

Table S1: Lactobacilli strains inhibiting *Listeria monocytogenes* virulence factors

Lactobacilli	Strain	Effect on	Reference
<i>Lgb. salivarius</i>	UCC118	Inflammation response	1
	NCDO 1205	Inflammation response	1
<i>Lbc. acidophilus</i>	ACCC11073	Cytokines level, translocation to organs, and LLO, InlA, InlB, Ami, and flagellin production	2
	LA 1		3
	LB	Adhesion and invasion	4
	LB95	Invasiveness	5
<i>Lpb. plantarum</i>	CICC 6257	<i>sigB</i> , <i>hly</i> , <i>inlA</i> , <i>inlB</i> , and <i>prfA</i> expression	6
	B-4496	Adhesion, invasion and virulence gene expression	7
	CICC21863	Cytokines level, translocation to organs, and LLO, InlA, InlB, Ami, and flagellin production	5
	Recombinant LAP expressing	Adhesion and invasion	8
<i>Lcb. paracasei</i>	CNCM I-3689	Infection	9
	Recombinant InlA InlB expressing	Adhesion, invasion and citotoxicity	10
<i>L casei</i>	BL23	Infection	9
	CFCS1		
	CFCS2	<i>fbp</i> and <i>iap</i> expression	11
<i>Lcb. rhanosus</i>	GG	Adhesion and invasion	12
	2A	Citotoxicity	13
<i>Llb. sakei</i>		Adhesion	14
	1		15
			16
		Hemolytic activity	17
<i>Lmb. fermentum</i>	B-1840	Adhesion, invasion and virulence gene expression	7
<i>Lmb. reuteri</i>	B-14172	Adhesion, invasion and virulence gene expression	7
<i>Lvb. brevis</i>	MF179529	Translocation to organs	18

Table S2: Lactobacilli inhibiting *Salmonella* spp. virulence factors

Lactobacilli	Strain	<i>Salmonella</i> spp.	Effect on	Reference
<i>Lbc. bulgaricus</i>	NRRL B548	<i>S. Enteritidis</i>	<i>sipA</i> , <i>sipB</i> , <i>sopB</i> , <i>spvB</i> , <i>hilA</i> , <i>hilD</i> , and <i>invH</i> expression	19
		<i>S. Typhimurium</i>		
<i>Lbc. casei</i>	-	<i>S. Typhimurium</i>	<i>hilA</i> , <i>hilD</i> , <i>hilC</i> , and <i>sipC</i> expression	20
	Shirota		Adhesion and invasion	21
	Shirota YIT9029		Swimming motility	22
	Recombinant LC-CLA	<i>S. Typhimurium</i>	Biofilm formation and interaction with the host	23
	Recombinant LC-CLA ATCC 334		Physicochemical properties, interaction with the host, <i>invG</i> , <i>invH</i> , <i>prgK</i> , <i>hilA</i> , <i>hilC</i> , <i>hilD</i> , and <i>invF</i> expression	24
	-		Invasion and translocation to organs	25
	CFCS1		<i>nmpC</i> expression	11
	CFCS2			
	-	<i>S. Javiana</i>	Citotoxicity and invasiveness	26
	<i>Lbc. amylovorus</i>	CL12	<i>S. Typhimurium</i>	<i>hilA</i> , <i>hilC</i> , <i>hilD</i> , <i>sopB</i> , <i>sopD</i> , <i>sopE2</i> , <i>sipA</i> , <i>avrA</i> , <i>sptP</i> expression
DCE 471				28
				21
<i>Lbc. rhanosus</i>	-		<i>hilA</i> , <i>hilD</i> , <i>hilC</i> , and <i>sipC</i> expression	20
	L2			29
	L3			
	LB2	<i>S. Typhimurium</i>	<i>hilA</i> , <i>hilC</i> , <i>hilD</i> , <i>sopB</i> , <i>sopD</i> , <i>sopE2</i> , <i>sipA</i> , <i>avrA</i> , <i>sptP</i> expression	29
	LB4			28
			Invasiveness	30
	GG		Adhesion and invasion	21
			Growth	31
	-	<i>S. Javiana</i>	Citotoxicity and invasiveness	26
	NRRLB442	<i>S. Enteritidis</i> <i>S. Heidelberg</i>	<i>sipA</i> , <i>sipB</i> , <i>sopB</i> , <i>spvB</i> , <i>hilA</i> , <i>hilD</i> , and <i>invH</i> expression	19
<i>Lbc. acidophilus</i>	-		<i>hilA</i> , <i>hilD</i> , <i>hilC</i> , and <i>sipC</i> expression	20
	CL10		<i>hilA</i> , <i>hilC</i> , <i>hilD</i> , <i>sopB</i> , <i>sopD</i> , <i>sopE2</i> , <i>sipA</i> , <i>avrA</i> , <i>sptP</i> expression	29
	CL10			28
	-	<i>S. Typhimurium</i>	<i>invA</i> , <i>avrA</i> , <i>hilA</i> , <i>ssrB</i> , and <i>sopD</i> expression	32
	IBB 801		Adhesion and invasion	21
	LB		permeabilization of the membrane, sensitivity to sodium dodecyl sulfate and death	33
	LA 1		Adhesion and invasion	6
	-	<i>S. Javiana</i>	Citotoxicity and invasiveness	12
			26	

<i>Lvb. brevis</i>	CCMA 1284	<i>S. Enteritidis</i>		34
Unknown	-	<i>S. Enteritidis</i>	β -galactosidase activity and <i>hilA</i> expression	35
<i>Lbc. crispatus</i>	ALB11	<i>S. Typhimurium</i>	<i>hilA, hilC, hilD, sopB, sopD, sopE2, sipA, avrA, sptP</i> expression	29 28
<i>Lbc. johnsonii</i>	La1	<i>S. Typhimurium</i>	Adhesion and invasion	21
	ZS2058		<i>invA, avrA, hilA, ssrB, and sopD</i> expression	36
	S8		<i>hilA, hilC, hilD, sopB, sopD, sopE2, sipA, avrA, sptP</i> expression	28
	S66			
	C4			
	C7			
	C8			
	B2a			
	B10			
	B11	<i>S. Typhimurium</i>	Resistance to antibiotics, adhesion and cytotoxicity	37
<i>Lpb. plantarum</i>	L4			
	L36			
	L37			
	L38			
	L39			
	ACA-DC 287		Adhesion and invasion	21
	-		Adhesion	38
	S8		Pro-inflammatory cytokine response	39
	CCMA 0359			
	CCMA 0743	<i>S. Enteritidis</i>	Adhesion	34
	ALB2			28
	ALB6			
	ALB2			
<i>Lgb. salivarius</i>	ALB6	<i>S. Typhimurium</i>	<i>hilA, hilC, hilD, sopB, sopD, sopE2, sipA, avrA, sptP</i> expression	29
	ALB7			
	ALB10			
	SG1			
	-		Adhesion	38
	CL9			29
	CL9			
<i>Lmb. reuteri</i>	S64	<i>S. Typhimurium</i>	<i>hilA, hilC, hilD, sopB, sopD, sopE2, sipA, avrA, sptP</i> expression	28
	K67			
	S64		Pro-inflammatory cytokine response	39
	LB1	<i>S. Typhimurium</i>	<i>hilA, hilC, hilD, sopB, sopD, sopE2, sipA, avrA, sptP</i> expression	29 28
<i>Lbc. zaeae</i>	LB2		Pro-inflammatory cytokine response	39
<i>Lbc. delbrueckii</i> var <i>delbrueckii</i>	-	<i>S. Typhimurium</i>	Adhesion	38

<i>Lcb.</i> <i>paracasei</i>	DUP-13076	<i>S. Enteritidis</i> <i>S. Heidelberg</i>	<i>sipA, sipB, sopB, spvB, hilA, hilD,</i> and <i>invH</i> expression	19
	IBB2588			40
	CCMA 0504	<i>S. Enteritidis</i>	Adhesion	34
	CCMA 0505			

Table S3: Lactobacilli inhibiting *Campylobacter jejuni* virulence factors

Lactobacilli	Strain	Effect on	Reference
<i>Lgb. salivarius</i>	AH102	Internalization	41
	-	Growth, <i>flaA</i> , <i>flaB</i> , <i>flhA</i> , <i>ciaB</i> , <i>luxS</i> expression, phagocytosis	42
<i>Lbc. johnsonii</i>	-	Growth, <i>flaA</i> , <i>flaB</i> , <i>flhA</i> , <i>ciaB</i> , <i>luxS</i> expression, phagocytosis	42
<i>Lmb. reuteri</i>	-	Growth, phagocytosis	42
<i>Lbc. crispatus</i>	-	Growth, <i>flaA</i> , <i>flaB</i> , <i>flhA</i> , <i>ciaB</i> , <i>luxS</i> expression, phagocytosis	42
<i>Lbc. gasseri</i>	-	Growth, <i>flaA</i> , <i>flaB</i> , <i>flhA</i> , <i>ciaB</i> , <i>luxS</i> expression, phagocytosis	42
<i>Lbc. helveticus</i>	R0052	Internalization	41
<i>Lcb. casei</i>	recombinant <i>mcra</i> expressing	Adhesion and <i>cadF</i> , <i>cdtB</i> , <i>ciaB</i> , and <i>flaB</i> expression	43
<i>Lbc. acidophilus</i>	La-5	<i>luxS</i> expression	44
<i>Lcb. rhanosus</i>	R0011	Internalization	41

Table S4: Lactobacilli strains inhibiting *Escherichia coli* virulence factors

Lactobacilli	Strain	<i>Escherichia</i> spp.	Effect on	Reference
<i>Lmb. reuteri</i>	ATCC 55730	EHEC	<i>ler</i> expression	45
	RC-14	UPEC	Adhesion and virulence gene expression	46
	CRL 1324	UPEC	Adhesion and internalization	47
	TMW1.656	ETEC	Toxins production	48
	LTH5794		Toxins production	
<i>Lpb. plantarum</i>		-	Internalization	49
	299v	EPEC E2348/69	Adhesion	50
		EHEC CL8	Adhesion	
	CCMA 0359	EPEC CDC 055	Adhesion	34
	CCMA 0743		Adhesion	
<i>Lbc. acidophilus</i>		EHEC	Colonization and TNF- α production	51
	La-5	EHEC O157	<i>tir</i> , <i>espA</i> , <i>fliC</i> , <i>espD</i> , <i>luxS</i> , <i>eaeA</i> , <i>ler</i> , <i>hylB</i> , and <i>qseA</i> expression	52
	R0052	EHEC O157	Adhesion	53
		EPEC E2348/69	Adhesion	
	A4	EHEC	Shiga-like Toxin 2 activity	54
	K99	ETEC	Adhesion	55
	LA 1	EPEC	Adhesion and invasion	12
	LB	EPEC	Adhesion and invasion	6
DAEC		Expression of virulence genes		
<i>Llb. sakei</i>	NR28	EHEC	Biofilm formation, AI-2 expression and adhesion	54
	NR28		AI-2 production	57
<i>Lcb. casei</i>	Recombinant LC-CLA	EHEC	Adhesion and invasion	23
	CFCS1		<i>eaeA</i> expression	11
	CFCS2		<i>eaeA</i> expression	
	Shirota	-	Growth rate and inflammatory response	58
<i>Lcb. rhanosus</i>	R0011	EHEC O157		53
		EPEC E2348/69		
	GG	EPEC E2348/69	Adhesion	50
		EHEC CL8		
<i>Lbc. kefiranofaciens</i>	NCDC 298	ETEC		59
	-		Internalization	60
	M1	EHEC	Immune response	61
<i>Lcb. paracasei</i>	CCMA 0504	EPEC	Adhesion	34
	CCMA 0505			
<i>Lbc. gasseri</i>	KS120.1	DAEC	Adhesion and internalization	62
	KS124.3			
<i>Lbc. jensenii</i>	KS119.1			
	KS121.1			

Table S5: Lactobacilli strains inhibiting *Clostridium* spp. virulence factors

<i>Clostridium</i> spp.	Lactobacilli	Strain	Effect on	Reference
	<i>Lbc. acidophilus</i>	ATCC 314	TcdA and TcdB production	63
	<i>Lvb. brevis</i>	ATCC 8287	TcdA and TcdB production	63
	<i>Lpb. plantarum</i>	CIDCA 83114	TcdA and TcdB production	63
		La-5	Adhesion	64
	<i>Lbc. acidophilus</i>	GP1B	<i>luxS</i> , <i>tcdA</i> , <i>tcdB</i> , and <i>txeR</i> expression	65
		CIDCA 8348	TcdA and TcdB production	63
		CIDCA 8344		
		CIDCA 83111		
		CIDCA 83113		
<i>C. difficile</i>	<i>Lbc. kefir</i>	CIDCA 83115		
		CIDCA 8321	Citotoxicity	66
		CIDCA 8345		
		CIDCA 8348		
		JCM 5818		
		ATCC 8007		
	<i>Lmb. reuteri</i>	LMG P-27481	Colonization and toxins production	67
	<i>Lcb. paracasei</i>	Recombinant anti-TcdBVHH fragment-expressing	Citotoxicity	68
		DSMZ 20011	TcdA and TcdB production	63
<i>C. perfringens</i>	<i>Lcb. casei</i>	Recombinant pPG- α 393	Citokines and interferon γ production	69

Table S6: Lactobacilli strains inhibiting *Staphylococcus aureus* virulence factors

Lactobacilli	Strain	Effect on	Reference
	-	Biofilm formation and antibiotic resistance	70
<i>Lbc. acidophilus</i>	76	Adhesion	71
	T-13	Adhesion	72
	ATCC 4356	Adhesion	72
<i>Lmb. fermentum</i>	TCUESC01	<i>icaA</i> and <i>icaR</i> expression	73
	ATCC 9338	<i>sea</i> , <i>sae</i> , <i>agrA</i> , <i>tst</i> , <i>spa</i> , and <i>spi</i> expression	74
	B-54		
	RC-14	Adhesion	75
<i>Lpb. plantarum</i>	TCUESC02	Growth	73
	CGMCC 1.557	Adhesion	72
<i>Lmb. reuteri</i>	ATCC 23272	<i>sea</i> , <i>sae</i> , <i>agrA</i> , <i>tst</i> , <i>spa</i> , and <i>spi</i> expression	74
	RC-14	SSL 1 production	76
<i>Lcb. casei</i>	36	Adhesion	71
	ATCC 393	Internalization	77
	BL23		
	CIRM-BIA 1542		
<i>Lbc. crispatus</i>	33820	Coaggregation	78
<i>Lpb. plantarum</i>	ATCC 8014	<i>sea</i> , <i>sae</i> , <i>agrA</i> , <i>tst</i> , <i>spa</i> , and <i>spi</i> expression	74
<i>Lbc. jensenii</i>	RC-28	Coaggregation	78
<i>Lcb. rhanosus</i>	GR-1	Adhesion	71
	ATCC 1465	Biofilm formation	79

Table S7: Lactobacilli strains inhibiting *Helicobacter* spp. virulence factors

<i>Helicobacter</i> spp.	Lactobacilli	Strain	Effect on	Reference
<i>H. pylori</i>	<i>Lgb. salivarius</i>	UCC118 UCC119	<i>Cag</i> expression and interleukin immune response	80
	<i>Lbc. acidophilus</i>	LB	Viability	81
	<i>Lpb. paraplantarum</i>	KNUC25	Adhesion	80
	<i>Lcb. casei Shirota</i>	YIT9029	Swimming motility	22
	<i>Lmb. reuteri</i>	ATCC 55730 6798	<i>flaA</i> and <i>vacA</i> expression Interleukin and chemokine response	82 83
<i>H. hepaticus</i>	<i>Lcb. paracasei</i>	1602	Interleukin and chemokine response	83

Table S8: Lactobacilli strains inhibiting *Pseudomonas aeruginosa*, *Klebsiella pneumoniae*, *Streptococcus mutans*, and *Streptococcus pyogenes* virulence factors

Lactobacilli	Strain	Pathogen	Effect on	Reference
	-	<i>Pseudomonas aeruginosa</i>	Biofilm and elastase production	84
<i>Lmb. fermentum</i>	CRL 1058	<i>Klebsiella pneumoniae</i>	Adhesion	85
	-		Replication inside biofilm	86
	ATCC 9338	<i>Streptococcus mutans</i>	<i>gtfB</i> and <i>gtfC</i> expression	87
<i>Lbc. zeae</i>	-	<i>Pseudomonas aeruginosa</i>	Biofilm and elastase production	84
<i>Lcb. paracasei</i>	-	<i>Pseudomonas aeruginosa</i>	Biofilm and elastase production	84
<i>Clb. crustorum</i>	ZHG 2-1	<i>Pseudomonas aeruginosa</i>	<i>lasI/R</i> and <i>rhII/R</i> expression	88
<i>Lgb. salivarius</i>	ATCC 11741	<i>Streptococcus mutans</i>	Biofilm formation	89
	K35		<i>gtfB</i> , <i>gtfC</i> , <i>gtfD</i> expression	90
	K43	<i>Streptococcus pyogenes</i>	Adhesion, hemolytic activity and <i>sag</i> expression	91
	LMG9477			
<i>Lcb. rhanosus</i>	GG ATCC 53103	<i>Streptococcus mutans</i>	Biofilm formation	92
	GG		<i>gtfB</i> , <i>gtfC</i> , <i>gtfD</i> expression	90
<i>Lbc. acidophilus</i>	-	<i>Klebsiella pneumoniae</i>	Replication inside biofilm	86
	DSM 20079	<i>Streptococcus mutans</i>	<i>gtfB</i> and <i>gtfC</i> expression	93
	-		<i>Gtf</i> and <i>LuxS</i> expression	94
<i>Alb. kunkeei</i>	-	<i>Pseudomonas aeruginosa</i>	Biofilm formation	95
<i>Lpb. plantarum</i>	ATCC 10241	<i>Pseudomonas aeruginosa</i>	Biofilm formation and phagocytosis	96
	ATCC 14197	<i>Streptococcus mutans</i>	Biofilm formation	89
	299v DSM 9843		Biofilm formation	92
	-	<i>Streptococcus pyogenes</i>	Interleukin immune response	97
	DSM 20016		<i>gtfB</i> , <i>gtfC</i> and <i>fft</i> expression	98
<i>Lmb. reuteri</i>	ATCC 23272	<i>Streptococcus mutans</i>		89
	ATCC PTA 5289		Biofilm formation	92
	ATCC 55730	<i>Streptococcus pyogenes</i>		
	ATCC PTA-5289		Adhesion, hemolytic activity and <i>sag</i> expression	91
<i>Lcb. casei</i>	4646	<i>Streptococcus mutans</i>	<i>luxS</i> , and <i>gtfB</i> , <i>spaP</i> , <i>gbpB</i> expression	99
	ATCC 393		Biofilm formation	89

Table S9: Lactobacilli strains inhibiting HIV, *Neisseria gonorrhoeae*, *Candida albicans*, *Gardnerella vaginalis*, *Trichomonas vaginalis*, *Prevotella bivia* and *Staphylococcus epidermidis* virulence factors

Lactobacilli	Strain	Pathogen	Effect	Reference
<i>Lbc. jensenii</i>	-	HIV virus	Adhesion	100
	-	<i>Neisseria gonorrhoeae</i>	Adhesion	101
	-	<i>Candida albicans</i>	<i>ALS3</i> , <i>HWPI</i> , <i>ECE1</i> and <i>NRG1</i> expression	102
<i>Lbc. crispatus</i>	CVT-05	UPEC	Adhesion	103
	-	<i>Gardnerella vaginalis</i>	<i>vly</i> and <i>sld</i> expression	104
	-	-	<i>HWPI</i> , <i>ECE1</i> , <i>ALS3</i> , <i>BCRI</i> , <i>EFG1</i> , <i>TEC1</i> and <i>CPHI</i> expression	105
	ATCC 33820	-	Adhesion and interleukine immune response	106
	ATCC 33820	<i>Candida albicans</i>	Adhesion and interleukine immune response	107
	B1-BC8	-	Adhesion	108
	-	-	<i>ALS3</i> , <i>HWPI</i> , <i>ECE1</i> and <i>NRG1</i> expression	102
<i>Lbc. acidophilus</i>	T-13	<i>Staphylococcus epidermidis</i>	Adhesion	109
	ATCC 4356	-	Adhesion and biofilm formation	110
	ATCC 4356	<i>Candida albicans</i>	<i>ALS3</i> , <i>HWPI</i> , <i>ECE1</i> and <i>NRG1</i> expression	111
	ATCC 4356	-	Hyphal morphogenesis and biofilm	112
	T-13	UPEC	Adhesion	109
<i>Lcb. casei</i>	ATCC 393	<i>Candida albicans</i>	Citotoxicity	113
	AMBR2	-	Hyphal morphogenesis	114
<i>Lbc. gasseri</i>	ATCC 9857	<i>Trichomonas vaginalis</i>	Adhesion	115
	1	-	Adhesion and biofilm formation	110
	-	-	Coaggregation	111
	-	<i>Candida albicans</i>	<i>HWPI</i> , <i>ECE1</i> , <i>ALS3</i> , <i>BCRI</i> , <i>EFG1</i> , <i>TEC1</i> and <i>CPHI</i> expression	105
	BC9-BC14	-	Adhesion	108
	-	-	<i>ALS3</i> , <i>HWPI</i> , <i>ECE1</i> and <i>NRG1</i> expression	102
	KS120.1	<i>Prevotella bivia</i>	-	116
	ATCC 9857	UPEC	Adhesion	103
<i>Lmb. vaginalis</i>	BC15-BC17	<i>Candida albicans</i>	Adhesion	108
	-	<i>Gardnerella vaginalis</i>	-	-
<i>Lmb. fermentum</i>	-	-	Coaggregation	111
	-	<i>Candida albicans</i>	<i>ALS3</i> , <i>HWPI</i> , <i>EFG1</i> , and <i>CPHI</i> expression	117

<i>Lgb. salivarius</i>	ATCC 11741	<i>Candida albicans</i>	Citotoxicity	113
	ATCC 7469			
	CMP5351		Hypae elongation	113
	GG ATCC 53103			
	GG ATCC 53103			
	CMPG5351			
	CMPG5540			
	CMPG5357		Hyphal morphogenesis	114
<i>Lcb. rhanosus</i>	CMPG10701	<i>Candida albicans</i>		
	CMPG10706			
	GR-1 ATCC 5582			
	ATCC7469		Enzymatic activity and susceptibility to antifungals	118
	GG		Hyphal extension and adhesion	119
	GR-1		Interleukin immune response	120
	ATCC 9595		<i>BCR1</i> , <i>HWP1</i> , <i>ALS3</i> and <i>CPHI</i> expression	121
	-		<i>ALS3</i> , <i>HWP1</i> , <i>EFG1</i> , and <i>CPHI</i> expression	117
	ATCC 9595		Adhesion and biofilm formation	110
<i>Lmb. reuteri</i>	-	<i>Candida albicans</i>	Coaggregation	111
	RC-14		Interleukin immune response	120
	-	<i>Candida albicans</i>		111
<i>Lpb. plantarum</i>	4B2	UPEC <i>Streptococcus agalactiae</i> <i>Gardnerella vaginalis</i>	Coaggregation	122
	11		Adhesion and biofilm formation	113
<i>Lcb. paracasei</i>	ATCC 11578	<i>Candida albicans</i>	Citotoxicity	113
	ATCC 334		Hyphal morphogenesis	114
	-		<i>ALS3</i> , <i>HWP1</i> , <i>EFG1</i> , and <i>CPHI</i> expression	117
Unknown	-	<i>Candida albicans</i>	<i>HWP1</i> , <i>PLB2</i> , and <i>SAP1</i> expression	123
<i>Lbc. helveticus</i>	KS300	<i>Garnerella vaginalis</i> UPEC <i>Salmonella enterica</i> serovar Typhimurium	Adhesion Adhesion, Invasion Invasion	124

Table S10: Lactobacilli strains inhibiting *Yersinia pseudotuberculosis*, *Yersinia enterocolitica*, *Serratia marcescens*, *Bacillus cereus*, *Enterococcus fecalis*, *Aggregatibacter actinomycetemcomitans*, and Rotavirus virulence factors

Lactobacilli	Strain	Pathogen	Effect on	Reference
<i>Lbc. acidophilus</i>	LA 1	<i>Yersinia pseudotuberculosis</i>	Adhesion and invasion	112
	LB			67
	ATCC 4356	<i>Serratia marcescens</i>	Hemolytic activity and enzymatic expression	125
<i>Lpb. plantarum</i>	C4	<i>Yersinia enterocolitica</i>	Immune system	126
	ATCC 8014	<i>Serratia marcescens</i>	Resistance to antibiotics and swarming mobility	125
	F14 JX282192	<i>Bacillus cereus</i>	Hemolytic activity and enzymatic expression	127
<i>Lcb. rhanosus</i>	-	<i>Enterococcus fecalis</i>	Immune system	128
<i>Lmb. reuteri</i>	LMG P-27481	Rotavirus	Number of the copies	67
<i>Lbc. gasseri</i>	OMZ525	<i>Aggregatibacter actinomycetemcomitans</i>	<i>LtxA</i> and <i>CdtB</i> expression	129
<i>Lgb. salivarius</i>	OMZ520			

References

1. Corr S, Hill C, Gahan CGM. 2006. An in vitro cell-culture model demonstrates internalin- and hemolysin-independent translocation of *Listeria monocytogenes* across M cells. *Microb Pathog* 41:241–250.
2. Deng Q, Shi H, Luo Y, Zhao H, Liu N. 2020. Effect of dietary Lactobacilli mixture on *Listeria monocytogenes* infection and virulence property in broilers. *Poult Sci* 99:3655–3662.
3. Bernet MF, Brassart D, Neeser JR, Servin AL. 1994. *Lactobacillus acidophilus* LA 1 binds to cultured human intestinal cell lines and inhibits cell attachment and cell invasion by enterovirulent bacteria. *Gut* 35:483–489.
4. Coconnier MH, Bernet MF, Kernéis S, Chauvière G, Fourniat J, Servin AL. 1993. Inhibition of adhesion of enteroinvasive pathogens to human intestinal Caco-2 cells by *Lactobacillus acidophilus* strain LB decreases bacterial invasion. *FEMS Microbiol Lett* 110:299–305.
5. Dutra V, Silva AC, Cabrita P, Peres C, Malcata X, Brito L. 2016. *Lactobacillus plantarum* LB95 impairs the virulence potential of Gram-positive and Gram-negative food-borne pathogens in HT-29 and vero cell cultures. *J Med Microbiol* 65:28–35.
6. Dong Q, Zhang W, Guo L, Niu H, Liu Q, Wang X. 2020. Influence of *Lactobacillus plantarum* individually and in combination with low O₂-MAP on the pathogenic potential of *Listeria monocytogenes* in cabbage. *Food Control* 107:106765.
7. Upadhyay A, Upadhyaya I, Mooyottu S, Venkitanarayanan K. 2016. Eugenol in combination with lactic acid bacteria attenuates *Listeria monocytogenes* virulence in vitro and in invertebrate model

- Galleria mellonella*. J Med Microbiol 65:443–455.
8. Koo OK, Amalaradjou MAR, Bhunia AK. 2012. Recombinant probiotic expressing *Listeria* adhesion protein attenuates *Listeria monocytogenes* virulence in vitro. PLoS One 7.
 9. Archambaud C, Nahori MA, Soubigou G, Bećavin C, Laval L, Lechat P, Smokvina T, Langella P, Lecuit M, Cossart P. 2012. Impact of lactobacilli on orally acquired listeriosis. Proc Natl Acad Sci U S A 109:16684–16689.
 10. Mathipa MG, Bhunia AK, Thantsha MS. 2019. Internalin AB-expressing recombinant *Lactobacillus casei* protects Caco-2 cells from *Listeria monocytogenes*-induced damages under simulated intestinal conditions. PLoS One 14:e0220321.
 11. Peng M, Reichmann G, Biswas D. 2015. *Lactobacillus casei* and its byproducts alter the virulence factors of foodborne bacterial pathogens. J Funct Foods 15:418–428.
 12. Iglesias MB, Viñas I, Colás-Medà P, Collazo C, Serrano JCE, Abadias M. 2017. Adhesion and invasion of *Listeria monocytogenes* and interaction with *Lactobacillus rhamnosus* GG after habituation on fresh-cut pear. J Funct Foods 34:453–460.
 13. Bambilra FHS, Lima KGC, Franco BDGM, Cara DC, Nardi RMD, Barbosa FHF, Nicoli JR. 2007. Protective effect of *Lactobacillus sakei* 2a against experimental challenge with *Listeria monocytogenes* in gnotobiotic mice. Lett Appl Microbiol 45:663–667.
 14. Winkelströter LK, Gomes BC, Thomaz MRS, Souza VM, De Martinis ECP. 2011. *Lactobacillus sakei* 1 and its bacteriocin influence adhesion of *Listeria monocytogenes* on stainless steel surface. Food Control 22:1404–1407.
 15. Martinez RCR, De Martinis ECP. 2004. Antilisterial activity of a crude preparation of *Lactobacillus sakei* 1 bacteriocin and its lack of influence on *Listeria monocytogenes* haemolytic activity. Food Control 16:429–433.
 16. Alves VF, Lavrador MAS, De Martinis ECP. 2003. Bacteriocin exposure and food ingredients influence on growth and virulence of *Listeria monocytogenes* in a model meat gravy system. J Food Saf 23:201–217.
 17. Martinez RCR, De Martinis ECP. 2005. Evaluation of bacteriocin-producing *Lactobacillus sakei* 1 against *Listeria monocytogenes* 1/2a growth and haemolytic activity. Brazilian J Microbiol 36:83–87.
 18. Riaz A, Noureen S, Liqat I, Arshad M, Arshad N. 2019. Antilisterial efficacy of *Lactobacillus brevis* MF179529 from cow: An in vivo evidence. BMC Complement Altern Med 19:1–9.
 19. Muiyarakandy MS, Amalaradjou MA. 2017. *Lactobacillus bulgaricus*, *Lactobacillus rhamnosus* and *Lactobacillus paracasei* attenuate salmonella enteritidis, salmonella heidelberg and salmonella typhimurium colonization and virulence gene expression in vitro. Int J Mol Sci 18.
 20. Abdelhafez S, Abdelwahab A, Eldemerdash AS, Ammar A. 2016. Molecular Studies on the prophylactic effect of probiotics on *Salmonella typhimurium* infected chicks. Benha Vet Med J 31:73–82.
 21. Makras L, Triantafyllou V, Fayol-Messaoudi D, Adriany T, Zoumpopoulou G, Tsakalidou E, Servin

- A, De Vuyst L. 2005. Kinetic analysis of the antibacterial activity of probiotic lactobacilli towards *Salmonella enterica* serovar Typhimurium reveals a role for lactic acid and other inhibitory compounds. *Res Microbiol* 157:241–247.
22. Liévin Le Moal V, Fayol-Messaoudi D, Servin AL. 2013. Compound(s) secreted by *Lactobacillus casei* strain Shirota YIT9029 irreversibly and reversibly impair the swimming motility of *Helicobacter pylori* and *Salmonella enterica* serovar Typhimurium, respectively. *Microbiol (United Kingdom)* 159:1956–1971.
 23. Peng M, Tabashsum Z, Patel P, Bernhardt C, Biswas D. 2018. Linoleic acids overproducing *Lactobacillus casei* limits growth, survival, and virulence of *Salmonella typhimurium* and enterohaemorrhagic *Escherichia coli*. *Front Microbiol* 9:1–14.
 24. Tabashsum Z, Peng M, Bernhardt C, Patel P, Carrion M, Rahaman SO, Biswas D. 2020. Limiting the pathogenesis of *Salmonella Typhimurium* with berry phenolic extracts and linoleic acid overproducing *Lactobacillus casei*. *J Microbiol* 58:489–498.
 25. Hudault S, Liévin V, Bernet-Camard MF, Servin AL. 1997. Antagonistic activity exerted in vitro and in vivo by *Lactobacillus casei* (strain GG) against *Salmonella typhimurium* C5 infection. *Appl Environ Microbiol* 63:513–518.
 26. Burkholder KM, Fletcher DH, Gileau L, Kandolo A. 2019. Lactic acid bacteria decrease *Salmonella enterica* Javiana virulence and modulate host inflammation during infection of an intestinal epithelial cell line. *Pathog Dis* 77.
 27. Wang C, Wang J, Gong J, Yu H, Pacan JC, Niu Z, Si W, Sabour PM. 2011. Use of *Caenorhabditis elegans* for preselecting *Lactobacillus* isolates to control *Salmonella Typhimurium*. *J Food Prot* 74:86–93.
 28. Yang X, Brisbin J, Yu H, Wang Q, Yin F, Zhang Y, Sabour P, Sharif S, Gong J. 2014. Selected lactic acid-producing bacterial isolates with the capacity to reduce salmonella translocation and virulence gene expression in chickens. *PLoS One* 9.
 29. Wang C, Wang J, Gong J, Yu H, Pacan JC, Niu Z, Si W, Sabour PM. 2011. Use of *Caenorhabditis elegans* for preselecting *Lactobacillus* isolates to control *Salmonella Typhimurium*. *J Food Prot* 74:86–93.
 30. Burkholder KM, Bhunia AK. 2009. *Salmonella enterica* serovar Typhimurium adhesion and cytotoxicity during epithelial cell stress is reduced by *Lactobacillus rhamnosus* GG. *Gut Pathog* 1:14.
 31. De Keersmaecker SCJ, Verhoeven TLA, Desair J, Marchal K, Vanderleyden J, Nagy I. 2006. Strong antimicrobial activity of *Lactobacillus rhamnosus* GG against *Salmonella typhimurium* is due to accumulation of lactic acid. *FEMS Microbiol Lett* 259:89–96.
 32. Andino A, Zhang N, Diaz-Sanchez S, Yard C, Pendleton S, Hanning I. 2014. Characterization and specificity of probiotics to prevent salmonella infection in mice. *Funct Foods Heal Dis* 4:370–380.
 33. Coconnier-Polter MH, Liévin-Le Moal V, Servin AL. 2005. A *Lactobacillus acidophilus* strain of human gastrointestinal microbiota origin elicits killing of enterovirulent *Salmonella enterica* serovar

- typhimurium by triggering lethal bacterial membrane damage. *Appl Environ Microbiol* 71:6115–6120.
34. Fonseca HC, de Sousa Melo D, Ramos CL, Dias DR, Schwan RF. 2021. Probiotic Properties of Lactobacilli and Their Ability to Inhibit the Adhesion of Enteropathogenic Bacteria to Caco-2 and HT-29 Cells. *Probiotics Antimicrob Proteins* 13:102–112.
 35. Durant JA, Corrier DE, Stanker LH, Ricke SC. 2000. Salmonella enteritidis hila gene fusion response after incubation in spent media from either S. Enteritidis or a poultry Lactobacillus strain. *J Environ Sci Heal - Part B Pestic Food Contam Agric Wastes* 35:599–610.
 36. Song F, Liu J, Zhao W, Huang H, Hu D, Chen H, Zhang H, Chen W, Gu Z. 2020. Synergistic Effect of Eugenol and Probiotic Lactobacillus Plantarum Zs2058 Against Salmonella Infection in C57bl/6 Mice. *Nutrients* 12:1611.
 37. Abdel-Daim A, Hassouna N, Hafez M, Ashor MSA, Aboulwafa MM. 2013. Antagonistic activity of lactobacillus isolates against salmonella typhi in vitro. *Biomed Res Int* 2013.
 38. Craven SE, Williams DD. 1998. In vitro attachment of Salmonella typhimurium to chicken cecal mucus: Effect of cations and pretreatment with Lactobacillus spp. isolated from the intestinal tracts of chickens. *J Food Prot* 61:265–271.
 39. Hu JL, Yu H, Kulkarni RR, Sharif S, Cui SW, Xie MY, Nie SP, Gong J. 2015. Modulation of cytokine gene expression by selected Lactobacillus isolates in the ileum, caecal tonsils and spleen of Salmonella-challenged broilers. *Avian Pathol* 44:463–469.
 40. Jankowska A, Laubitz D, Antushevich H, Zabielski R, Grzesiuk E. 2008. Competition of Lactobacillus paracasei with Salmonella enterica for adhesion to Caco-2 cells. *J Biomed Biotechnol* 2008.
 41. Alemka A, Clyne M, Shanahan F, Tompkins T, Corcionivoschi N, Bourke B. 2010. Probiotic colonization of the adherent mucus layer of HT29MTXE12 cells attenuates Campylobacter jejuni virulence properties. *Infect Immun* 78:2812–2822.
 42. Taha-Abdelaziz K, Astill J, Kulkarni RR, Read LR, Najarian A, Farber JM, Sharif S. 2019. In vitro assessment of immunomodulatory and anti-Campylobacter activities of probiotic lactobacilli. *Sci Rep* 9:1–15.
 43. Tabashsum Z, Peng M, Salaheen S, Comis C, Biswas D. 2018. Competitive elimination and virulence property alteration of Campylobacter jejuni by genetically engineered Lactobacillus casei. *Food Control* 85:283–291.
 44. Mundi A, Delcenserie V, Amiri-Jami M, Moorhead S, Griffiths MW. 2013. Cell-free preparations of Lactobacillus acidophilus strain La-5 and Bifidobacterium longum strain NCC2705 affect virulence gene expression in Campylobacter jejuni. *J Food Prot* 76:1740–1746.
 45. Jelčić I, Hüfner E, Schmidt H, Hertel C. 2008. Repression of the locus of the enterocyte effacement-encoded regulator of gene transcription of Escherichia coli O157:H7 by Lactobacillus reuteri culture supernatants is LuxS and strain dependent. *Appl Environ Microbiol* 74:3310–3314.
 46. Cadieux PA, Burton JP, Devillard E, Reid G. 2009. Lactobacillus by-products inhibit the growth and

- virulence of uropathogenic *Escherichia coli*. *J Physiol Pharmacol* 60:13–18.
47. Leccese Terraf MC, Juarez Tomás MS, Rault L, Le Loir Y, Even S, Nader-Macías MEF. 2017. In vitro effect of vaginal lactobacilli on the growth and adhesion abilities of uropathogenic *Escherichia coli*. *Arch Microbiol* 199:767–774.
 48. Yang Y, Galle S, Le MHA, Zijlstra RT, Gänzle MG. 2015. Feed fermentation with reuteran- and levan-producing *Lactobacillus reuteri* reduces colonization of weanling pigs by enterotoxigenic *Escherichia coli*. *Appl Environ Microbiol* 81:5743–5752.
 49. Mangell P, Nejdfor P, Jeppsson B. 2002. *Lactobacillus plantarum* 299v Inhibits Intestinal Permeability. *Dig Dis* 47:511–516.
 50. Mack DR, Michail S, Wei S, McDougall L, Hollingsworth MA. 1999. Probiotics inhibit enteropathogenic *E. coli* adherence in vitro by inducing intestinal mucin gene expression. *Am J Physiol - Gastrointest Liver Physiol* 276:941–949.
 51. Zeinhom M, Tellez AM, Delcenserie V, El-Kholy AM, El-Shinawy SH, Griffiths MW. 2012. Yogurt containing bioactive molecules produced by *Lactobacillus acidophilus* la-5 exerts a protective effect against enterohemorrhagic *Escherichia coli* in mice. *J Food Prot* 75:1796–1805.
 52. Medellín-Peña MJ, Wang H, Johnson R, Anand S, Griffiths MW. 2007. Probiotics affect virulence-related gene expression in *Escherichia coli* O157:H7. *Appl Environ Microbiol* 73:4259–4267.
 53. Sherman PM, Johnson-Henry KC, Yeung HP, Ngo PSC, Goulet J, Tompkins TA. 2005. Probiotics reduce enterohemorrhagic *Escherichia coli* O157:H7- and enteropathogenic *E. coli* O127:H6-induced changes in polarized T84 epithelial cell monolayers by reducing bacterial adhesion and cytoskeletal rearrangements. *Infect Immun* 73:5183–5188.
 54. Kim Y, Oh S, Park S, Seo JB, Kim SH. 2008. *Lactobacillus acidophilus* reduces expression of enterohemorrhagic *Escherichia coli* O157:H7 virulence factors by inhibiting autoinducer-2-like activity. *Food Control* 19:1042–1050.
 55. Chu H, Kang S, Ha S, Cho K, Park SM, Han KH, Sang KK, Lee HG, Seung HH, Yun CH, Choi Y. 2005. *Lactobacillus acidophilus* expressing recombinant K99 adhesive fimbriae has an inhibitory effect on adhesion of enterotoxigenic *Escherichia coli*. *Microbiol Immunol* 49:941–948.
 56. Liévin-Le Moal V, Amsellem R, Servin AL, Coconnier MH. 2002. *Lactobacillus acidophilus* (strain LB) from the resident adult human gastrointestinal microflora exerts activity against brush border damage promoted by a diarrhoeagenic *Escherichia coli* in human Enterocyte-like cells. *Gut* 50:803–811.
 57. Park H, Yeo S, Ji Y, Lee J, Yang J, Park S, Shin H, Holzappel W. 2014. Autoinducer-2 associated inhibition by *Lactobacillus sakei* NR28 reduces virulence of enterohaemorrhagic *Escherichia coli* O157: H7. *Food Control* 45:62–69.
 58. Asahara T, Nomoto K, Watanuki M, Yokokura T. 2001. Antimicrobial activity of intraurethrally administered probiotic *Lactobacillus casei* in a murine model of *Escherichia coli* urinary tract infection. *Antimicrob Agents Chemother* 45:1751–1760.

59. Anand S, Mandal S, Singh KS, Patil P, Tomar SK. 2018. Synbiotic combination of *Lactobacillus rhamnosus* NCDC 298 and short chain fructooligosaccharides prevents enterotoxigenic *Escherichia coli* infection. *Lwt* 98:329–334.
60. Hirano J, Yoshida T, Sugiyama T, Koide N, Mori I, Yokochi T. 2003. The effect of *Lactobacillus rhamnosus* on enterohemorrhagic *Escherichia coli* infection of human intestinal cells in vitro. *Microbiol Immunol* 47:405–409.
61. Chen YP, Lee TY, Hong WS, Hsieh HH, Chen MJ. 2013. Effects of *Lactobacillus kefiranofaciens* M1 isolated from kefir grains on enterohemorrhagic *Escherichia coli* infection using mouse and intestinal cell models. *J Dairy Sci* 96:7467–7477.
62. Atassi F, Brassart D, Grob P, Graf F, Servin AL. 2006. Vaginal *Lactobacillus* isolates inhibit uropathogenic *Escherichia coli*. *FEMS Microbiol Lett* 257:132–138.
63. Trejo FM, Pérez PF, De Antoni GL. 2010. Co-culture with potentially probiotic microorganisms antagonises virulence factors of *Clostridium difficile* in vitro. *Antonie van Leeuwenhoek, Int J Gen Mol Microbiol* 98:19–29.
64. Najarian A, Sharif S, Griffiths MW. 2019. Evaluation of protective effect of *Lactobacillus acidophilus* La-5 on toxicity and colonization of *Clostridium difficile* in human epithelial cells in vitro. *Anaerobe* 55:142–151.
65. Yun B, Oh S, Griffiths MW. 2014. *Lactobacillus acidophilus* modulates the virulence of *Clostridium difficile*. *J Dairy Sci* 97:4745–4758.
66. Carasi P, Trejo FM, Pérez PF, De Antoni GL, Serradell M de los A. 2012. Surface proteins from *Lactobacillus kefir* antagonize invitro cytotoxic effect of *Clostridium difficile* toxins. *Anaerobe* 18:135–142.
67. Sagheddu V, Uggeri F, Belogi L, Remollino L, Brun P, Bernabè G, Moretti G, Porzionato A, Morelli L, Castagliuolo I, Elli M. 2020. The Biotherapeutic Potential of *Lactobacillus reuteri* Characterized Using a Target-Specific Selection Process. *Front Microbiol* 11.
68. Andersen KK, Strokappe NM, Hultberg A, Truusalu K, Smidt I, Mikelsaar RH, Mikelsaar M, Verrips T, Hammarström L, Marcotte H. 2016. Neutralization of *Clostridium difficile* toxin B mediated by engineered lactobacilli that produce single-domain antibodies. *Infect Immun* 84:395–406.
69. Gao X, Ma Y, Wang Z, Bai J, Jia S, Feng B, Jiang Y, Cui W, Tang L, Li Y, Wang L, Xu Y. 2019. Oral immunization of mice with a probiotic *Lactobacillus casei* constitutively expressing the α -toxoid induces protective immunity against *Clostridium perfringens* α -toxin. *Virulence* 10:166–179.
70. Jabbar H, Hala F, Radeef M. 2011. Capability of *Lactobacillus acidophilus* supernatant to inhibit production of lipase from methicillin-resistant *Staphylococcus aureus*. *J Univ Anbar Pure Sci* 5.
71. Reid G, Tieszer C. 1994. Use of lactobacilli to reduce the adhesion of *Staphylococcus aureus* to catheters. *Int Biodeterior Biodegrad* 34:73–83.
72. Ren D, Li C, Qin Y, Yin R, Li X, Tian M, Du S, Guo H, Liu C, Zhu N, Sun D, Li Y, Jin N. 2012. Inhibition of *Staphylococcus aureus* adherence to Caco-2 cells by lactobacilli and cell surface

- properties that influence attachment. *Anaerobe* 18:508–515.
73. Melo TA, Dos Santos TF, De Almeida ME, Junior LAGF, Andrade EF, Rezende RP, Marques LM, Romano CC. 2016. Inhibition of *Staphylococcus aureus* biofilm by *Lactobacillus* isolated from fine cocoa. *BMC Microbiol* 16:1–9.
 74. Ramezani M, Zainodini N, Hakimi H, Zarandi ER, Bagheri V, Bahramabadi R, Zare-Bidaki M. 2019. Cell-free culture supernatants of lactobacilli modify the expression of virulence factors genes in *staphylococcus aureus*. *Jundishapur J Microbiol* 12.
 75. Gan BS, Kim J, Reid G, Cadieux P, Howard JC. 2002. *Lactobacillus fermentum* RC-14 Inhibits *Staphylococcus aureus* Infection of Surgical Implants in Rats . *J Infect Dis* 185:1369–1372.
 76. Laughton JM, Devillard E, Heinrichs DE, Reid G, McCormick JK. 2006. Inhibition of expression of a staphylococcal superantigen-like protein by a soluble factor from *Lactobacillus reuteri*. *Microbiology* 152:1155–1157.
 77. Bouchard DS, Rault L, Berkova N, Le Loir Y, Even S. 2013. Inhibition of *Staphylococcus aureus* invasion into bovine mammary epithelial cells by contact with live *Lactobacillus casei*. *Appl Environ Microbiol* 79:877–885.
 78. Younes JA, van der Mei HC, van den Heuvel E, Busscher HJ, Reid G. 2012. Adhesion forces and coaggregation between vaginal staphylococci and lactobacilli. *PLoS One* 7.
 79. Fornitano A, Amendola I, Santos S, Silva C, Leao M. 2019. *Lactobacillus rhamnosus* versus *Staphylococcus aureus*: influence on growth and expression of virulence factors. *J Dent Maxillofac Res* 2:29–33.
 80. Ki M-R, Ghim S-Y, Hong I-H, Park J-K, Hong K-S, Ji A-R, Jeong K-S. 2010. In Vitro Inhibition of *Helicobacter pylori* Growth and of Adherence of cagA-Positive Strains to Gastric Epithelial Cells by *Lactobacillus paraplantarum* KNUC25 Isolated from Kimchi. *J Med Food* 13:629–634.
 81. Gotteland M, Poliak L, Cruchet S, Brunser O. 2005. Effect of regular ingestion of *Saccharomyces boulardii* plus inulin or *Lactobacillus acidophilus* LB in children colonized by *Helicobacter pylori*. *Acta Paediatr Int J Paediatr* 94:1747–1751.
 82. Urrutia-Baca VH, Escamilla-García E, de la Garza-Ramos MA, Tamez-Guerra P, Gomez-Flores R, Urbina-Ríos CS. 2018. In Vitro Antimicrobial Activity and Downregulation of Virulence Gene Expression on *Helicobacter pylori* by Reuterin. *Probiotics Antimicrob Proteins* 10:168–175.
 83. Pena JA, Rogers AB, Ge Z, Ng V, Li SY, Fox JG, Versalovic J. 2005. Probiotic *Lactobacillus* spp. Diminish *Helicobacter hepaticus*-Induced Inflammatory Bowel Disease in Interleukin-10-Deficient Mice. *Infect Immun* 73:912–920.
 84. Alexandre Y, Le Berre R, Barbier G, Le Blay G. 2014. Screening of *Lactobacillus* spp. for the prevention of *Pseudomonas aeruginosa* pulmonary infections. *BMC Microbiol* 14.
 85. Maldonado NC, Silva De Ruiz C, Cecilia M, Nader-Macias ME. 2007. A simple technique to detect *Klebsiella* biofilm-forming-strains. Inhibitory potential of *Lactobacillus fermentum* CRL 1058 whole cells and products. *Commun Curr Res Educ Top Trends Appl Microbiol* 52–59.

86. Al-Mathkhury HJF, Aded Assa SD. 2012. Inhibitory Effect of Lactobacilli Filtrate on Klebsiella Pneumoniae Biofilm. *Iraqi Postgrad Med J* 11:168–179.
87. Tahmourespour A, Salehi R, Kermanshahi RK, Eslami G. 2011. The anti-biofouling effect of Lactobacillus fermentum-derived biosurfactant against Streptococcus mutans. *Biofouling* 27:385–392.
88. Cui T, Bai F, Sun M, Lv X, Li X, Zhang D, Du H. 2020. Lactobacillus crustorum ZHG 2-1 as novel quorum-quenching bacteria reducing virulence factors and biofilms formation of Pseudomonas aeruginosa. *LWT* 117.
89. Wasfi R, Abd El-Rahman OA, Zafer MM, Ashour HM. 2018. Probiotic Lactobacillus sp. inhibit growth, biofilm formation and gene expression of caries-inducing Streptococcus mutans. *J Cell Mol Med* 22:1972–1983.
90. Wu CC, Lin CT, Wu CY, Peng WS, Lee MJ, Tsai YC. 2015. Inhibitory effect of Lactobacillus salivarius on Streptococcus mutans biofilm formation. *Mol Oral Microbiol* 30:16–26.
91. Saroj SD, Maudsdotter L, Tavares R, Jonsson AB. 2016. Lactobacilli interfere with streptococcus pyogenes hemolytic activity and adherence to host epithelial cells. *Front Microbiol* 7:1–8.
92. Söderling EM, Marttinen AM, Haukioja AL. 2011. Probiotic Lactobacilli interfere with Streptococcus mutans biofilm formation in Vitro. *Curr Microbiol* 62:618–622.
93. Tahmourespour A, Salehi R, Kasra Kermanshahi R. 2011. Lactobacillus acidophilus-derived biosurfactant effect on GTFB and GTFC expression level in Streptococcus mutans biofilm cells. *Brazilian J Microbiol* 42:330–339.
94. Ahmed A, Dachang W, Lei Z, Jianjun L, Juanjuan Q, Yi X. 2014. Effect of Lactobacillus species on Streptococcus mutans biofilm formation. *Pak J Pharm Sci* 27:1523–1528.
95. Berríos P, Fuentes JA, Salas D, Carreño A, Aldea P, Fernández F, Trombert AN. 2018. Inhibitory effect of biofilm-forming Lactobacillus kunkeei strains against virulent Pseudomonas aeruginosa in vitro and in honeycomb moth (Galleria mellonella) infection model. *Benef Microbes* 9:257–268.
96. Valdéz JC, Peral MC, Rachid M, Santana M, Perdígón G. 2005. Interference of Lactobacillus plantarum with Pseudomonas aeruginosa in vitro and in infected burns: The potential use of probiotics in wound treatment. *Clin Microbiol Infect* 11:472–479.
97. Saroj SD, Maudsdotter L, Tavares R, Jonsson AB. 2016. Lactobacilli interfere with streptococcus pyogenes hemolytic activity and adherence to host epithelial cells. *Front Microbiol* 7:1–8.
98. Salehi R, Salehi A, Savabi O, Tahmourespour A, Eslami G, Kamali S, Kazemi M. 2014. Effects of Lactobacillus reuteri-derived biosurfactant on the gene expression profile of essential adhesion genes (gtfB, gtfC and ftf) of Streptococcus mutans. *Adv Biomed Res* 3:169.
99. Wen ZT, Yates D, Ahn SJ, Burne RA. 2010. Biofilm formation and virulence expression by Streptococcus mutans are altered when grown in dual-species model. *BMC Microbiol* 10.
100. Hawthorn LA, Reid G. 1990. Exclusion of uropathogen adhesion to polymer surfaces by Lactobacillus acidophilus. *J Biomed Mater Res* 24:39–46.

101. Spurbeck RR, Arvidson CG. 2010. *Lactobacillus jensenii* surface-associated proteins inhibit *Neisseria gonorrhoeae* adherence to epithelial cells. *Infect Immun* 78:3103–3111.
102. Wang S, Wang Q, Yang E, Yan L, Li T, Zhuang H. 2017. Antimicrobial compounds produced by vaginal *Lactobacillus crispatus* are able to strongly inhibit *Candida albicans* growth, hyphal formation and regulate virulence-related gene expressions. *Front Microbiol* 8:1–11.
103. Atassi F, Pho Viet Ahn DL, Lievin-Le Moal V. 2019. Diverse Expression of Antimicrobial Activities Against Bacterial Vaginosis and Urinary Tract Infection Pathogens by Cervicovaginal Microbiota Strains of *Lactobacillus gasseri* and *Lactobacillus crispatus*. *Front Microbiol* 10:1–13.
104. Castro J, Martins AP, Rodrigues ME, Cerca N, Onderdonk AB. 2018. *Lactobacillus crispatus* represses vaginolysin expression by BV associated *Gardnerella vaginalis* and reduces cell cytotoxicity. *Anaerobe* 50:60–63.
105. Matsuda Y, Cho O, Sugita T, Ogishima D, Takeda S. 2018. Culture Supernatants of *Lactobacillus gasseri* and *Lbc. crispatus* Inhibit *Candida albicans* Biofilm Formation and Adhesion to HeLa Cells. *Mycopathologia* 183:691–700.
106. Niu XX, Li T, Zhang X, Wang SX, Liu ZH. 2017. *Lactobacillus crispatus* modulates vaginal epithelial cell innate response to *Candida albicans*. *Chin Med J (Engl)* 130:273–279.
107. Rizzo A, Losacco A, Carratelli CR. 2013. *Lactobacillus crispatus* modulates epithelial cell defense against *Candida albicans* through Toll-like receptors 2 and 4, interleukin 8 and human β -defensins 2 and 3. *Immunol Lett* 156:102–109.
108. Parolin C, Marangoni A, Laghi L, Foschi C, Palomino RAÑ, Calonghi N, Cevenini R, Vitali B. 2015. Isolation of vaginal lactobacilli and characterization of anti-candida activity. *PLoS One* 10:1–17.
109. Hawthorn LA, Reid G. 1990. Exclusion of uropathogen adhesion to polymer surfaces by *Lactobacillus acidophilus*. *J Biomed Mater Res* 24:39–46.
110. Itapary dos Santos C, Ramos Franca Y, Duarte Lima Campos C, Quaresma Bomfim MR, Oliveira Melo B, Assuncao Holanda R, Santos VL, Gomes Monteiro S, Buoizzi Moffa E, Souza Monteiro A, Andrade Monteiro C, Monteiro-Nero V. 2019. Antifungal and Antivirulence Activity of Vaginal *Lactobacillus* Spp. Products against *Candida* Vaginal Isolates. *Pathogens* 8.
111. Santos CMA, Pires MCV, Leão TL, Hernández ZP, Rodriguez ML, Martins AKS, Miranda LS, Martins FS, Nicoli JR. 2016. Selection of *Lactobacillus* strains as potential probiotics for vaginitis treatment. *Microbiol (United Kingdom)* 162:1195–1207.
112. Vilela SFG, Barbosa JO, Rossoni RD, Santos JD, Prata MCA, Anbinder AL, Jorge AOC, Junqueira JC. 2015. *Lactobacillus acidophilus* ATCC 4356 inhibits biofilm formation by *C. Albicans* and attenuates the experimental candidiasis in *Galleria mellonella*. *Virulence* 6:29–39.
113. Graf K, Last A, Gratz R, Allert S, Linde S, Westermann M, Gröger M, Mosig AS, Gresnigt MS, Hube B. 2019. Keeping *Candida* commensal: How lactobacilli antagonize pathogenicity of *Candida albicans* in an in vitro gut model. *DMM Dis Model Mech* 12.

114. Allonsius CN, Vandenheuevel D, Oerlemans EFM, Petrova MI, Donders GGG, Cos P, Delputte P, Lebeer S. 2019. Inhibition of *Candida albicans* morphogenesis by chitinase from *Lactobacillus rhamnosus* GG. *Sci Rep* 9:1–12.
115. Phukan N, Parsamand T, Brooks AES, Nguyen TNM, Simoes-Barbosa A. 2013. The adherence of *Trichomonas vaginalis* to host ectocervical cells is influenced by lactobacilli. *Sex Transm Infect* 89:455–459.
116. Atassi F, Brassart D, Grob P, Graf F, Servin AL. 2006. *Lactobacillus* strains isolated from the vaginal microbiota of healthy women inhibit *Prevotella bivia* and *Gardnerella vaginalis* in coculture and cell culture. *FEMS Immunol Med Microbiol* 48:424–432.
117. Rossoni RD, Fuchs BB, De Barros PP, Dos Santos Velloso M, Jorge AOC, Junqueira JC, Mylonakis E. 2017. *Lactobacillus paracasei* modulates the immune system of *Galleria mellonella* and protects against *Candida albicans* infection. *PLoS One* 12:1–17.
118. Oliveira VMC, Santos SSF, Silva CRG, Jorge AOC, Leão MVP. 2016. *Lactobacillus* is able to alter the virulence and the sensitivity profile of *Candida albicans*. *J Appl Microbiol* 121:1737–1744.
119. Mailänder-Sánchez D, Braunsdorf C, Grumaz C, Müller C, Lorenz S, Stevens P, Wagener J, Hebecker B, Hube B, Bracher F, Sohn K, Schaller M. 2017. Antifungal defense of probiotic *Lactobacillus rhamnosus* GG is mediated by blocking adhesion and nutrient depletion. *PLoS One* 12:1–19.
120. Martinez RCR, Seney SL, Summers KL, Nomizo A, De Martinis ECP, Reid G. 2009. Effect of *Lactobacillus rhamnosus* GR-1 and *Lactobacillus reuteri* RC-14 on the ability of *Candida albicans* to infect cells and induce inflammation. *Microbiol Immunol* 53:487–495.
121. Ribeiro FC, de Barros PP, Rossoni RD, Junqueira JC, Jorge AOC. 2017. *Lactobacillus rhamnosus* inhibits *Candida albicans* virulence factors in vitro and modulates immune system in *Galleria mellonella*. *J Appl Microbiol* 122:201–211.
122. Kmet V, Lucchino F. 1997. Aggregation-promoting factor in human vaginal *Lactobacillus* strains. *FEMS Immunol Med Microbiol* 19:111–114.
123. Ahmad A. 2013. Probiotic *Lactobacillus* affects the expression of virulence in *Candida albicans*. *J Microb Biochem Technol* 5:5948.
124. Atassi F, Brassart D, Grob P, Graf F, Servin AL. 2006. In vitro antibacterial activity of *Lactobacillus helveticus* strain KS300 against diarrhoeagenic, uropathogenic and vaginosis-associated bacteria. *J Appl Microbiol* 101:647–654.
125. Vahedi-Shahandashti R, Kasra-Kermanshahi R, Shokouhfard M, Ghadam P, Feizabadi MM, Teimourian S. 2017. Antagonistic activities of some probiotic lactobacilli culture supernatant on *Serratia marcescens* swarming motility and antibiotic resistance. *Iran J Microbiol* 9:348–355.
126. De Montijo-Prieto S, Moreno E, Bergillos-Meca T, Lasserrot A, Ruiz-López MD, Ruiz-Bravo A, Jiménez-Valera M. 2015. A *Lactobacillus plantarum* strain isolated from kefir protects against intestinal infection with *Yersinia enterocolitica* O9 and modulates immunity in mice. *Res Microbiol*

166:626–632.

127. Reda FM. 2014. Detoxification of enterotoxigenic *Bacillus cereus* (JX455159) isolated from meat by a local strain of *Lactobacillus plantarum* (JX282192). *Ann Microbiol* 64:287–296.
128. Felipe EMM, Fanny MJ, Isabela A, Celia RG, Mariella VPL, Silvana SFDS. 2016. Relationship between the probiotic *Lactobacillus rhamnosus* and *Enterococcus faecalis* during the biofilm formation. *African J Microbiol Res* 10:1182–1186.
129. Nissen L, Sgorbati B, Biavati B, Belibasakis GN. 2014. *Lactobacillus salivarius* and *Lbc. gasseri* down-regulate *Aggregatibacter actinomycetemcomitans* exotoxins expression. *Ann Microbiol* 64:611–617.