

SUPPLEMENTAL DATA FOR PUBLICATION

Supplemental Table 1. Cocktails of Antibodies used to Detect Immune Cells by Flow Cytometry

Target Cell Populations	Antibodies in Cocktail (Clone)
T cells/Natural Killer Cells	Anti-CD3 (PPT3) ^a Anti-CD4 (74-12-4) ^a Anti-CD8 (76-2-11) ^a
Monocytes/Macrophages	Anti-CD172a (74-22-15) ^a Anti-CD163 (2A10/11) ^b Anti-CD14 (MIL2) ^b
B cells	Anti-CD21 (BB6-11C9.6) ^a Anti-SLA class II DR (2E9/13) ^b

^aSouthern Biotech (Birmingham, AL, USA)

^bAbD Serotec, a Bio-Rad Company (Raleigh, NC, USA).

Supplemental Table 2. *B. infantis* in ascending colon contents and feces at 120h after *S. aureus* infection in piglets fed control formula (CON), control formula with *B. infantis* administration (BI, 3×10^9 CFU/d) or formula with 4 g/L bLf alone (LF) or with *B. infantis* administration (COMB).

	Occurrence		Abundance	
	# positive/total # of animals, (%)		Log ₁₀ copies/g	
	AC	Feces	AC	Feces
CON	0/12, (0)	1/9, (11)	BLD	BLD
LF	1/12, (8)	0/11, (0)	BLD	BLD
BI	9/10, (90)*	8/8, (100) *	7.0 ± 1.1*	7.2 ± 1.1*
COMB	12/13, (92) *	9/9, (100) *	7.5 ± 1.4*	7.4 ± 1.0*

Abbreviations: AC, ascending colon; *B. infantis*, *Bifidobacterium longum* subsp. *infantis* ATCC 15697; BLD, below level of detection; CON, control; BI, *B. infantis*; LF, bovine lactoferrin; COMB, both *B. infantis* and bovine lactoferrin; *S. aureus*, *Staphylococcus aureus* strain S54F9

Data are expressed as Mean ± SD

*Means in a column without a common superscript differ by treatment, $P < 0.0001$

Supplemental Table 3. Whole blood cell populations and percentages determined by CBC/differential analysis in 7-day-old piglets (pre-infection) or 12-day-old piglets (5 days post-infection with *S. aureus*) fed formula with 4 g/l whey (CON), control formula with *B. infantis* administration (BI, 10^9 CFU/d) or formula with 4 g/l bLf alone (LF) or with *B. infantis* administration (COMB).

	CON	LF	BI	COMB
Hemoglobin, g/dL				
Pre-Infection	7.5 ± 0.7	8.2 ± 0.4	7.5 ± 0.5	7.7 ± 0.4
Post-Infection	6.6 ± 0.3	6.3 ± 0.2	6.2 ± 0.3	6.5 ± 0.2
NRBC, per 200 WBC				
Pre-Infection	2.0 ± 0.9	2.5 ± 1.1	3.2 ± 0.9	3.0 ± 1.1
Post-Infection	5.4 ± 2.1	3.9 ± 1.5*	9.2 ± 2.6	3.2 ± 1.1*
WBC Count, per μ L				
Pre-Infection	8.9 ± 2.1	10.9 ± 1.3	11.1 ± 1.0	9.7 ± 1.9
Post-Infection	10.0 ± 2.9	10.8 ± 2.0	11.4 ± 2.2	10.8 ± 1.6
Platelets, x 10^3 per μ L				
Pre-Infection	486 ± 65.6	545 ± 55.9	487 ± 29.4	456 ± 66.8
Post-Infection	748 ± 71.5	723 ± 46.9	681 ± 90.3	745 ± 46.0
Seg, %				
Pre-Infection	66.9 ± 4.4	54.2 ± 5.1†	59.4 ± 5.0	51.9 ± 5.9†
Post-Infection	57.1 ± 5.8	57.3 ± 3.2	60.7 ± 4.7	60.5 ± 4.1
Band, %, (n detected / total n)				
Pre-Infection	0.9 ± 0.9 (1/7)	0.6 ± 0.5 (2/10)	7.0 ± 5.2 (5/10)	1.1 ± 0.7 (3/10)
Post-Infection	1.4 ± 0.5 (6/11)	0.9 ± 0.3 (7/13)	3.0 ± 1.9 (7/11)	1.0 ± 0.5 (5/13)
Lymph, %				
Pre-Infection	30.1 ± 4.4	42.6 ± 5.4*	31.5 ± 4.1	43.2 ± 5.5*
Post-Infection	37.2 ± 6.1	36.4 ± 3.1	31.6 ± 3.1	34.5 ± 3.6

Data are expressed as Mean ± SEM

*Means in a row without a common superscript differ by treatment, $P < 0.05$; † Means in a row without a common superscript showed a trend to differ by treatment, $0.05 \geq P < 0.10$.

Abbreviations: Lymph, lymphocytes; Band, immature neutrophils; Seg, neutrophils; WBC, white blood cells; NRBC, nucleated red blood cells.