Table 2 The list of Psychobiotics and their positive psycho effects (Adopted from Oroojzadeh et al., 2022)

| Potential Psychobiotics | Dosage of Psychobiotics | Observed Psycho Effect | Study Model |
|---|---|---|---|
| B. longum 1714 | 1 × 10^9 CFU/day by the stick with probiotic strains mixed into milk, drunk each morning for 4 weeks | Decreased stress and enhanced memory | Clinical/N = 22 healthy male volunteers |
| L. rhamnosus (JB-1) | 1 × 10^9 CFU/day as capsule for 4 weeks | Decreased stress-related behaviors, corticosterone release, and altered expression of central GABA receptors | Clinical/N = 29 healthy male volunteers |
| L. reuteri ATG-F4 | 1 × 10^7 CFU/day as drinking water for 4 weeks | Anti-inflammatory effects, interleukin (IL)-10, and serum dopamine levels significantly increased | Animal model/N = 10 male mice |
| Pedicoccus pentosaceus WS11, L. plantarum SK321, L. fermentum SK324, L. brevis TRBC 3003, B. adolescentis TBRC 7154, Lactococcus lactis subsp. lactis TBRC 375 | 6 × 10^9 CFU/day as cell pellets administered daily via oral gavage for 14 days | Reduced anxiety level, increased locomotor function, improved short-term memory | Animal model/N = 7 male Wistar rats |
| L. gasseri CP2305 | 1 × 10^10 CFU/day mixed with acid milk beverages for 5 weeks | Improved sleep quality, effect on the growth of fecal Bacteroides spp. involved in intestinal inflammation | Clinical/N = 21 male and N = 11 female healthy students |
| L. plantarum PS128 | 1 × 10^10 CFU/day as pellet for 2 weeks by oral administration | Reduced tic-like behaviors | Animal model/N = 10 male Wistar rats |
| L. plantarum PS128 | 3 × 10^10 CFU/day as capsule for 4 weeks | Improve opposition/defiance behaviors in ASD children | Clinical/N = 80 children (7–15 years) with ASD |
| L. plantarum PS128 | 1 × 10^10 CFU/day as pellet by oral gavage for 4 weeks | Reduced motor deficits, elevated corticosterone, and prevention of Parkinson's disease | Animal model/N = 18 male mice |
| Multi-strain probiotic (Bacillus coagulans Unique IS2, L. rhamnosus UBLR58, B. lactis UBBLa70, L. plantarum UBLP40, B. breve UBBr01, B. infantis UBBI01) | 1 × 10^9 CFU/capsule, twice a day for 28 days | Reduction in depression anxiety stress scale and state-trait anxiety inventory | Clinical/N = 80 students (63 female and 17 male) |
| L. plantarum 90sk and B. adolescentis 150 | 0.5 mL/day of the mixture includes 1 × 10^7 CFU of B. adolescentis and 1 × 10^8 CFU of L. plantarum, by oral gavage for 14 days | Reduced depressive-like behavior | Animal model/N = 48 male mice with anxiety-like behavior and measures of despair |
| L. rhamnosus JB-1 | 1 × 10^9 CFU/day by oral treatment for 14 days | Antidepressant effects | Animal model/N = 46 male mice with anxiety-like behavior and measures of despair |
| L. casei W56, L. acidophilus W22, L. paracasei W20, B. lactis W51, L. salivarius W24, L. lactis W19, B. lactis W52, L. plantarum W62, and B. bifidum W23 | 3000 mg daily oral treatment for 6 months | Normalized gut-microbiome composition, reduced inflammation and gastrointestinal discomfort, increased body weight | Clinical/N = 60 patients with anorexia nervosa (13–19 years) |