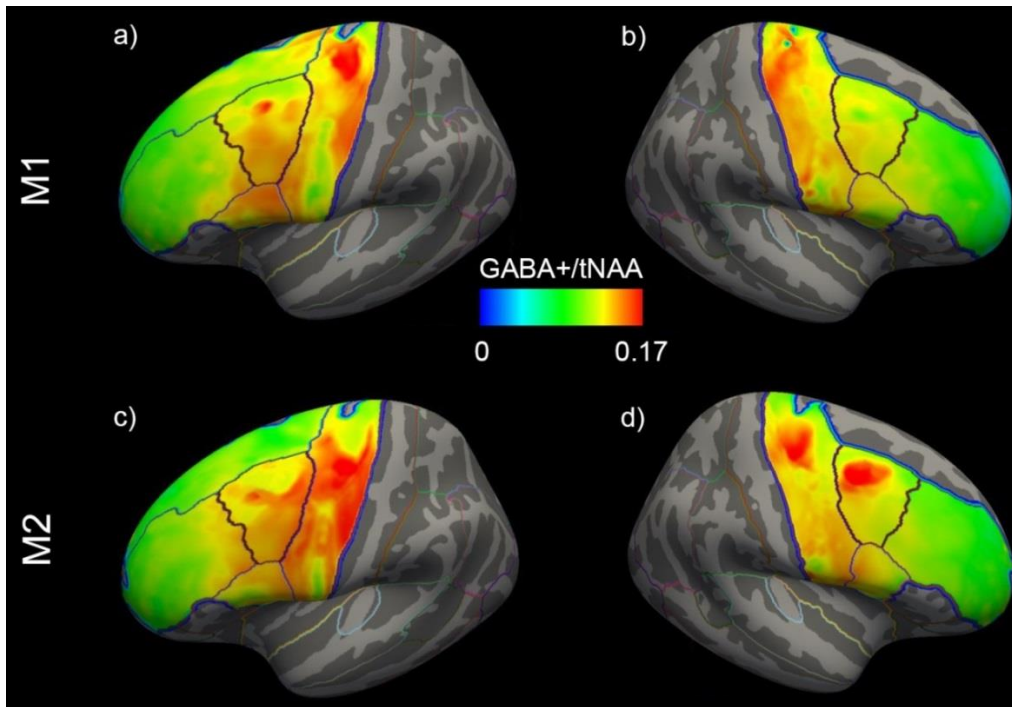
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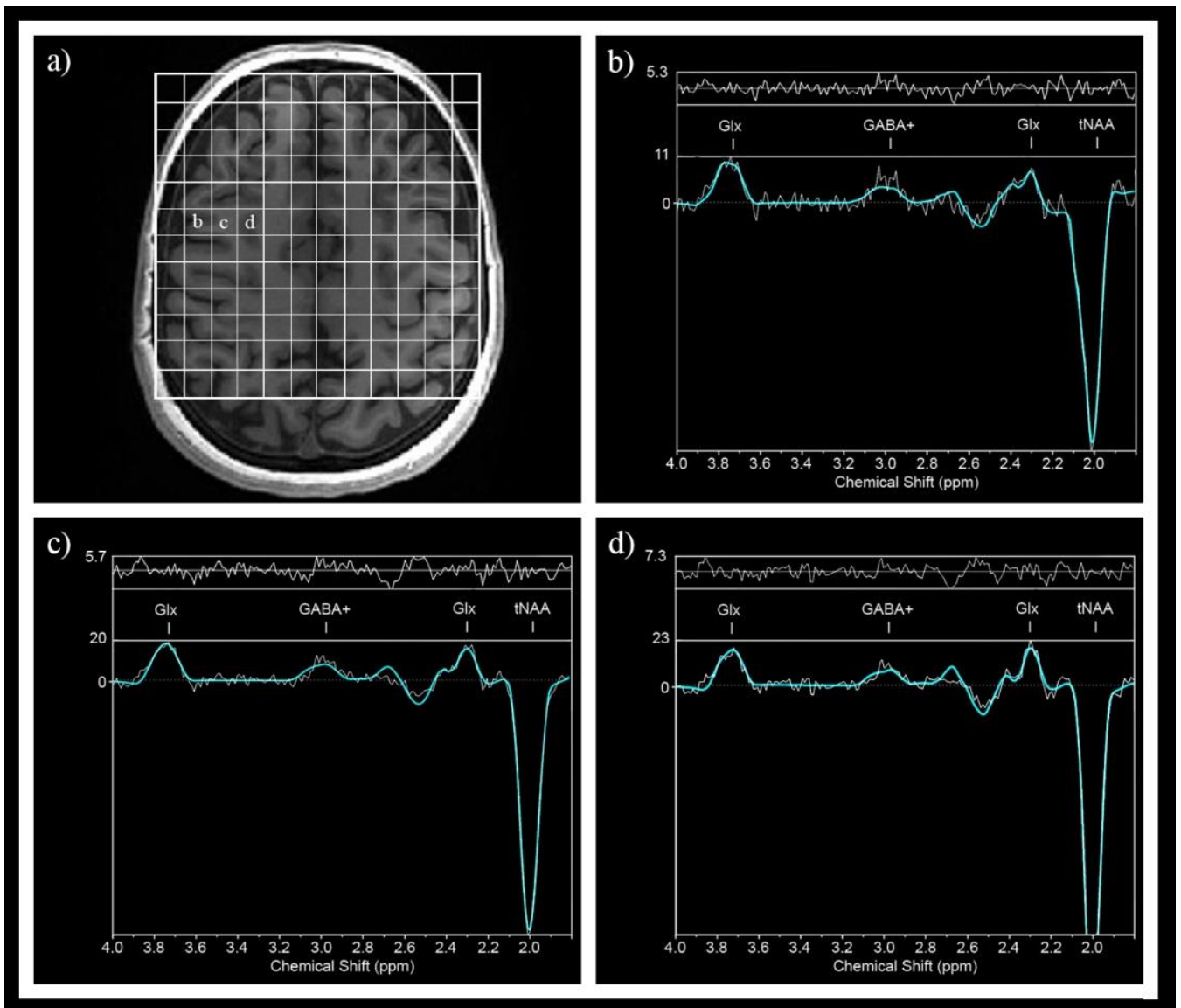
**DIFF**



**Supplement figure 1:** Exemplary unedited (EDIT OFF) and edited (DIFF) spectra derived from the caudal middle frontal area showing peaks of total N-acetylaspartate (tNAA), a combination of GABA and macromolecules (=GABA+) and a combined signal of glutamate and glutamine (=Glx).



**Supplement figure 2:** Mean distribution of GABA+/tNAA ratios before (=M1) and after (=M2) the treatment period of the left (a and c) and right (b and d) hemisphere. tNAA = total N-acetylaspartate; GABA+ = a combination of GABA and macromolecules.



**Supplement figure 3:** Example series of spectra in cortical regions demonstrating the effects of lipid suppression on spectral quality. Stable quantification of skull-near (b) to inner cerebral (c,d) spectra is shown. Voxel positions of spectra (b,c,d) are marked in the voxel grid (a). tNAA = total N-acetylaspartate; GABA+ = a combination of GABA and macromolecules, Glx = glutamate + glutamine.

**Supplement table 1:** Detailed medication of the TRD patients (with dosages in milligram where documented)

<b>subject</b>	<b>medication</b>
1	sertraline 100mg, pregabalin
2	venlafaxine 150mg, bupropion 150mg, lamotrigine 100mg, pregabalin 225mg, olanzapine 2.5mg, amitriptyline 20mg
3	none
4	sertraline 200mg, escitalopram 5mg
5	none
6	sertraline 100mg
7	escitalopram 10mg, mianserin 15mg
8	escitalopram 30mg
9	venlafaxine 150mg, lithium 450mg
10	milnacipran
11	melitracen
12	none