

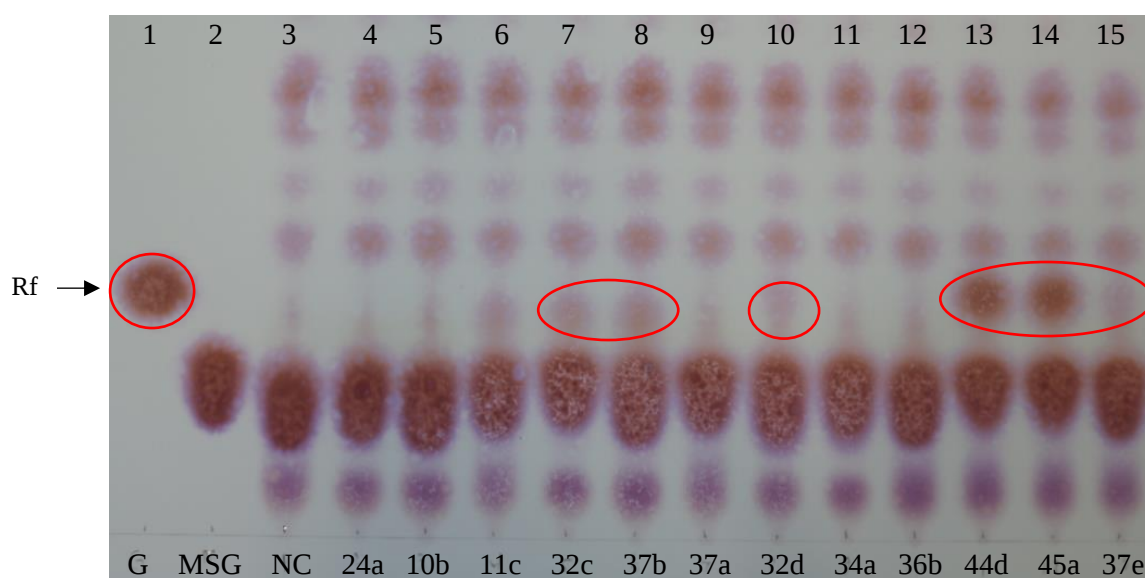


Figure S1. Thin-layer chromatography (TLC) analysis of GABA producing-LAB. Lane 1: GABA standard (G); lane 2: monosodium glutamate (MSG); lane 3: negative control (NC); lane 7–8, 10, 13–15: GABA-positive strains (*Lb. namurensis*, *Lb. futsaii*, *Lb. plantarum*); lane 4–6, 9, 11–12: GABA-negative strains (any strain that does not produce a GABA spot with a R_f value equal to that of the GABA standard (e.g. all tested strains except of 45a, 44d, 37e, 32d, 37 b, 32c)).

Table S1: List of LAB isolates identified by partial 16S rDNA sequencing (% similarity, accession number) and MALDI-TOF MS (Bruker Biotyper) log(score) and their source

Isolates	16S rDNA sequencing Closest relative(s) (% similarity, accession n.)	MALDI-TOF MS		Source
		Best hit organism based on log(score)	Log(score)	
32e-S	<i>Lb. fermentum</i> (99, NR_104927.1)	<i>Lb. fermentum</i>	2.20 ^a	<i>Spey chrouk</i>
32e-B	<i>Lb. fermentum</i> (99, NR_104927.1)	<i>Lb. fermentum</i>	2.20 ^a	—
34a	<i>Lb. fermentum</i> (100, NR_104927.1)	<i>Lb. fermentum</i>	2.20 ^b	—
34b-S	<i>Lb. fermentum</i> (99, NR_104927.1)	<i>Lb. fermentum</i>	2.02 ^b	—
34b-B	<i>Lb. fermentum</i> (100, NR_104927.1)	<i>Lb. fermentum</i>	2.12 ^b	—
34c	<i>Lb. fermentum</i> (99, NR_104927.1)	<i>Lb. fermentum</i>	2.00 ^b	—
34d-S	<i>Lb. fermentum</i> (99, NR_104927.1)	<i>Lb. fermentum</i>	2.02 ^b	—
34d-B	<i>Lb. fermentum</i> (99, NR_104927.1)	<i>Lb. fermentum</i>	2.02 ^b	—
34e	<i>Lb. fermentum</i> (99, NR_104927.1)	<i>Lb. fermentum</i>	2.12 ^b	—
44a	<i>Lb. fermentum</i> (99, NR_104927.1)	<i>Lb. fermentum</i>	2.00 ^b	<i>Paork kampeus</i>
44b	<i>Lb. fermentum</i> (100, NR_104927.1)	<i>Lb. fermentum</i>	2.05 ^b	—
44e	<i>Lb. fermentum</i> (100, NR_104927.1)	<i>Lb. fermentum</i>	2.07 ^b	—
45b	<i>Lb. fermentum</i> (99, NR_104927.1)	<i>Lb. fermentum</i>	2.09 ^b	—
45c	<i>Lb. fermentum</i> (100, NR_104927.1)	<i>Lb. fermentum</i>	2.02 ^a	—
45d	<i>Lb. fermentum</i> (100, NR_104927.1)	<i>Lb. fermentum</i>	2.08 ^b	—
46a	<i>Lb. fermentum</i> (100, NR_104927.1)	<i>Lb. fermentum</i>	2.09 ^b	—
46e-S	<i>Lb. fermentum</i> (99, NR_104927.1)	<i>Lb. fermentum</i>	2.18 ^b	—
46e-B	<i>Lb. fermentum</i> (100, NR_104927.1)	<i>Lb. fermentum</i>	2.15 ^a	—
22a	<i>Lb. acidipiscis</i> (99, NR_112693.1)	<i>Lb. acidipiscis</i>	2.07 ^b	<i>Mam trey</i>
22b	<i>Lb. acidipiscis</i> (99, NR_112693.1)	<i>Lb. acidipiscis</i>	2.09 ^b	—
22c	<i>Lb. acidipiscis</i> (99, NR_112693.1)	<i>Lb. acidipiscis</i>	2.04 ^b	—
22d	<i>Lb. acidipiscis</i> (99, NR_112693.1)	<i>Lb. acidipiscis</i>	2.11 ^b	—
22e	<i>Lb. acidipiscis</i> (99, NR_112693.1)	<i>Lb. acidipiscis</i>	2.03 ^b	—
42a	<i>Lb. acidipiscis</i> (98, NR_112693.1)	<i>Lb. acidipiscis</i>	1.79 ^{b,c}	<i>Paork chav</i>
42b	<i>Lb. acidipiscis</i> (99, NR_112693.1)	<i>Lb. acidipiscis</i>	1.97 ^{b,c}	—
42c	<i>Lb. acidipiscis</i> (99, NR_112693.1)	<i>Lb. acidipiscis</i>	2.00 ^b	—
42d	<i>Lb. acidipiscis</i> (99, NR_112693.1)	<i>Lb. acidipiscis</i>	1.87 ^{b,c}	—
42e	<i>Lb. acidipiscis</i> (99, NR_112693.1)	<i>Lb. acidipiscis</i>	2.00 ^b	—
43a	<i>Lb. acidipiscis</i> (99, NR_112693.1)	<i>Lb. acidipiscis</i>	1.80 ^{b,c}	—
43b	<i>Lb. acidipiscis</i> (99, NR_112693.1)	<i>Lb. acidipiscis</i>	2.04 ^b	—
43c	<i>Lb. acidipiscis</i> (99, NR_112693.1)	<i>Lb. acidipiscis</i>	1.95 ^{b,c}	—
41a	<i>Lb. acidipiscis</i> (99, NR_112693.1)	<i>Lb. acidipiscis</i>	1.86 ^{b,c}	—
41b	<i>Lb. acidipiscis</i> (99, NR_112693.1)	<i>Lb. acidipiscis</i>	2.01 ^b	—
41c	<i>Lb. acidipiscis</i> (99, NR_112693.1)	<i>Lb. acidipiscis</i>	2.32 ^a	—
41d	<i>Lb. acidipiscis</i> (99, NR_112693.1)	<i>Lb. acidipiscis</i>	2.11 ^a	—
41e	<i>Lb. sucicola</i> (98, NR_112785.1)	<i>Lb. acidipiscis</i>	2.25 ^a	—
32a	<i>Lb. futsaii</i> (99, NR_117973.1)	<i>Lb. futsaii</i>	2.26 ^a	<i>Spey chrouk</i>
32d	<i>Lb. futsaii</i> (99, NR_117973.1)	<i>Lb. futsaii</i>	2.30 ^a	—
32c	<i>Lb. namurensis</i> (99, NR_042514.1)	<i>Lb. namurensis</i>	2.43 ^a	—
36d	<i>Lb. namurensis</i> (99, NR_042514.1)	<i>Lb. namurensis</i>	2.54 ^a	<i>Mam lahong</i>
36e	<i>Lb. namurensis</i> (99, NR_042514.1)	<i>Lb. namurensis</i>	2.24 ^a	—
37b	<i>Lb. namurensis</i> (99, NR_042514.1)	<i>Lb. namurensis</i>	2.45 ^a	—
37a	<i>Lb. zymae</i> (97, NR_042241.1)	<i>Lb. zymae</i>	2.04 ^a	—
36a-S	<i>Lb. plantarum</i> (99, NR_104573.1)	<i>Lb. pentosus</i>	2.38 ^a	—
	<i>Lb. paraplantarum</i> (99, NR_025447.1)			
	<i>Lb. pentosus</i> (99, NR_029133.1)			
36a-B	<i>Lb. plantarum</i> (99, NR_104573.1)	<i>Lb. pentosus</i>	2.28 ^a	—
	<i>Lb. paraplantarum</i> (99, NR_025447.1)			
	<i>Lb. pentosus</i> (99, NR_029133.1)			
36b-S	<i>Lb. plantarum</i> (99, NR_104573.1)	<i>Lb. pentosus</i>	2.41 ^a	—

	<i>Lb. paraplantarum</i> (99, NR_025447.1)			
	<i>Lb. pentosus</i> (99, NR_029133.1)			
36b-B	<i>Lb. plantarum</i> (99, NR_104573.1)	<i>Lb. pentosus</i>	2.40 ^a	—
	<i>Lb. paraplantarum</i> (99, NR_025447.1)			
	<i>Lb. pentosus</i> (99, NR_029133.1)			
36c	<i>Lb. plantarum</i> (99, NR_104573.1)	<i>Lb. pentosus</i>	2.20 ^a	—
	<i>Lb. paraplantarum</i> (99, NR_025447.1)			
	<i>Lb. pentosus</i> (99, NR_029133.1)			
36f	<i>Lb. plantarum</i> (99, NR_104573.1)	<i>Lb. pentosus</i>	2.26 ^a	—
	<i>Lb. paraplantarum</i> (99, NR_025447.1)			
	<i>Lb. pentosus</i> (99, NR_029133.1)			
32b	<i>Lb. plantarum</i> (99, NR_104573.1)	<i>Lb. pentosus</i>	2.28 ^a	Spey chrouk
	<i>Lb. paraplantarum</i> (99, NR_025447.1)			
	<i>Lb. pentosus</i> (99, NR_029133.1)			
45e	<i>Lb. plantarum</i> (99, NR_104573.1)	<i>Lb. pentosus</i>	2.33 ^a	Paork kampeus
	<i>Lb. paraplantarum</i> (99, NR_025447.1)			
	<i>Lb. pentosus</i> (99, NR_029133.1)			
46b	<i>Lb. plantarum</i> (99, NR_104573.1)	<i>Lb. pentosus</i>	2.14 ^a	—
	<i>Lb. paraplantarum</i> (99, NR_025447.1)			
	<i>Lb. pentosus</i> (99, NR_029133.1)			
44d	<i>Lb. plantarum</i> (99, NR_104573.1)	<i>Lb. plantarum</i>	2.39 ^a	—
	<i>Lb. paraplantarum</i> (99, NR_025447.1)			
	<i>Lb. pentosus</i> (99, NR_029133.1)			
45a	<i>Lb. plantarum</i> (99, NR_104573.1)	<i>Lb. plantarum</i>	2.43 ^a	—
	<i>Lb. paraplantarum</i> (99, NR_025447.1)			
	<i>Lb. pentosus</i> (99, NR_029133.1)			
37c	<i>Lb. plantarum</i> (99, NR_104573.1)	<i>Lb. plantarum</i>	2.34 ^a	Mam lahong
	<i>Lb. paraplantarum</i> (99, NR_025447.1)			
	<i>Lb. pentosus</i> (99, NR_029133.1)			
37e	<i>Lb. plantarum</i> (99, NR_104573.1)	<i>Lb. plantarum</i>	2.38 ^a	—
	<i>Lb. paraplantarum</i> (99, NR_025447.1)			
	<i>Lb. pentosus</i> (99, NR_029133.1)			
10b	<i>E. faecium</i> (99, NR_114742.1)	<i>E. faecium</i>	2.35 ^a	Trey proheum
11b	<i>E. faecium</i> (99, NR_114742.1)	<i>E. faecium</i>	2.45 ^a	—
11d	<i>E. pseudoavium</i> (96, NR_114785.2)	<i>E. faecium</i>	2.25 ^a	—
	<i>E. avium</i> (96, NR_114777.1)			
11c	<i>E. viikkiensis</i> (99, NR_117976.1)	<i>E. hermannienseis</i>	1.87 ^{b,c}	—
	<i>E. durans</i> (99, NR_036922.1)			
	<i>E. malodoratus</i> (99, NR_114453.1)			
	<i>E. pseudoavium</i> (99, NR_028705.1)			
10a	<i>P. pentosaceus</i> (99, NR_042058.1)	<i>P. pentosaceus</i>	2.04 ^a	—
11a	<i>P. pentosaceus</i> (98, NR_042058.1)	<i>P. pentosaceus</i>	2.17 ^a	—
11e	<i>P. pentosaceus</i> (100, NR_042058.1)	<i>P. pentosaceus</i>	2.09 ^a	—
24a	<i>P. pentosaceus</i> (100, NR_042058.1)	<i>P. pentosaceus</i>	2.03 ^a	Kapi
44c	<i>P. pentosaceus</i> (100, NR_042058.1)	<i>P. pentosaceus</i>	2.15 ^a	Paork kampeus
46c	<i>P. pentosaceus</i> (100, NR_042058.1)	<i>P. pentosaceus</i>	2.04 ^a	—
46d	<i>P. pentosaceus</i> (99, NR_042058.1)	<i>P. pentosaceus</i>	2.18 ^a	—
51a	<i>P. pentosaceus</i> (99, NR_042058.1)	<i>P. pentosaceus</i>	2.25 ^a	Prahok

^a“extended direct transfer” procedure.

^b“formic acid extraction” procedure.

^clog(score) 1.70–<2.00: identification at genus level, log(score) ≥2.00: identification at species level.