

Search strategy for the Pubmed database is as follows, and filters in article types, publication dates and species, we chose clinical trials, 10 years and humans respectively.

Table 1 Search strategy for the Pubmed database

1. probiotics. Mesh.	27. magnetic resonance imaging. Mesh.
2. culturelle. ti, ab	28. fMRI. ti, ab
3. bifidobacteria. ti, ab	29. MRI. ti, ab
4. lactobacilli. ti, ab	30. MR. ti, ab
5. escherichia coli. ti, ab	31. functional magnetic resonance imaging. ti, ab
6. yogurt. ti, ab	32. NMR Imaging. ti, ab
7. yeast. ti, ab	33. neuroimaging. ti, ab
8. saccharomyces. ti, ab	34. brain activity. ti, ab
9. bacillus. ti, ab	35. MR tomography. ti, ab
10. enterococcus. ti, ab	36. independent component analysis. ti, ab
11. streptococcus. ti, ab	37. functional network connectivity. ti, ab
12. fermented milk. ti, ab	38. amplitude of low frequency fluctuations. ti, ab
13. sour milk. ti, ab	39. regional homogeneity. ti, ab
14. 1 or 2-13	40. functional connectivity. ti, ab
15. gastrointestinal microbiome. Mesh.	41. central. ti, ab
16. gut microbiota. ti, ab	42. brain. ti, ab
17. gut microbiome. ti, ab	43. neuro. ti, ab
18. gut microflora. ti, ab	44. ALFF. ti, ab
19. intestinal microflora. ti, ab	45. FALFF. ti, ab
20. intestinal bacteria. ti, ab	46. ReHo. ti, ab
21. intestinal microbiome. ti, ab	47. ROI. ti, ab
22. microbiome. ti, ab	48. ICA. ti, ab
23. microbiota. ti, ab	49. FC. ti, ab
24. flora. ti, ab	50. 27 or 28-49
25. bacteria. ti, ab	51. 14 or 26
26. 15 or 16-25	52. (Final search) 50 and 51