

Table S1. Characteristics of the 50 *Lactobacillus*

used in this study.

Organism name	Isolation source	Access Number	References
<i>Lactobacillus pentosus</i> KCA1	Vagina– Nigeria	NZ_CM001538.1	1
<i>L. plantarum</i> 10CH	Cheese- United Kingdom	CP023728.1	2
<i>L. plantarum</i> 16	Isolated from malt production– Ireland	NC_021514.1	3
<i>L. plantarum</i> 5-2	Fermented soybean- China	NZ_CP009236.1	4
<i>L. plantarum</i> ATCC 8014	Green olive fermentation- Spain	NZ_CP024413.1	Unpublished
<i>L. plantarum</i> B21	Vietnamese Fermented Sausage- Vietnam	NZ_CP010528.1	5
<i>L. plantarum</i> BDGP2	<i>Drosophila melanogaster</i> - United States	NZ_CP023174.1	6
<i>L. plantarum</i> C410L1	Pit mud- China	NZ_CP017954.1	Unpublished
<i>L. plantarum</i> CAUH2	Sichuan pickle vegetables– China	NZ_CP015126.1	7
<i>L. plantarum</i> CLP0611	Environment- South Korea	NZ_CP019722.1	Unpublished
<i>L. plantarum</i> CMPG5300	Vagina of healthy woman- <i>Homo sapiens</i> – Belgium	NZ_CM002918.1	8
<i>L. plantarum</i> DF	<i>Drosophila melanogaster</i> - Canada	NZ_CP013753.1	9
<i>L. plantarum</i> dm	<i>Drosophila melanogaster</i> - United States	NZ_CP022373.1	10
<i>L. plantarum</i> DOMLa	Probiotic potential– China	NZ_CP004406.1	Unpublished
<i>L. plantarum</i> GB-LP1	Traditional Korean Fermented Food- South Korea	NZ_CP020564.1	11
<i>L. plantarum</i> HFC8	Faecal– <i>Homo sapiens</i> - India	NZ_CP012650.1	12
<i>L. plantarum</i> JBE245	Meju- South Korea	NZ_CP014780.1	13
<i>L. plantarum</i> JBE490	Nuruk - South Korea	NZ_CP020861.1	Unpublished
<i>L. plantarum</i> JDM1	Commercial LAB with several probiotic functions– China	NC_012984.1	14
<i>L. plantarum</i> KC28	Fermented Kimchi- South Korea	CP026743.1	Unpublished

<i>L. plantarum</i> KLDS1.0391	Nuruk – South Korea	CP019348.1	15
<i>L. plantarum</i> KP	<i>Drosophila melanogaster</i> – Canada	CP019348.1	9
<i>L. plantarum</i> LM1004	Napa cabbage kimchi- South Korea	CP025988.1	Unpublished
<i>L. plantarum</i> LP2	Pickles– China	NZ_CP020816.1	Unpublished
<i>L. plantarum</i> LP3	Commercial dietary supplements- South Korea	NZ_CP017066.1	Unpublished
<i>L. plantarum</i> LPL-1	Fermented fish– China	NZ_CP021997.1	16
<i>L. plantarum</i> LY-78	Fermented chinese cabbage– China	NZ_CP015308.1	Unpublished
<i>L. plantarum</i> LZ206	Cow milk– <i>Bos taurus</i> – China	NZ_CP015966.1	17
<i>L. plantarum</i> LZ227	Cow milk– <i>Bos taurus</i> – China	NZ_CP015857.1	18
<i>L. plantarum</i> LZ95	Faecal- <i>Homo sapiens</i> – China	NZ_CP012122.1	19
<i>L. plantarum</i> MF1298	Fermented sausage– Norway	NZ_CP013149.1	Unpublished
<i>L. plantarum</i> NCU116	Chinese pickle– China	NZ_CP016071.1	Unpublished
<i>L. plantarum</i> PC520	Chinese fermented food pickles- China	NZ_CP023772.1	Unpublished
<i>L. plantarum</i> RI-113	Fermented salami– Switzerland	NZ_CP017406.1	Unpublished
<i>L. plantarum</i> SRCM102022	Food- South Korea	NZ_CP021501.1	Unpublished
<i>L. plantarum</i> TMW 1.25	Raw sausage– Germany	NZ_CP017354.1	20
<i>L. plantarum</i> TMW 1.277	Palm wine– Germany	NZ_CP017363.1	20
<i>L. plantarum</i> TMW 1.708	Raw sausage– Germany	NZ_CP017374.1	20
<i>L. plantarum</i> TMW 1.1623	Cow Milk– <i>Bos taurus</i> – Germany	NZ_CP017379.1	20
<i>L. plantarum</i> WCFS1	Saliva– <i>Homo sapiens</i> – United States	NC_004567.2	21
<i>L. plantarum</i> X7021	Brine of stinky tofu- China	CP025412.1	Unpublished
<i>L. plantarum</i> Zhang-LL	Fermented rice- China	NZ_CP011769.1	Unpublished
<i>L. plantarum</i> ZJ316	Faecal- <i>Homo sapiens</i> – China	NC_020229.1	22
<i>L. plantarum</i> ZS2058	Sauerkraut – China	NZ_CP012343.1	23

<i>L. plantarum</i> subsp. <i>plantarum</i> BLS41	Kimchi- South Korea	NZ_CP018209.1	Unpublished
<i>L. plantarum</i> subsp. <i>plantarum</i> CGMCC 1.557	Intestine- <i>Homo sapiens</i> – China	NZ_CP016270.1	24
<i>L. plantarum</i> subsp. <i>plantarum</i> P-8	Traditional dairy products– China	NC_021224.2	25
<i>L. plantarum</i> subsp. <i>plantarum</i> SRCM100434	Food- South Korea	NZ_CP021528.1	Unpublished
<i>L. plantarum</i> subsp. <i>plantarum</i> ST-III	Kimchi- China	NC_014554.1	26
<i>L. plantarum</i> subsp. <i>plantarum</i> TS12	Stinky Tofu– Malaysia	NZ_CP018324.1	Unpublished

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