

Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: Phenotypes of baseline volunteers. (Excel file)

File Name: Supplementary Data 2

Description: POSITIVE AND NEGATIVE SYNDROME SCALE (PANSS) for SCZ patients. (Excel file)

File Name: Supplementary Data 3

Description: Cognitive assessment of participants by MATRICS consensus cognitive battery (MCCB). (Excel file)

File Name: Supplementary Data 4

Description: Statistics for the metagenomic shot-gun sequencing data. (Excel file)

File Name: Supplementary Data 5

Description: a: Significantly differentially enriched mOTU between SCZ patients and healthy controls. (Excel file);

b: Significantly differentially enriched genus between SCZ patients and healthy controls. (Excel file);

File Name: Supplementary Data 6

Description: a: Kyoto Encyclopedia of Genes and Genomes (KEGG) functional modules differentially enriched in gut microbiota between SCZ patients and controls (Excel file).

b: Kyoto Encyclopedia of Genes and Genomes (KEGG) functional pathways differentially enriched in gut microbiota between SCZ patients and controls (Excel file).

File Name: Supplementary Data 7

Description: a: The presence of GBMs in 42 species (Excel file).

b: The pvalue of GBMs in 42 species in our healthy people and SCZ patients (Excel file).

File Name: Supplementary Data 8

Description: The effect of confounders in RF classifier (Excel file).

File Name: Supplementary Data 9

Description: a: Phenotypes of validation cohort (Excel file).

b: Statistics for the metagenomic shot-gun sequencing data of validation cohort (Excel file).

File Name: Supplementary Data 10

Description: Significantly differentially enriched mOTU between healthy controls and 38 baseline SCZ patients or 38 treated SCZ patients. (Excel file)

File Name: Supplementary Data 11

Description: Alterations in abundance of mOTUs in the gut of SCZ patients after 3-month antipsychotics treatment (Excel file).

File Name: Supplementary Data 12

Description: Expressed gene in the intestine(a), colon(b), PFC(c), striatum(d) and hippocampus(e) of the mice transplanted with *Streptococcus vestibularis* or saline(Excel file).

File Name: Supplementary Data 13

Description: Concentrations of dopamine, 5-hydroxytryptamine, 4-aminobutyric acid, and tryptophan in various brain regions of the mice transplanted with *Streptococcus vestibularis* or saline (Excel file).

File Name: Supplementary Data 14

Description: ELISA kit summary (Excel file).

File Name: Supplementary Data 15

Description: The primers of qPCR in this study (Excel file).