Supplementary materials

PANSS

The Pediatric Acute Neuropsychiatric Symptom Scale (PANSS) was developed, based on the clinical experience, by Swedo S, Kovacevic M, Latimer B and Leckman J, with the help of Pohlman D, Moore K and many other parents.

In our study, PANSS was used by investigators with parents of patients, rating the severity of symptoms and impairment, on the same day as the blood draw.

The structure of the scale provides for each symptom, included in the PANS criteria, a score from 0 to 5 points (none to very severe), with a total score range of 0–50 points.

The impairment in self-esteem, family life, social acceptance, and school or job functioning, is estimated with a total score range of 0–50 points (no impairment to extreme difficulties).

For the PANS scale, see:

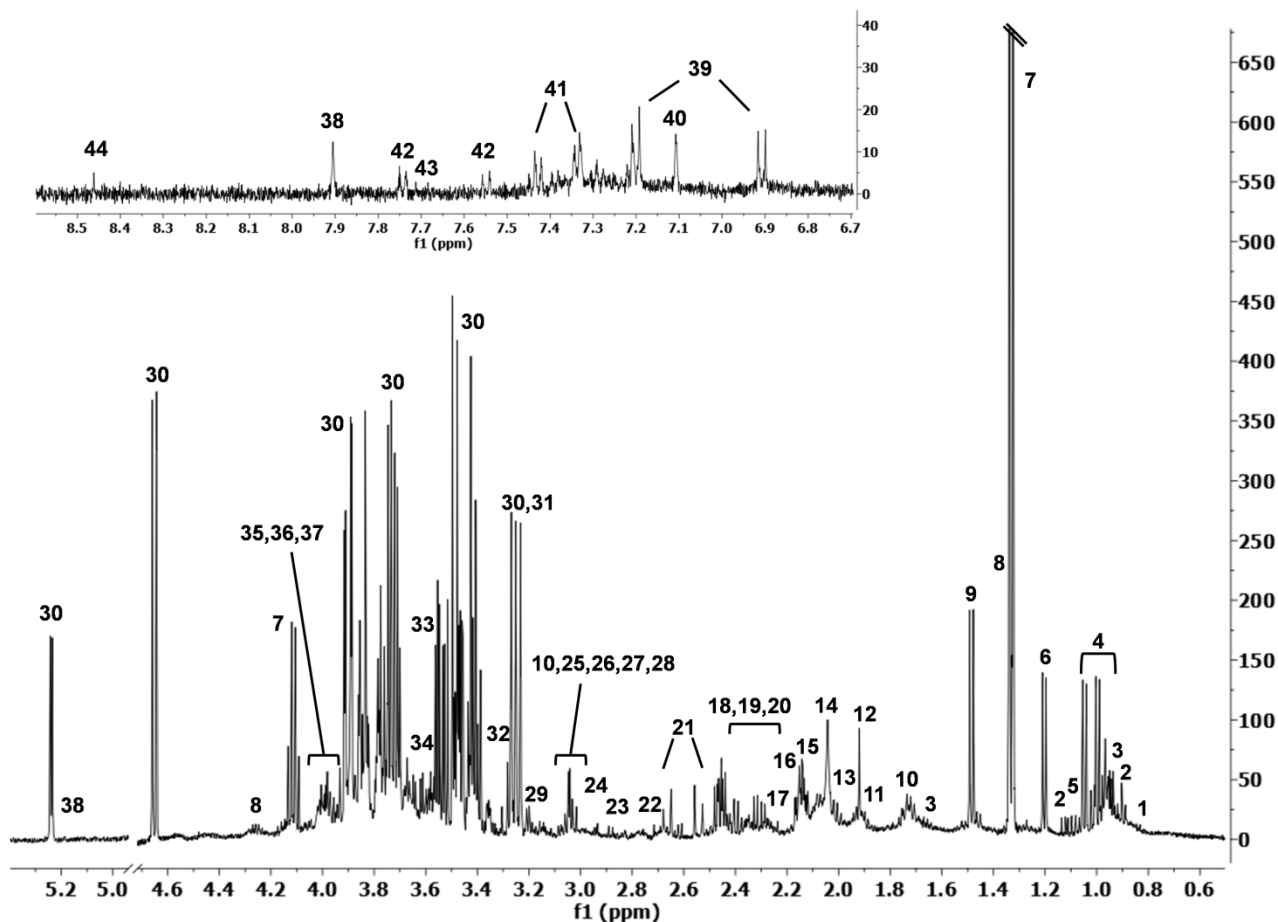https://pandasnetwork.org/wpcontent/uploads/2018/11/pandas_pans_scale.pdf

Figure S1 Signal's assignments of the serum metabolites in an ^{1}H-NMR spectrum: 1. 2-Hydroxyisovalerate; 2. 3-methyl-2-Oxoglutarate; 3. 2-Hydroxybutirate; 4.Branched Aminoacids: Valina, Leucine, Isoleucine, 5. 2-Methylglutarate; 6. 3-Hydroxybutirate; 7. Lactate; 8.Threonine; 9. Alanine; 10. Lysine; 11. Arginine; 12. Acetate; 13. Proline; 14. N-acetyl-Groups; 15. Methionine; 16. Glutamine; 17. Acetone; 18. Glutamate; 19.Pyruvate; 20. Pyroglutamate; 21. Citrate; 22. Dimethylamine; 23. Aspartate; 24. Asparagine; 25. Creatine; 26. Creatine phosphate; 27. Creatinine; 28: Ornithine; 29. Choline; 30. Glucose; 31. Betaine; 32.TMAO; 33. Glycine; 34. Glycerol; 35. Serine; 36. Fructose; 37. Myo-Inositol; 38. Mannose; 39.Tyrosine: 40. Histidine; 41. Phenylalanine; 42. Tryptophan; 43. τ methyl-Histidine; 44. Formate.

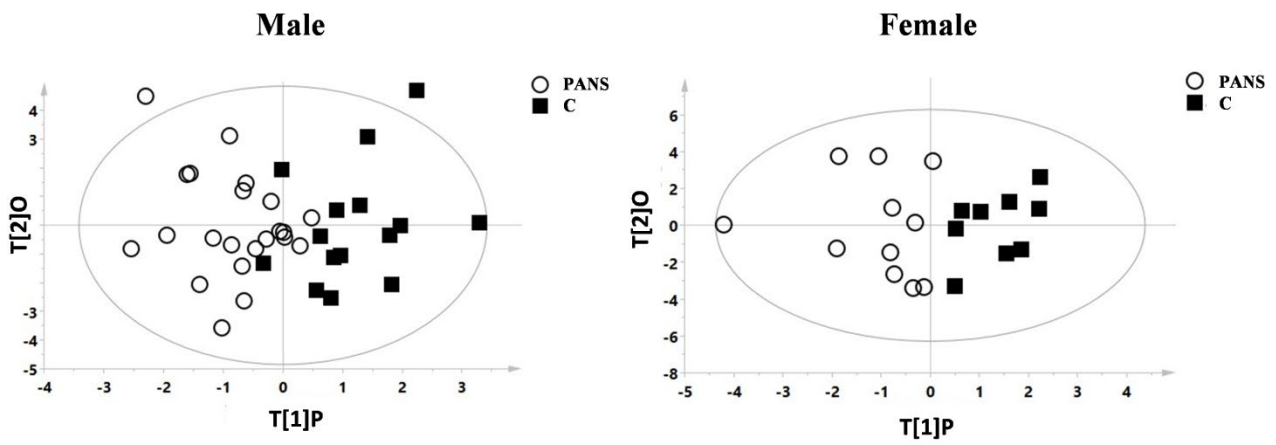## PANS *vs* Controls: Gender Analysis

Figure 2S. Multivariate statistical model of the patients affected by PANS and controls subjects based on the gender. Statistical parameters were: male model: $R^2X=0.40$, $R^2Y=0.57$, $Q^2=0.41$, *p*-value = 0.008. Female model: $R^2X=0.6$, $R^2Y=0.6$, $Q^2=0.30$, *p*-value = 0.06.