**Supplementary Material**

**Supplementary Table 1.** Nutrients composition of both ND and HTD were similar as shown in the table below. ND, normal diet; HTD, high-tryptophan diet.

| Nutrients                | Content                      |
|-------------------------|------------------------------|
| Metabolizable energy    |                              |
| Protein                 | 23.07%                       |
| Carbohydrate            | 65.08%                       |
| Fat                     | 11.85%                       |
| Vitamin                 |                              |
| Vitamin A               | 7800.00 IU/kg                |
| Vitamin D               | 1200.00 IU/kg                |
| Vitamin E               | 67.00 mg/kg                  |
| Vitamin K               | 5.00 mg/kg                   |
| Vitamin B1              | 10.00 mg/kg                  |
| Vitamin B2              | 15.00 mg/kg                  |
| Vitamin B6              | 10.00 mg/kg                  |
| Vitamin B12             | 0.02 mg/kg                   |
| Nicotinic acid          | 55.00 mg/kg                  |
| Pantothenic acid        | 22.00 mg/kg                  |
| Biotin                  | 0.20 mg/kg                   |
| Folic acid              | 6.60 mg/kg                   |
| Mineral substance       |                              |
| Sodium (Na)             | 3.10 g/kg                    |
| Magnesium (Mg)          | 2.90 g/kg                    |
| Kalium (K)              | 7.40 g/kg                    |
| Cuprum (Cu)             | 11.40 mg/kg                  |
| Iron (Fe)               | 113.70 mg/kg                 |
| Manganese (Mn)          | 80.00 mg/kg                  |
| Zinc (Zn)               | 31.60 mg/kg                  |
| Selenium (Se)           | 0.20 mg/kg                   |
| Iodine (I)              | 0.70 mg/kg                   |
Supplementary Table 2. Amino acids present in ND and HTD (g/kg). The ND and HTD are the same composition in nutrients except the tryptophan content. ND, normal diet; HTD, high-tryptophan diet.

| Aminoacids              | ND  | HTD |
|-------------------------|-----|-----|
| Methionine+Cystine      | 5.80| 5.80|
| Lysine                  | 8.90| 8.90|
| Arginine                | 9.90| 9.90|
| Leucine                 | 14.80| 14.80|
| Isoleucine              | 7.40| 7.40|
| Threonine               | 6.60| 6.60|
| Valine                  | 8.90| 8.90|
| Histidine               | 4.90| 4.90|
| Phenylalanine+Tyrosine  | 14.60| 14.60|
| **Tryptophan**          | **2.10**| **4.00**|
Supplementary Fig 1. Schematic showing the timeline of seizure induction, diet intervention, acoustic stimulation, UHPLC and 16S rDNA microbiota profiling at various time points in experiment. PND, postnatal day; ND, normal diet; HTD, high-tryptophan diet; UHPLC, ultra-high-pressure liquid chromatography; S-IRA, seizure-induced respiratory arrest.