Table S1: Data on growth and acidification of some* probiotics in media with IPEC-J2 animal cell cultures.

Species ¤	Probiotic				IPEC-J2 cell culture			
	Inoculation CFU/mL	**Final CFU**	**Incubation time (h)**	**Final pH**	**Medium ****	**Cytotoxicity**	**Parameter tested**	**References**
Lactobacillus rhamnosus GG *Lactobacillus acidophilus* NCFM	1.0 x 10^6 1.0 x 10^8	ND	24	ND	DMEM/F12	Inoc. > 10^7 Inoc. > 10^9	Protection against rotavirus infection	[6]
Lactobacillus reuteri	1 x 10^8 a 1 x 10^9 a	ND	6 h	ND	DMEM/F12	ND	Epithelial barrier integrity – against E coli	[52]
5 *Lactobacillus* and 2 *Bifidobacte-rium* species	1 x 10^8	ND	90 min 24 h	ND	DMEM + FCS	ND	Vesicular stomatitis virus infectivity	[2]
Four *Lactobacillus reuteri* strains	1 x 10^7 b	ND	16 h	ND	DMEM + FBS	ND	Protection against intestinal inflammation	[53]
Eleven Lactobacillus species	1 x 10^8 c	ND	60 min	ND	DMEM/F12	ND	Competitive exclusion of *E. coli*	[54]
LGG *L Johnsonii and L reuteri*	3 x 10^7d	ND	12 h	4.0	DMEM/F12	LDH :Yes LDH : No	Effect of gut barrier functions and Protection against ETEC infections	[18]
L. rhamnosus	1 x 10^8	ND	3 h	ND	DMEM/F12	Apoptose	Effect of *L. rhamnosus* alone, pre incubated and co-incubated with ETEC on apoptosis of IPEC-J2	[55]
P. pentosaceus	5 x 10^5 to 5 x 10^7	ND	6 h	ND	DMEM/F12	Trypan blue No	Evaluation of *P. pentosaceus* and its impact on inflammatory response in IPEC-J2 to ETEC	[56]
L. plantarum	5 x 10^7	ND	6 h	ND	DMEM/F12	No change TEER	Effects of *L. plantarum* on epithelial barrier disruption caused by ETEC in IPEC-J2	[41]
L. helveticus	3 x 10^7	ND	24-48-72 h	ND	DMEM/F12	MTT: No TEER: No Apoptose: No	Effects of citrulline and *L. helveticus* ASCC 511 on intestinal epithelial cell integrity	[57]
L. salivarieus + ETEC	1 x 10^5 b	No	3 h-to 24 h	ND	RPMI	LDH combined with ETEC	Protective effect of *L. salivarius* on ETEC adhesion on IPEC-J2 cells	[58]
L. reuteri, Salomonella enterica, Bacillus licheniformis	1.5 x 10^8 e	ND	60 min, overnight	ND	DMEM/F12	ND	Effect on chemokine cytokine expression	[59]
L. plantarum ETEC	5 x 10^7 e	ND	6 h	ND	DMEM/F12	ND	Protective effect of *L plantarum* against ETEC in IPEC-J2	[60]
L. gasseri	MOI 100 f	ND	2 h -4 h	ND	DMEM/F12	ND	*A*ctivation of the oxidative phosphorylation pathway in IPEC-J2	[61]
L. casei	1x10^8 c	ND	3 h	ND	DMEM/F12	No: (CCK 8)	Protective effect of *L. casei* ATCC 393 on IPEC-J2 cells infected by ETEC	[62]
L. johnsonii	3 x 10^6	ND	3 h	ND	DMEM/F12	No: (Trypan blue)	Protection of *L. johnsonii* against *S. infintidis* infection in IPEC-J2	[63]
E. coli Nissle	MOI 10 to 100 f	ND	2 h- 6 h	ND	DMEM/F12	ND	Inhibitory effect of *E. coli* Nissel on *S. thyphimurium* in IPEC-J2 cells	[64]
Enterococcus. faecium	2 x 10^6 a	ND	2 h-4 h-6 h	ND	DMEM/F12	No change TEER	Protective effect of *E. faecium* against ETEC	[65]
11 strains: *Pediococcus,, Lactoba-cillus, Enterococcus*	1 x 10^8	ND	2 h	ND	DMEM + 10% FCS	ND	Adhesion of LAB to IPEC-J2 cells	[66]

L. rhamnosus. L. fermentum	1 x 10^8	ND	2 h total	ND	DMEM + FBS	ND	Antimicrobial activities against 20 bacterial pathogens	[67]
L. plantarum	10^5 to 10^9 /well	ND	2 to 4 h	ND	DMEM/F12	Microscopic; flow cytometry	Antioxidant and cytoprotective activities of cells exposed to hydrogen peroxide	[68]
L. johnsonii	10^6/well MOI 3	ND	3 h	ND	DME/F-12	ND	Alleviation of *S. Typhimurium*-induced tight junction injury	[69]

* Limited to probiotics that tend to acidify the medium : lactobacilli, *Bifidobacterium, Pediococcus* and *Enterococcus.* Excludes, for example, probiotic cultures of *Bacillus, Saccharomyces or Clostridium.*
¤ A new taxonomy of lactobacilli has been published [9], but the form used in the references will be used in this table for purposes of accuracy of citations.

MEDIUM:
** DMEM/F12 containing 0 % to 10 % FSB
INOCULATION :

a. Considering 0.5 mL/well (transwell : 0.5 mL recommended on apical side)
b. Considering 1 mL/well (24 wells plate : 0.5 mL to 1.2 mL recommended)
c. Considering 2 mL/well (12 wells plate)
d. Considering 200 µL (96 wells plate : 100 µL to 200 µL recommended)
e. Considering 1 mL/well (transwell)
f. No IPEC-J2 population was given in these article

Table S2: Growth of the various probiotics in the Buffered Maintenance Medium (BMM) at inoculation levels of approximately 10^7 and 10^8 cells/mL after 22 h in incubation in presence of (cell) or in absence of (no cell) IPEC-J2 cells. Values are in viable counts in a flow cytometry analysis (FC_V).

Culture	Target: 10^7 bacteria/mL					Target: 10^8 bacteria/mL				
	Inoculated (bact. / mL)	Incubated (bact. / mL)		MF*		Inoculated (bact. / mL)	Incubated (bact. / mL)		MF*	
		No cells **	With cells	No cells	With cells		No cells	With cells	No cells	With cells
Lactobacillus plantarum 299V	1.3×10^7	2.0×10^7	1.3×10^8	1.4	12	1.3×10^8	5.6×10^8	4.9×10^8	4.2	4.3
Lactobacillus paracasei A234	2.1×10^7	1.2×10^8	8.0×10^8	5.0	38	2.1×10^8	6.0×10^8	1.2×10^9	2.7	6.0
Bifidobacterium lactis A026	1.4×10^7	8.4×10^6	7.1×10^7	0.6	5	1.4×10^8	1.8×10^8	3.4×10^8	1.3	2.5
Lactobacillus rhamnosus GG	1.4×10^7	1.3×10^8	1.6×10^8	10	14	1.4×10^8	3.8×10^8	2.3×10^8	3.5	2.1
Lactobacillus rhamnosus R0011	2.3×10^7	3.8×10^7	2.5×10^8	1.5	11	2.3×10^8	5.6×10^8	5.7×10^8	2.4	2.5
Bifidobacterium longum R0175	2.3×10^7	2.6×10^7	2.6×10^8	1.1	12	2.3×10^8	2.7×10^8	7.8×10^8	1.2	3.5
Lactobacillus gasseri A237	1.5×10^7	3.7×10^6	1.2×10^7	0.3	0.8	1.5×10^8	3.6×10^7	1.1×10^8	0.3	0.8
Escherichia coli Nissle	1.6×10^7	1.7×10^9	NA	108	NA	1.6×10^8	2.6×10^9	NA	16	NA
Escherichia coli DH5	2.4×10^7	1.5×10^9	NA	64	NA	2.4×10^8	1.9×10^9	NA	7.9	NA

* MF = Multiplication factor, which represents : (number of bacteria in the incubated medium) / (number of bacteria inoculated)
** No cell = Probiotics only. With cells = Probiotics with IPEC-J2 animal cells.

Table S3. Viability of IPEC-J2 in incubated Minimal Medium (MM) having reached a pH of 5.0, as well a in a bacterial-free MM adjusted to pH 5.0 with lactic acid.

Treatment		**IPEC-J2 Viability (%)**	
		Neutral red	**FC_A**
Probiotics strains			
R0011	(10^7)*	75	28
A237	(10^9)	52	22
A026	(10^8)	36	8
299v	(10^8)	34	5
R0175	(10^7)	18	5
GG	(10^8)	27	28
A234	(10^8)	21	5
Probiotic-free			
Lactic acid		40	22
Probiotic-free			
Sodium Lactate		100	-

FC_A : Apoptosis as observed by Flow Cytometry

* Values in brackets indicate the inoculation level

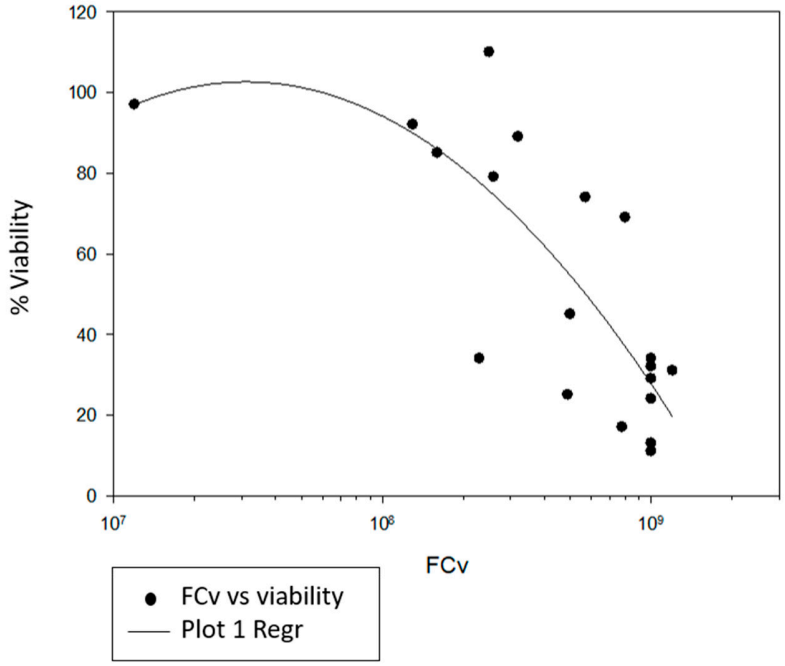

Figure S1: The effect of the bacterial population reached in the BMM medium after the 22 h incubation (FCv) and the resulting viability levels of the IPEC-J2 cells (assessed by Neutral Red).