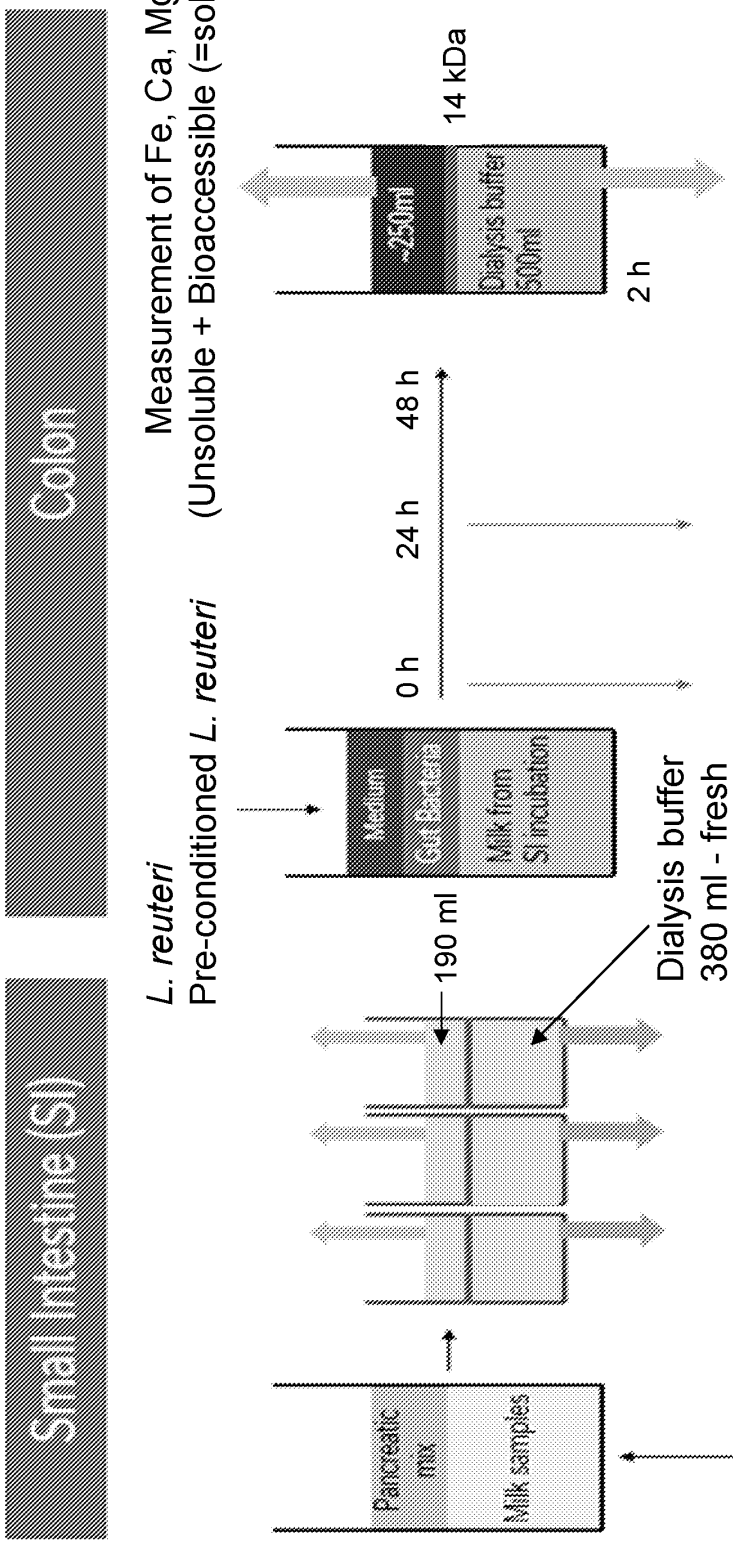

Small Intestine (SI)
Colon
Pancreatic mix
Milk samples
190 ml
Dialysis buffer
380 ml - fresh
Medium
Gut Bacteria
Milk from SI incubation
0 h
24 h
48 h
~250ml
Dialysis buffer 500ml
14 kDa
2 h
Measurement of Fe, Ca, Mg
(Unsoluble + Bioaccessible (=soluble))
Measurement of Fe, Ca, Mg
(total and soluble)
L. reuteri
Pre-conditioned L. reuteri
Milk
Milk + L. reuteri
Milk + pre-conditioned L. reuteri

Figure 1

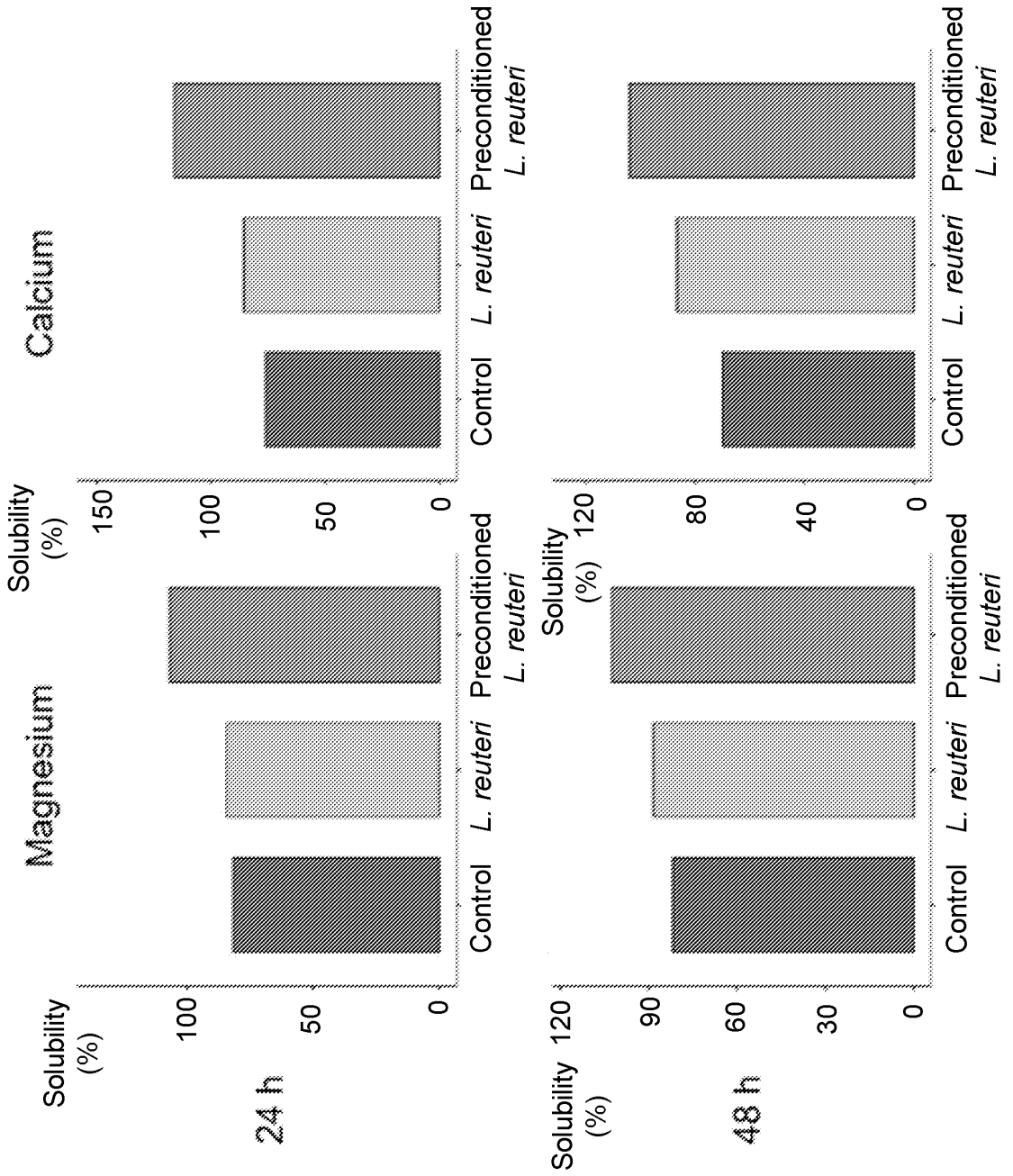

Magnesium
Calcium
24 h
48 h
Solubility (%)
Control
L. reuteri
Preconditioned L. reuteri

Figure 2

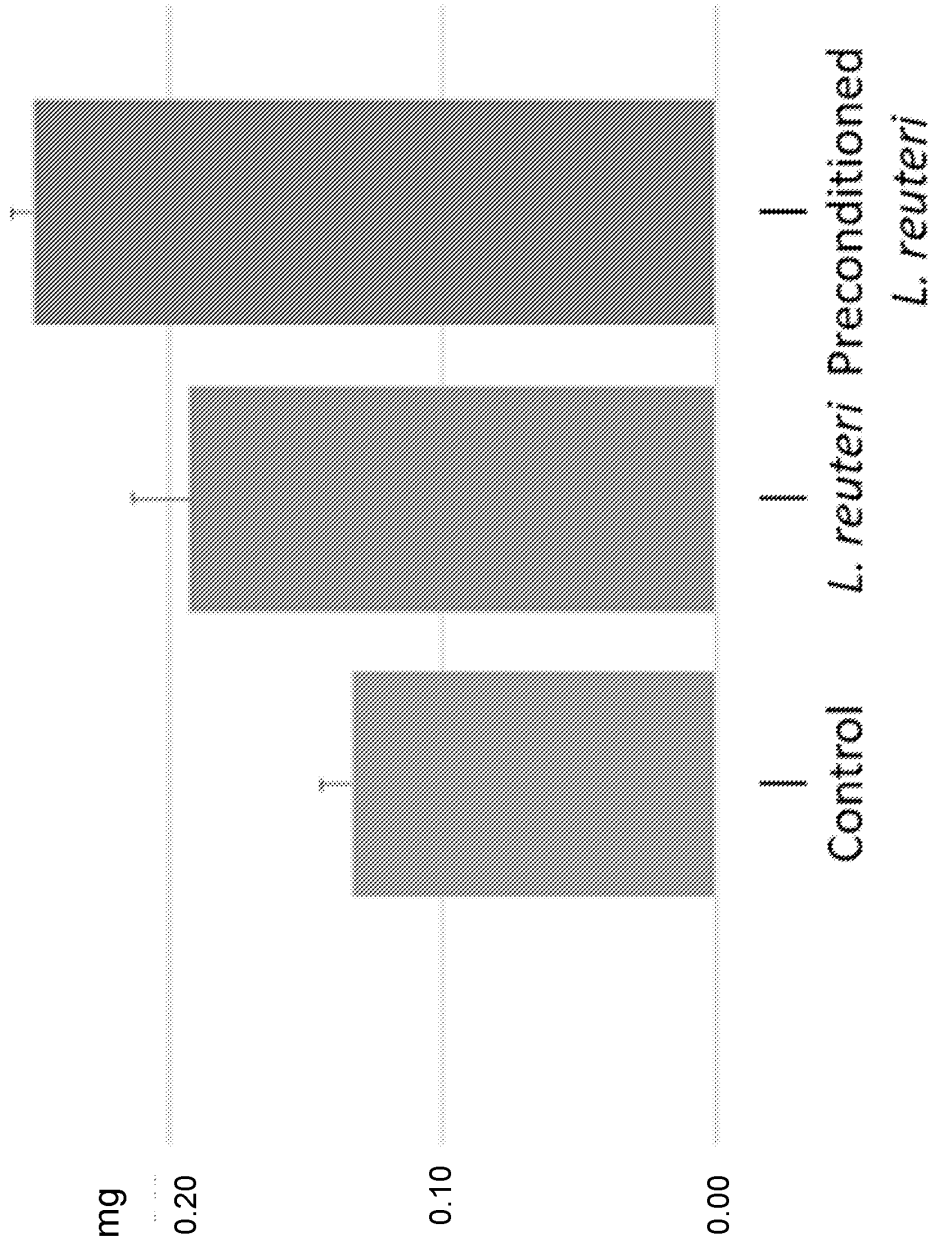


Figure 3

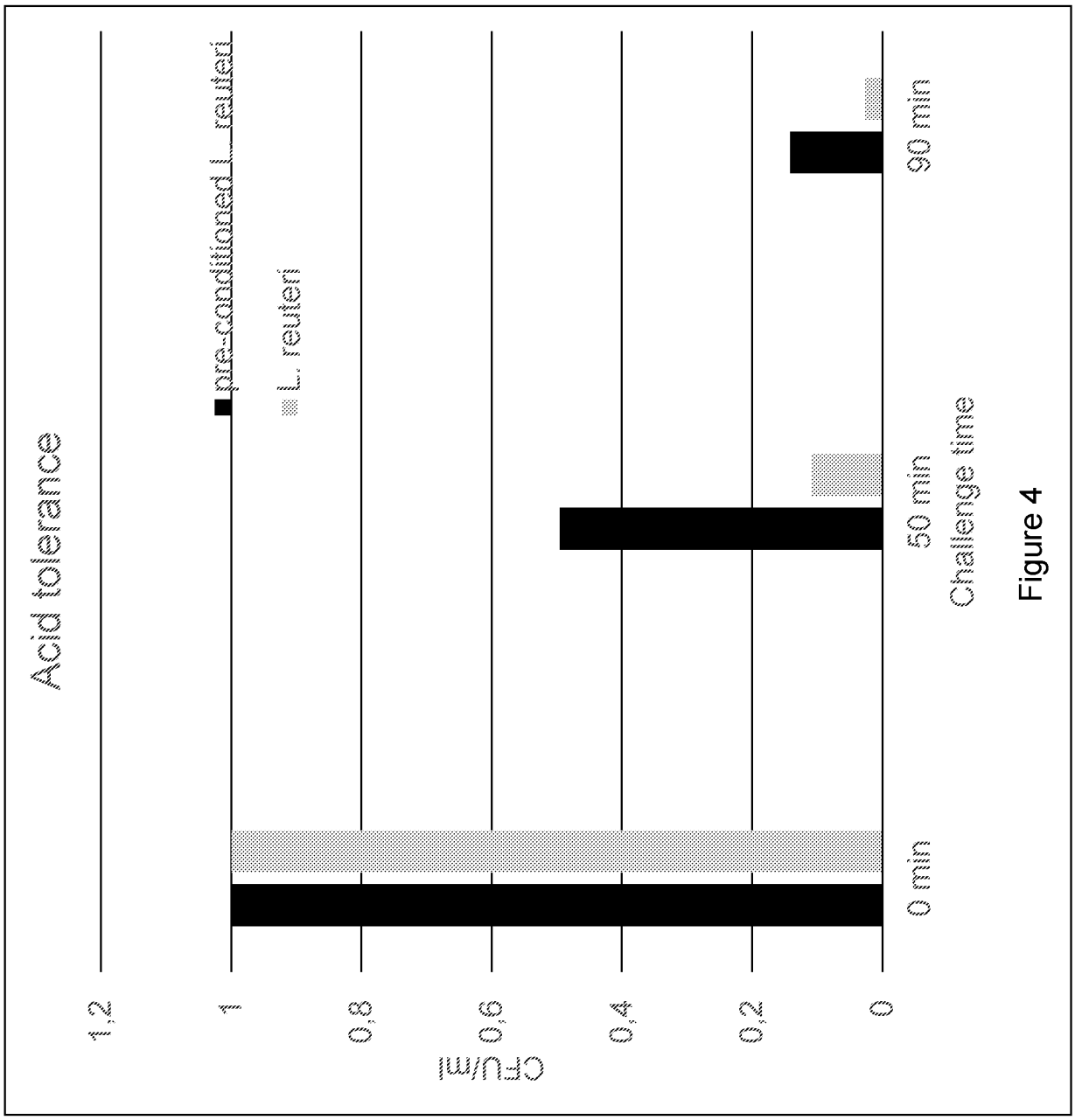

Acid tolerance
pre-conditioned L. reuteri
L. reuteri
CFU/ml
1,2
1
0,8
0,6
0,4
0,2
0
0 min
50 min
90 min
Challenge time

Figure 4

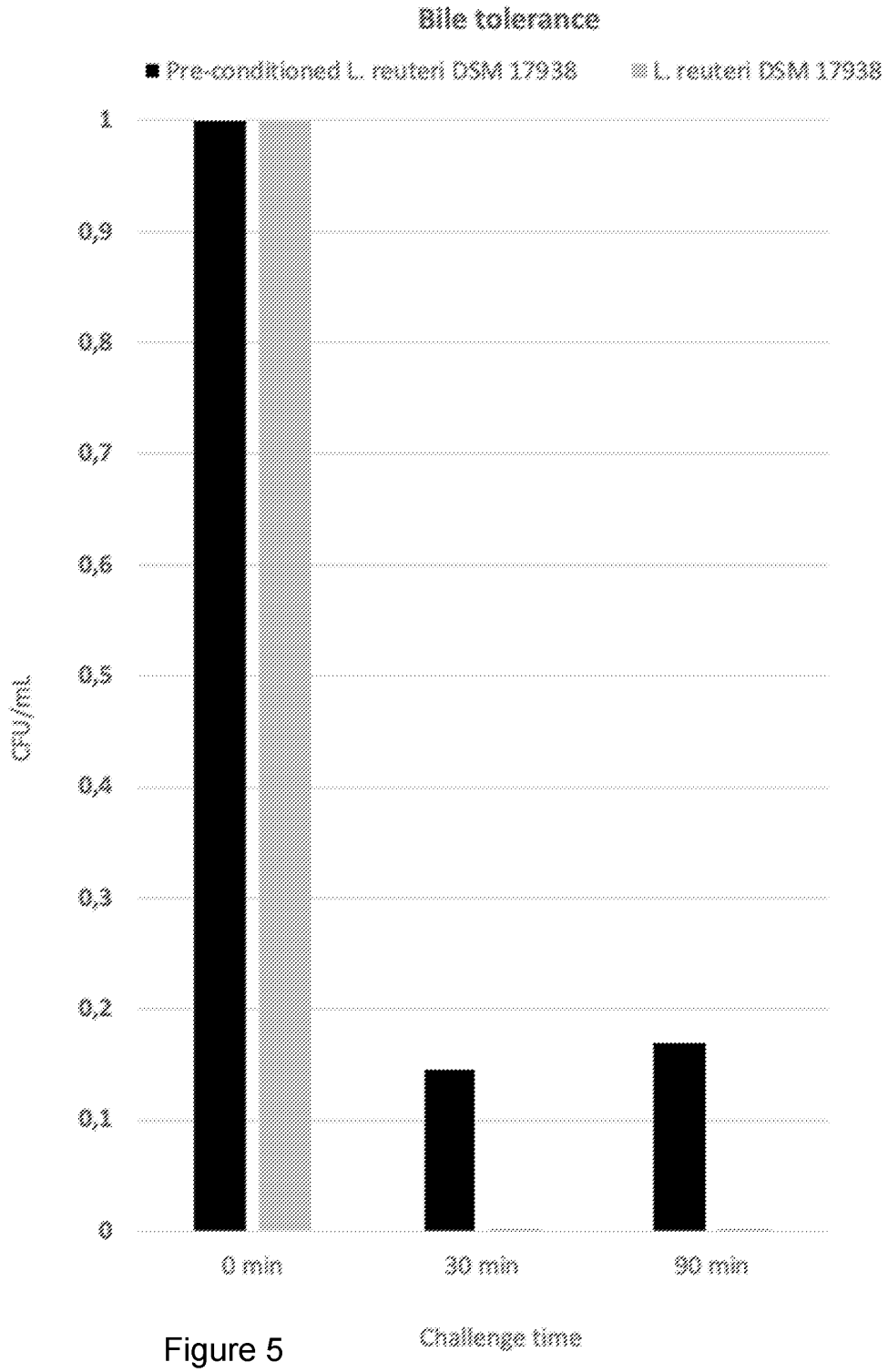

Bile tolerance
Pre-conditioned L. reuteri DSM 17938
L. reuteri DSM 17938
1
0,9
0,8
0,7
0,6
0,5
0,4
0,3
0,2
0,1
0
CFU/mL
0 min
30 min
90 min
Challenge time

Figure 5

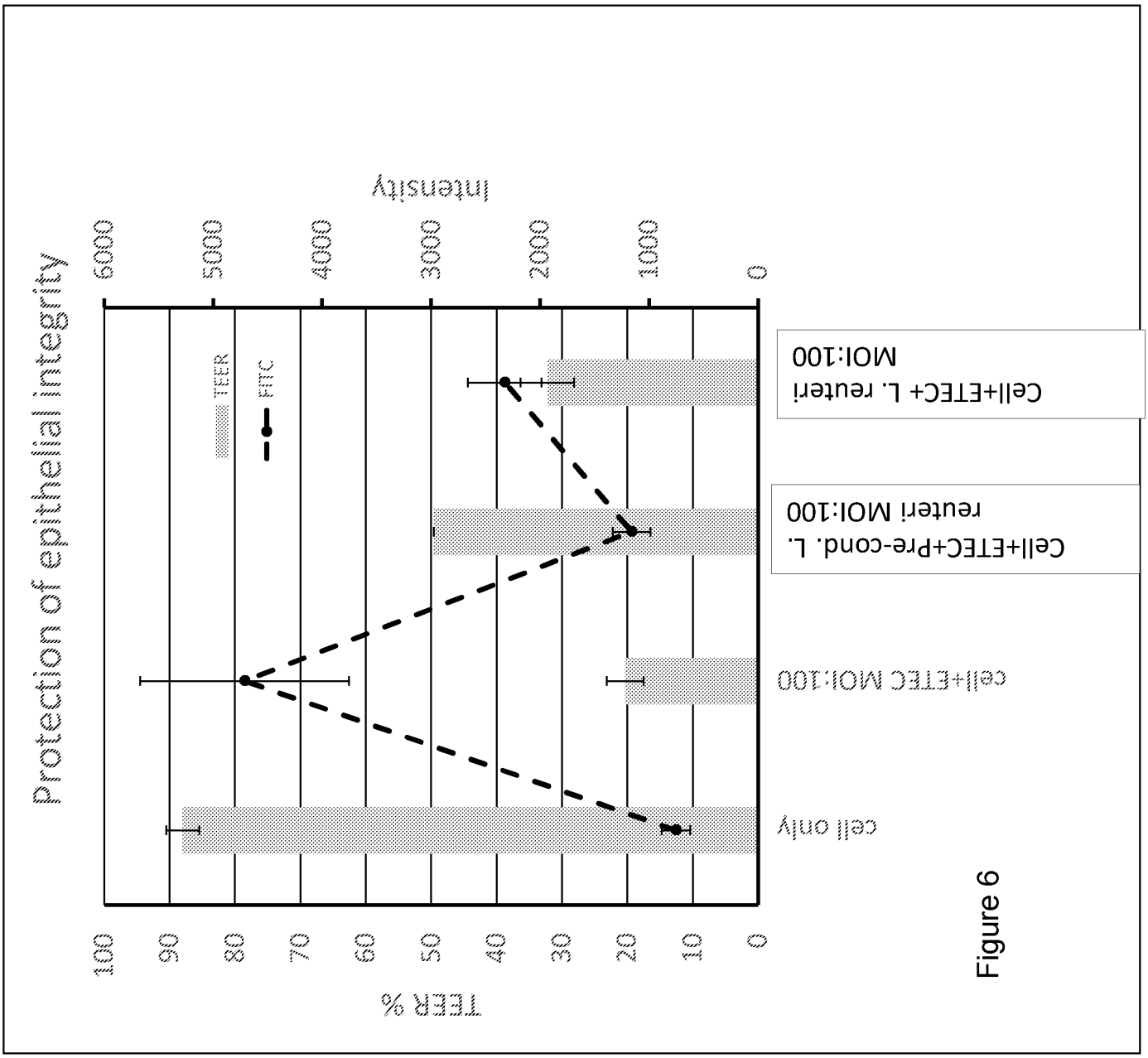
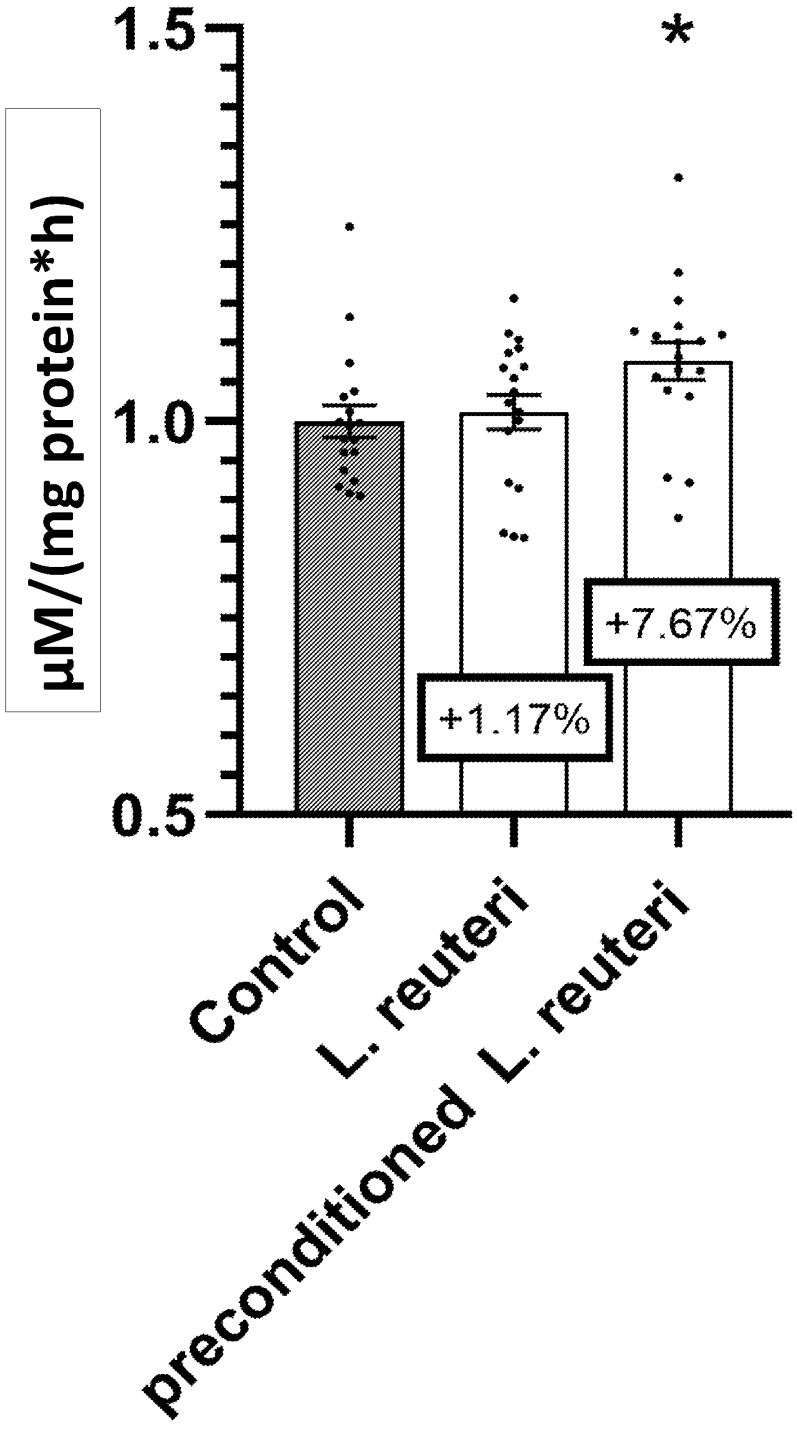

Protection of epithelial integrity
TEER %
Intensity
TEER
ETEC
cell only
cell+ETEC MOI:100
Cell+ETEC+Pre-cond. L. reuteri MOI:100
Cell+ETEC+ L. reuteri MOI:100

Figure 6



* p<0.05 vs control and L. Reuteri

Figure 7

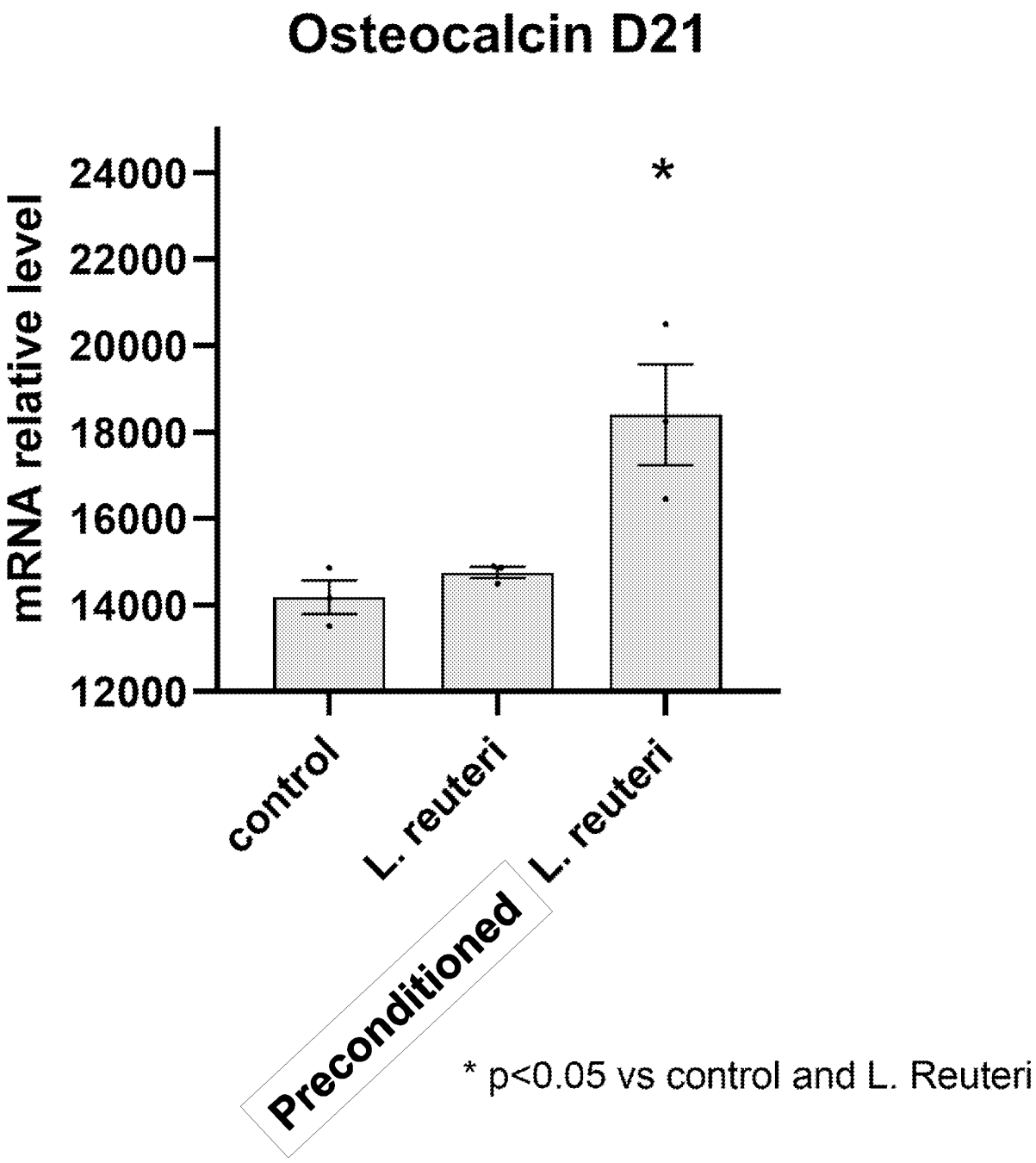
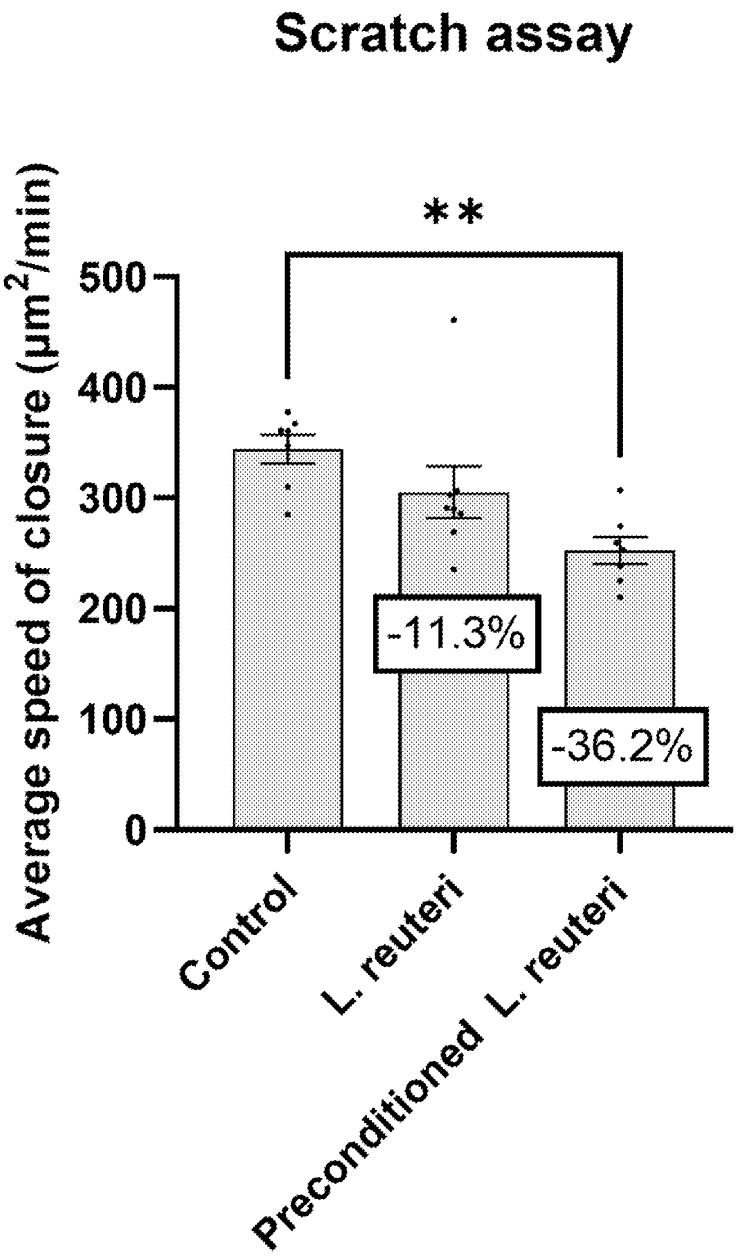

Osteocalcin D21
mRNA relative level
24000
22000
20000
18000
16000
14000
12000
*
control
L. reuteri
L. reuteri
Preconditioned
* p<0.05 vs control and L. Reuteri

Figure 8



**p<0.01 vs Control

Figure 9