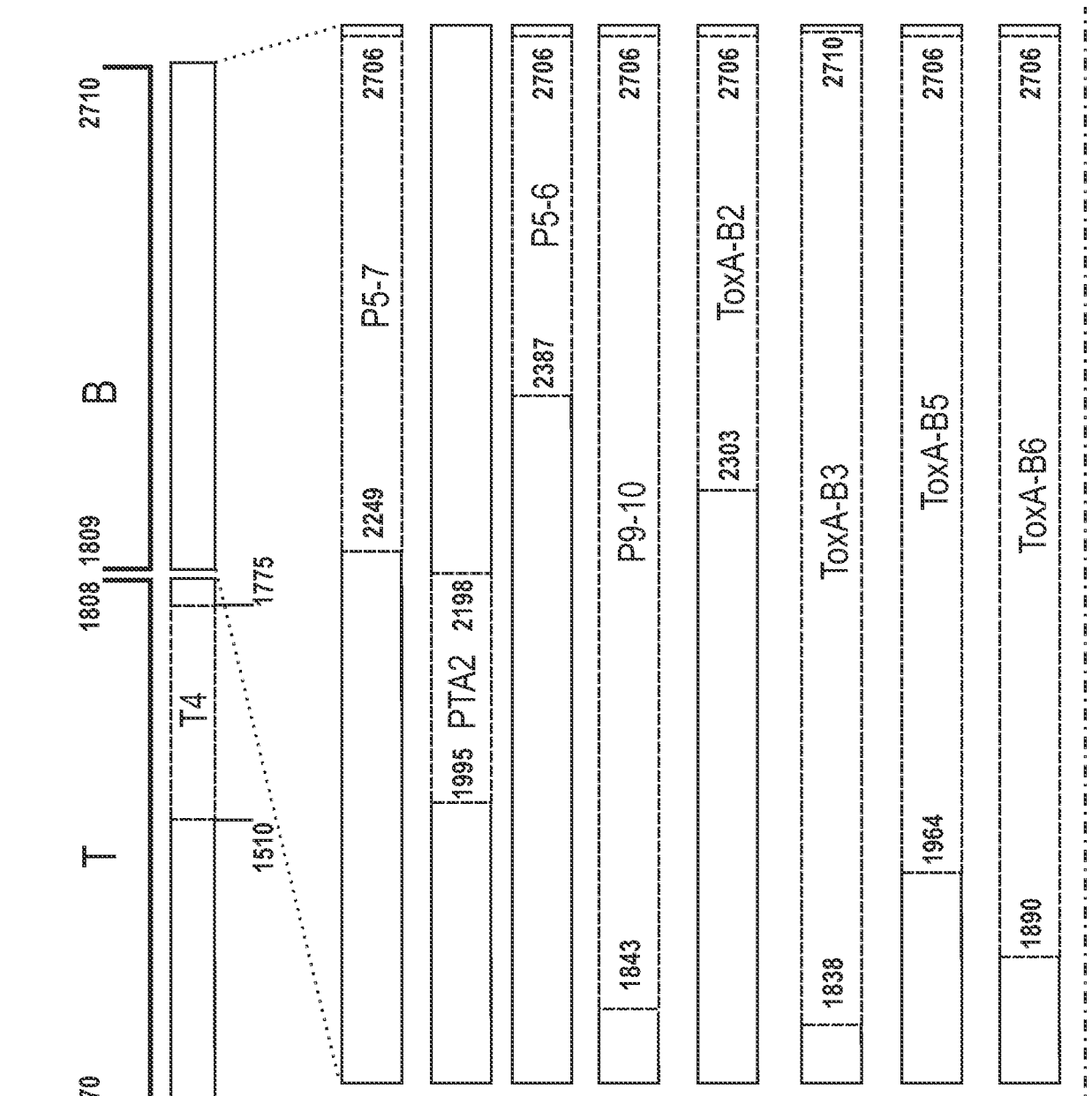

ToxA
1
ED
769
770
T
1808
1809
B
2710
GT
CP
T4
1
541
542
769
1510
1775
2249
P5-7
2706
1995
PTA2
2198
2387
P5-6
2706
1843
P9-10
2706
2303
ToxA-B2
2706
1838
ToxA-B3
2710
1964
ToxA-B5
2706
1890
ToxA-B6
2706

FIG. 1

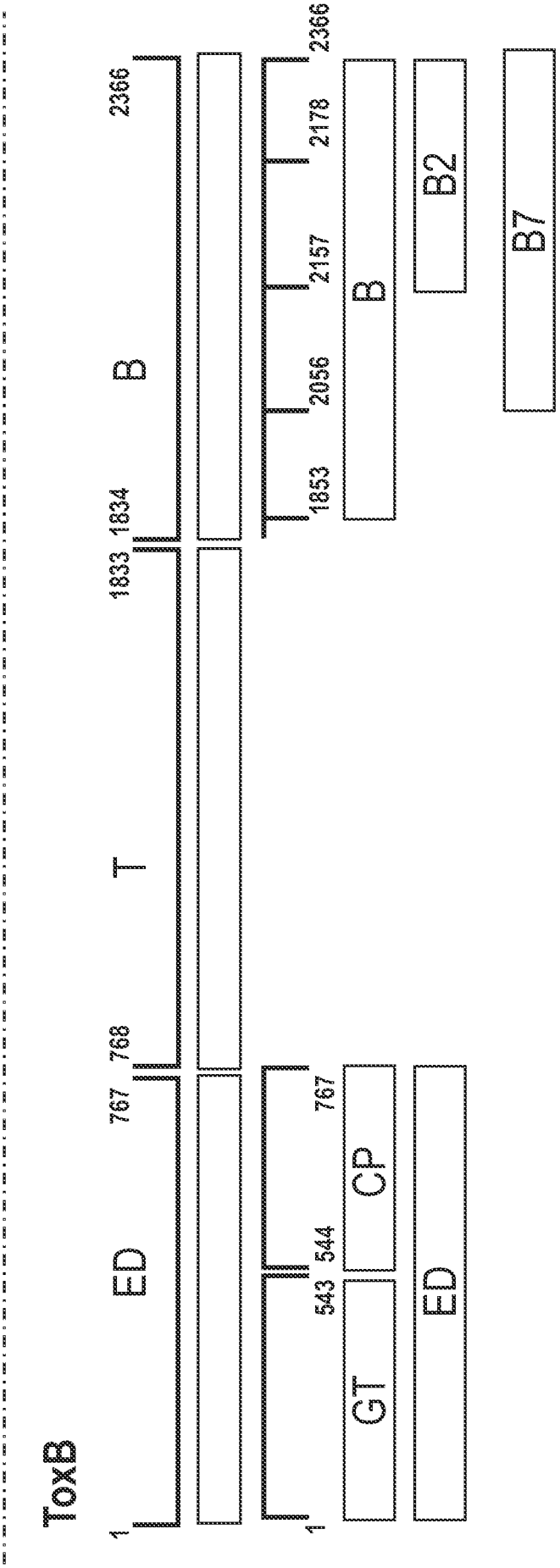

ToxB
1
ED
767
768
T
1833
1834
B
2366
1
543
544
GT
CP
767
ED
1853
2056
2157
2178
2366
B
B2
B7

FIG. 1(contd)

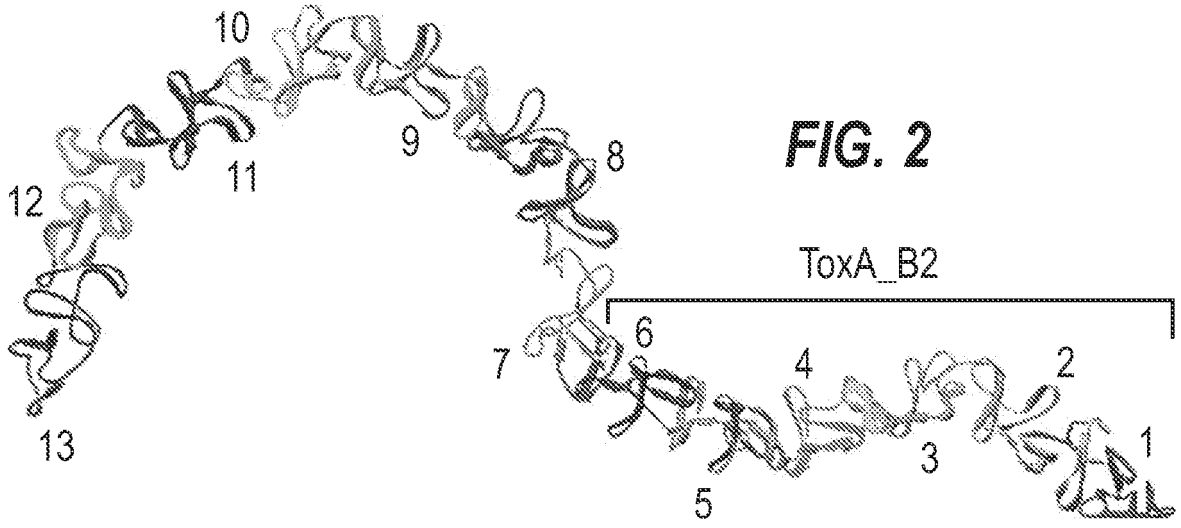


FIG. 2

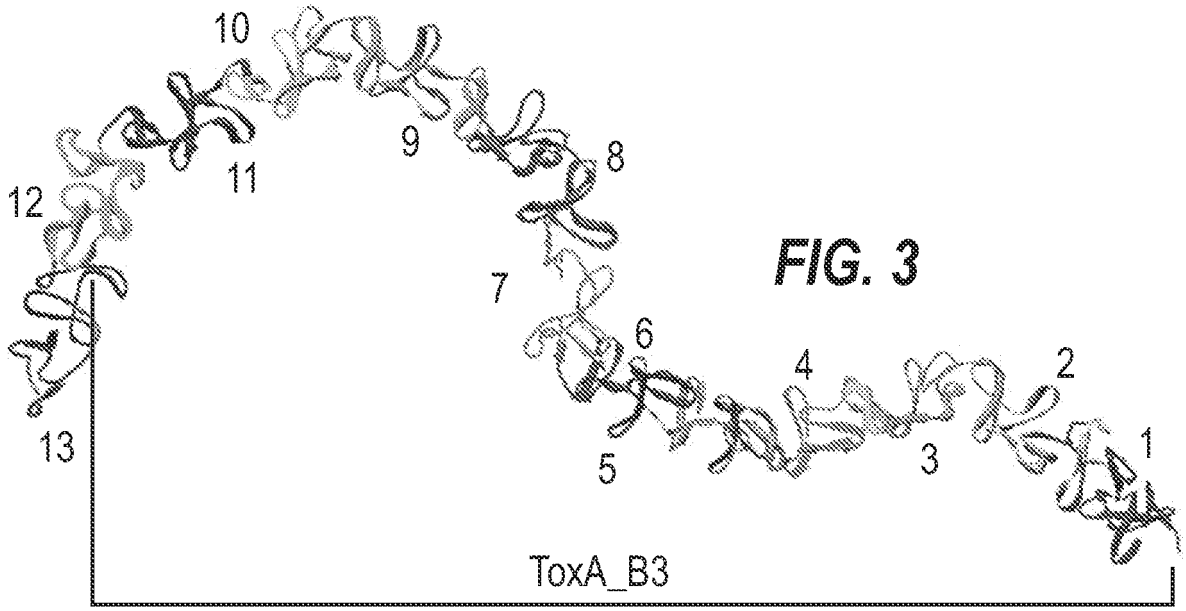


FIG. 3

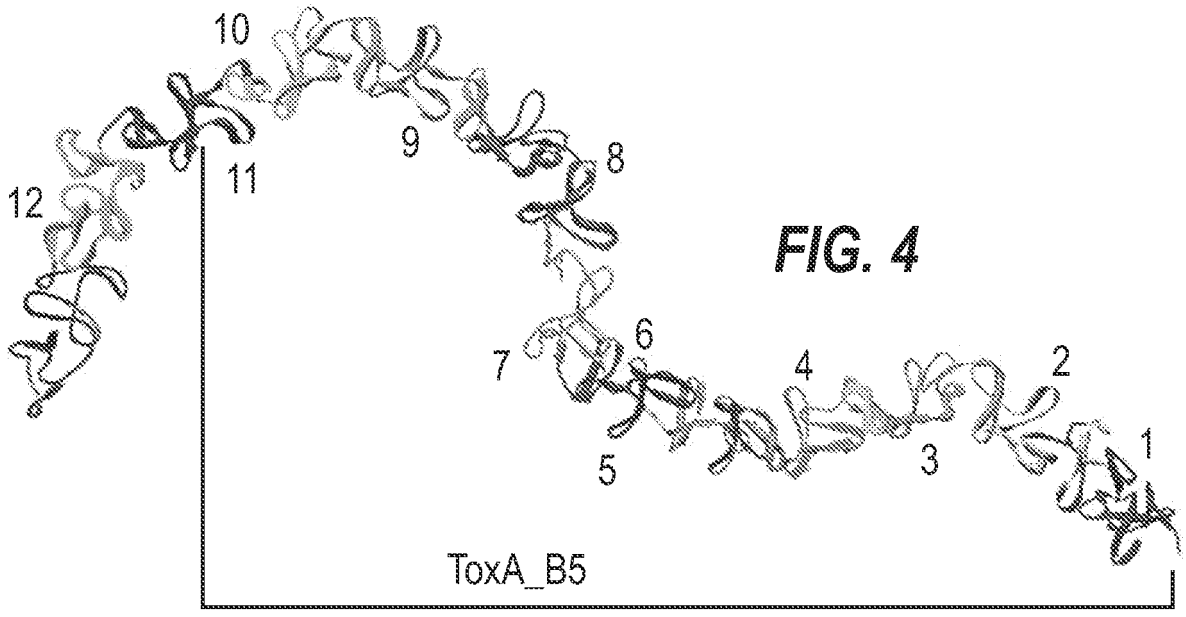


FIG. 4

FIG. 5

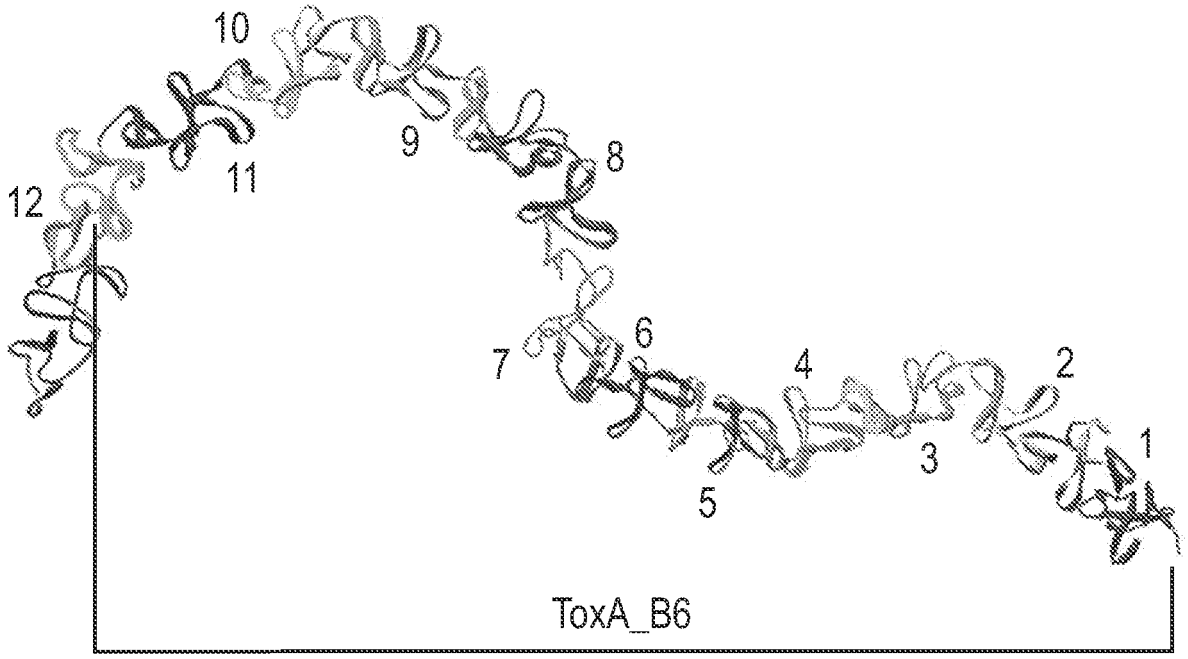


FIG. 6

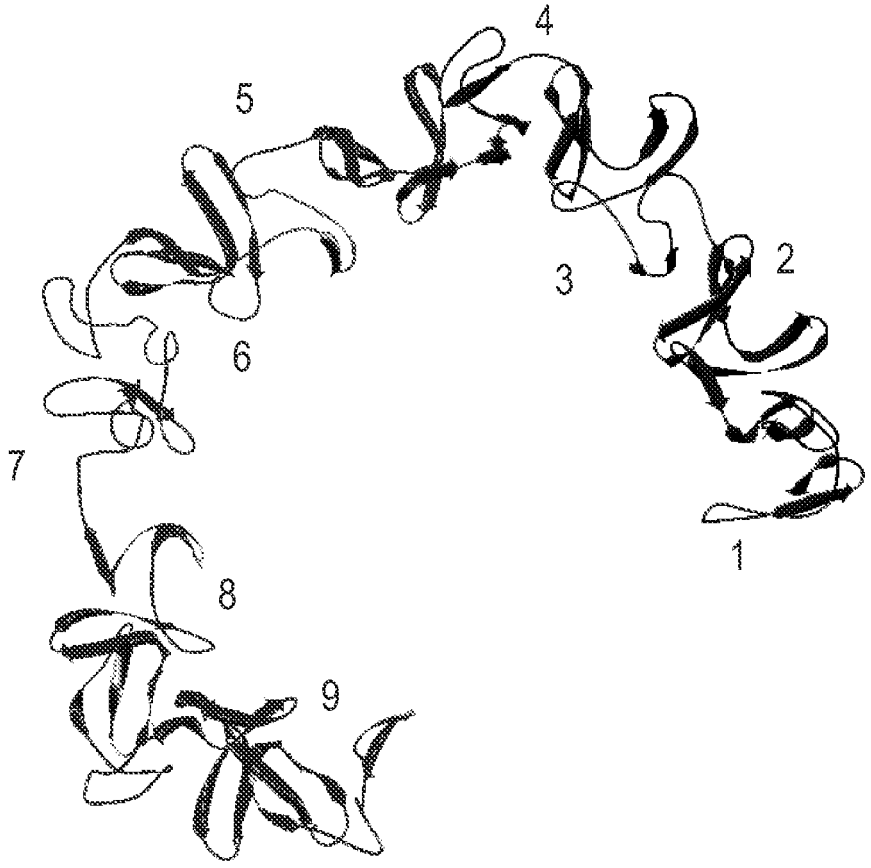


FIG. 7

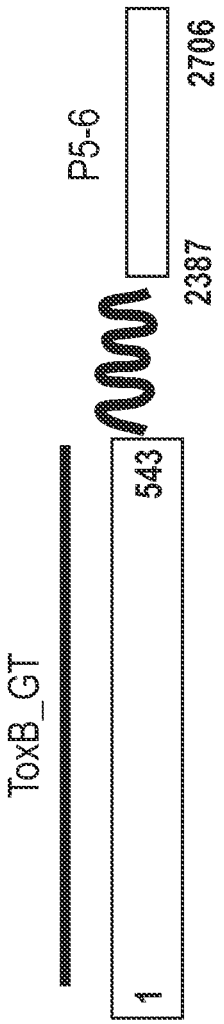

ToxB_GT
1
543
2387
P5-6
2706

FIG. 8

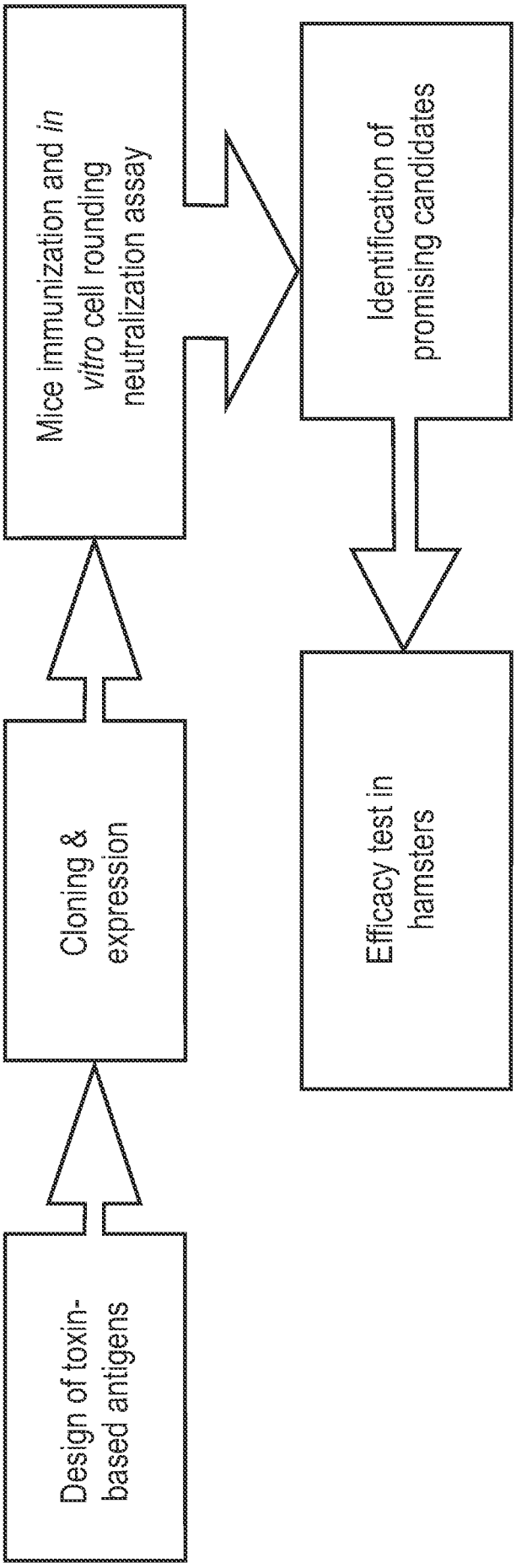

Design of toxin-based antigens
Cloning & expression
Mice immunization and in vitro cell rounding neutralization assay
Identification of promising candidates
Efficacy test in hamsters

FIG. 9

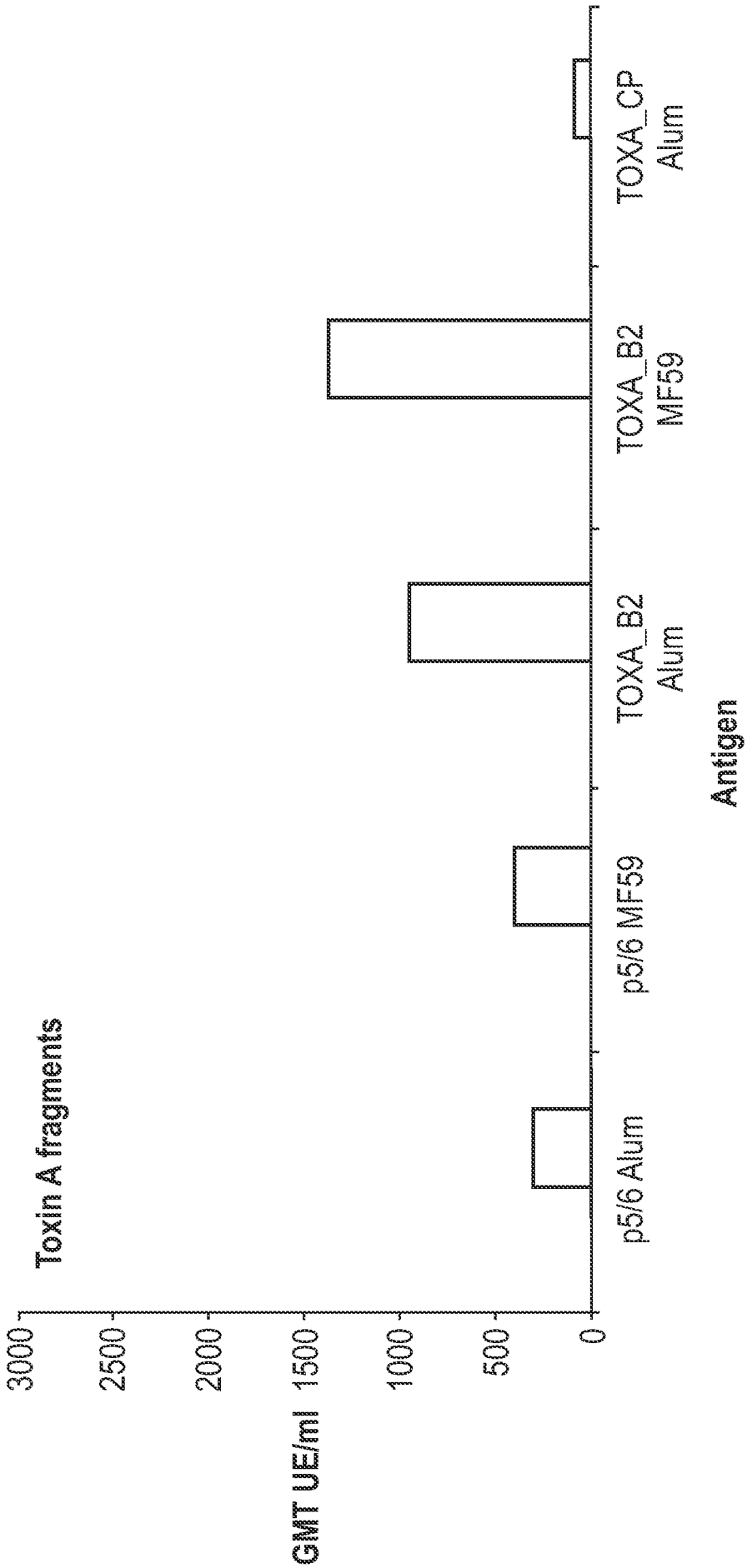

Toxin A fragments
GMT UE/ml
3000
2500
2000
1500
1000
500
0
p5/6 Alum
p5/6 MF59
TOXA_B2 Alum
TOXA_B2 MF59
TOXA_CP Alum
Antigen

FIG. 9(contd)

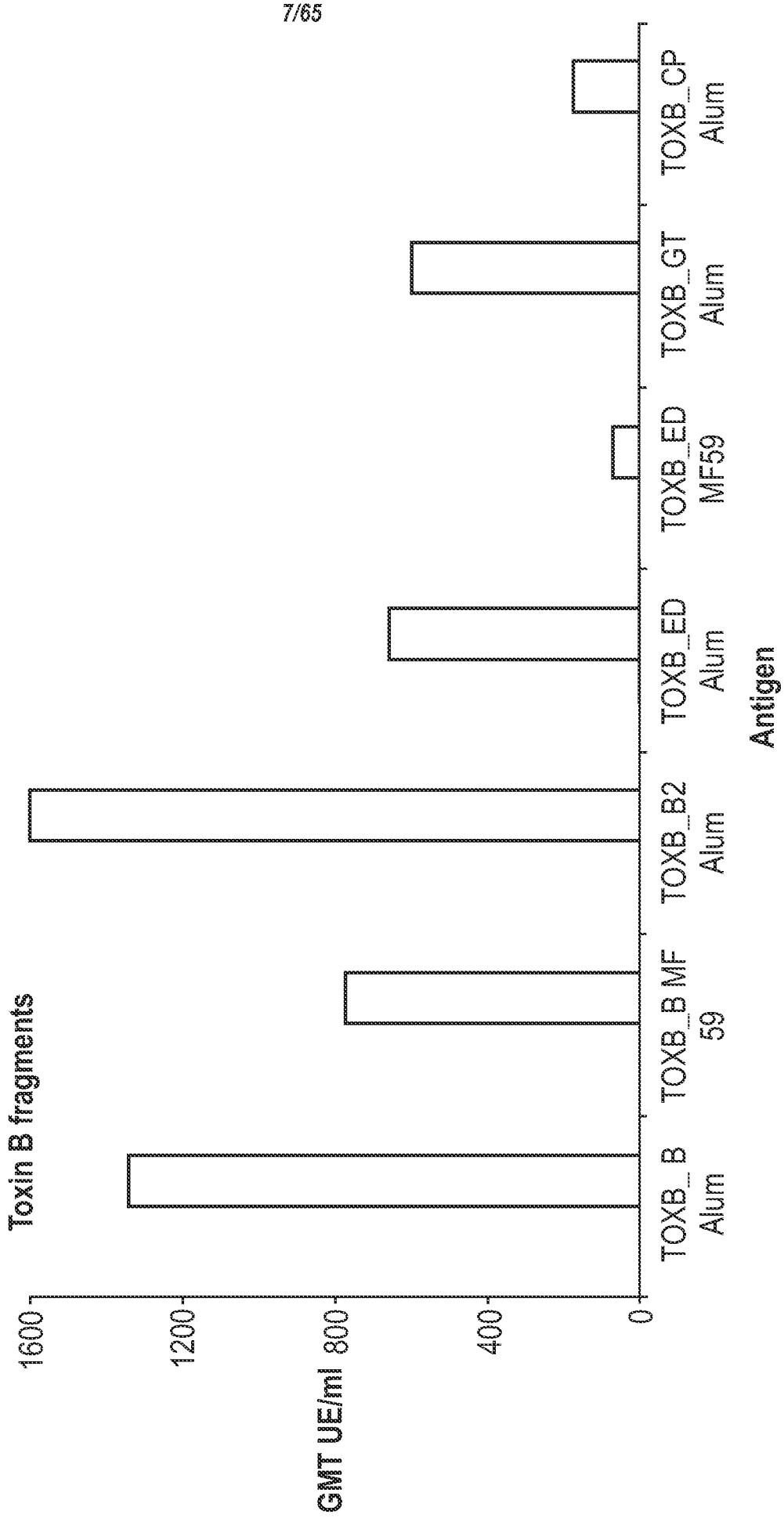

Toxin B fragments
GMT UE/ml
1600
1200
800
400
0
TOXB_B Alum
TOXB_B MF 59
TOXB_B2 Alum
TOXB_ED Alum
TOXB_ED MF59
TOXB_GT Alum
TOXB_CP Alum
Antigen

FIG. 10

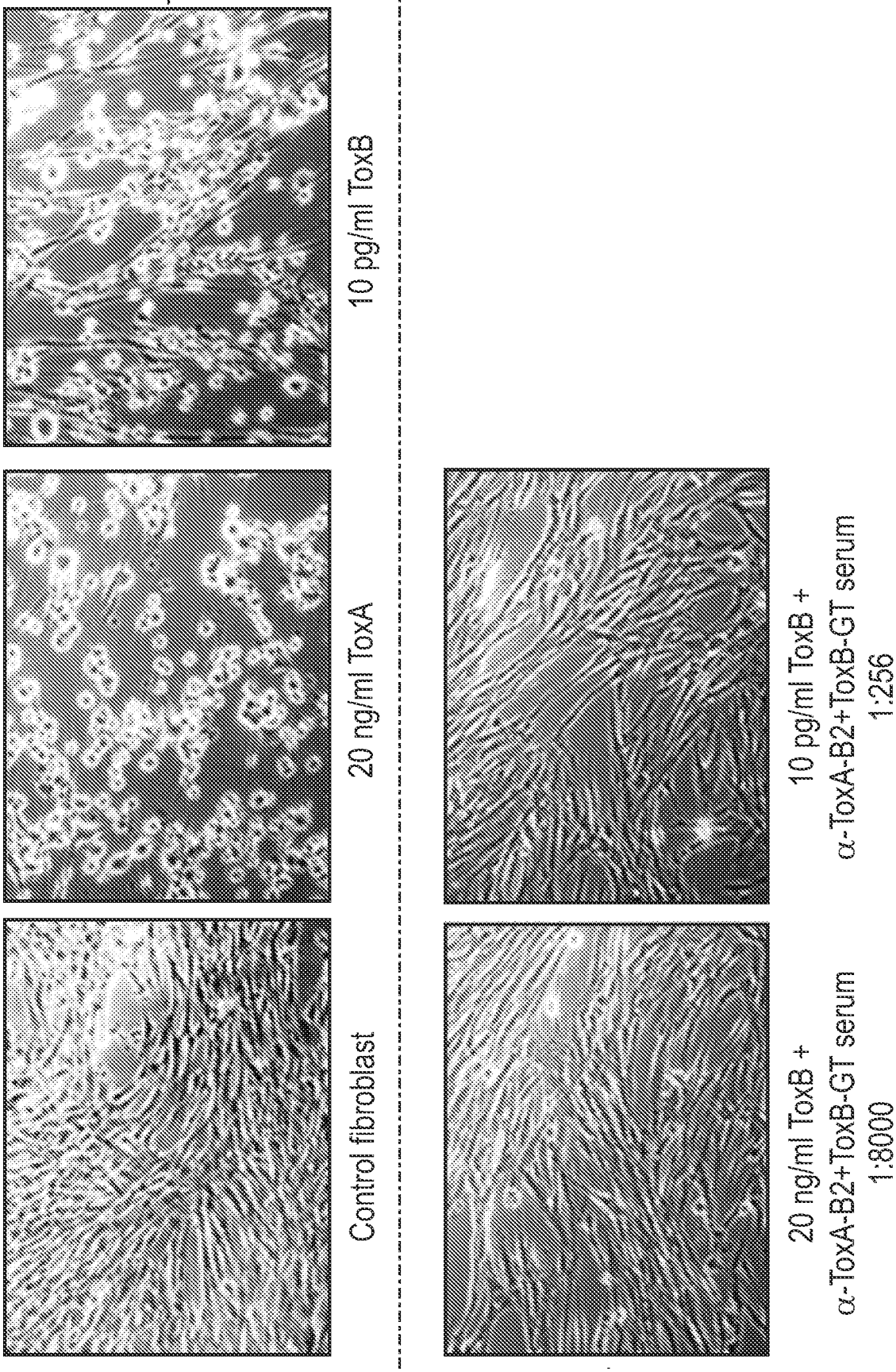

Control fibroblast
20 ng/ml ToxA
10 pg/ml ToxB
20 ng/ml ToxB +
α-ToxA-B2+ToxB-GT serum
1:8000
10 pg/ml ToxB +
α-ToxA-B2+ToxB-GT serum
1:256

FIG. 11

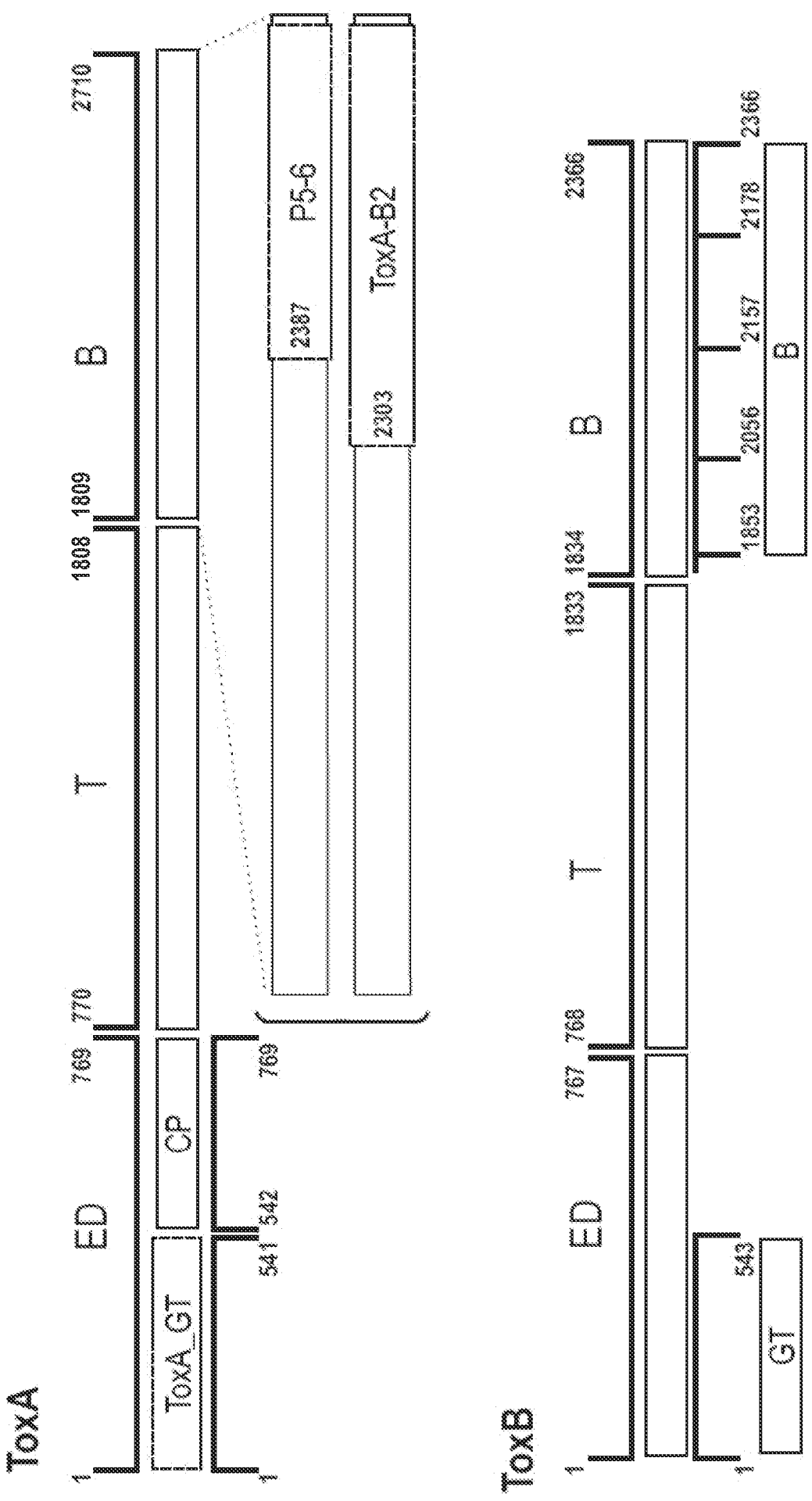

ToxA
1
ED
769
770
T
1808
1809
B
2710
ToxA_GT
CP
541
542
769
P5-6
2387
ToxA-B2
2303
ToxB
1
ED
767
768
T
1833
1834
B
2366
543
GT
1853
2056
2157
2178
2366
B

FIG. 12

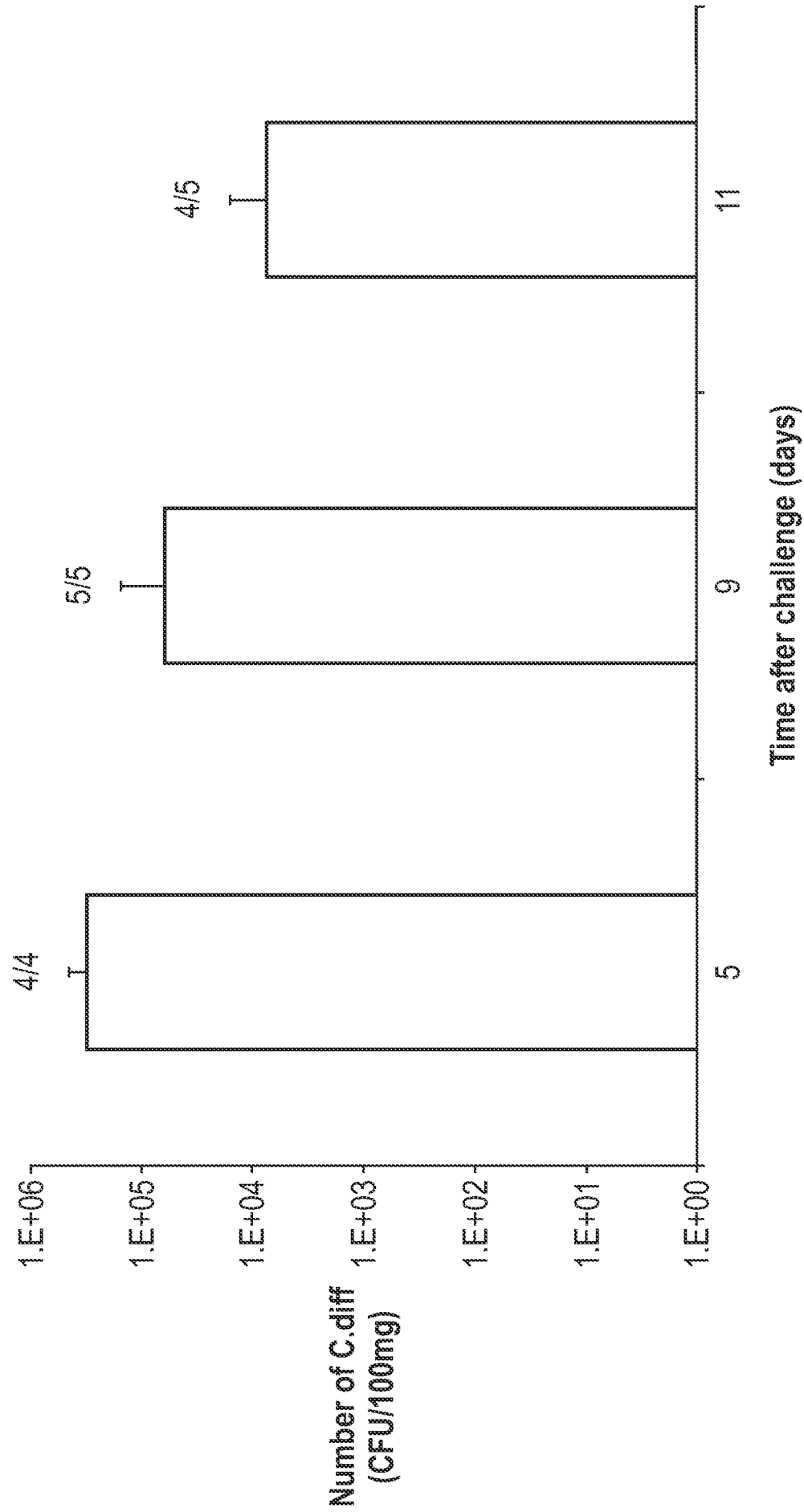

Number of C.diff (CFU/100mg)
1.E+06
1.E+05
1.E+04
1.E+03
1.E+02
1.E+01
1.E+00
4/4
5/5
4/5
5
9
11
Time after challenge (days)

FIG. 13

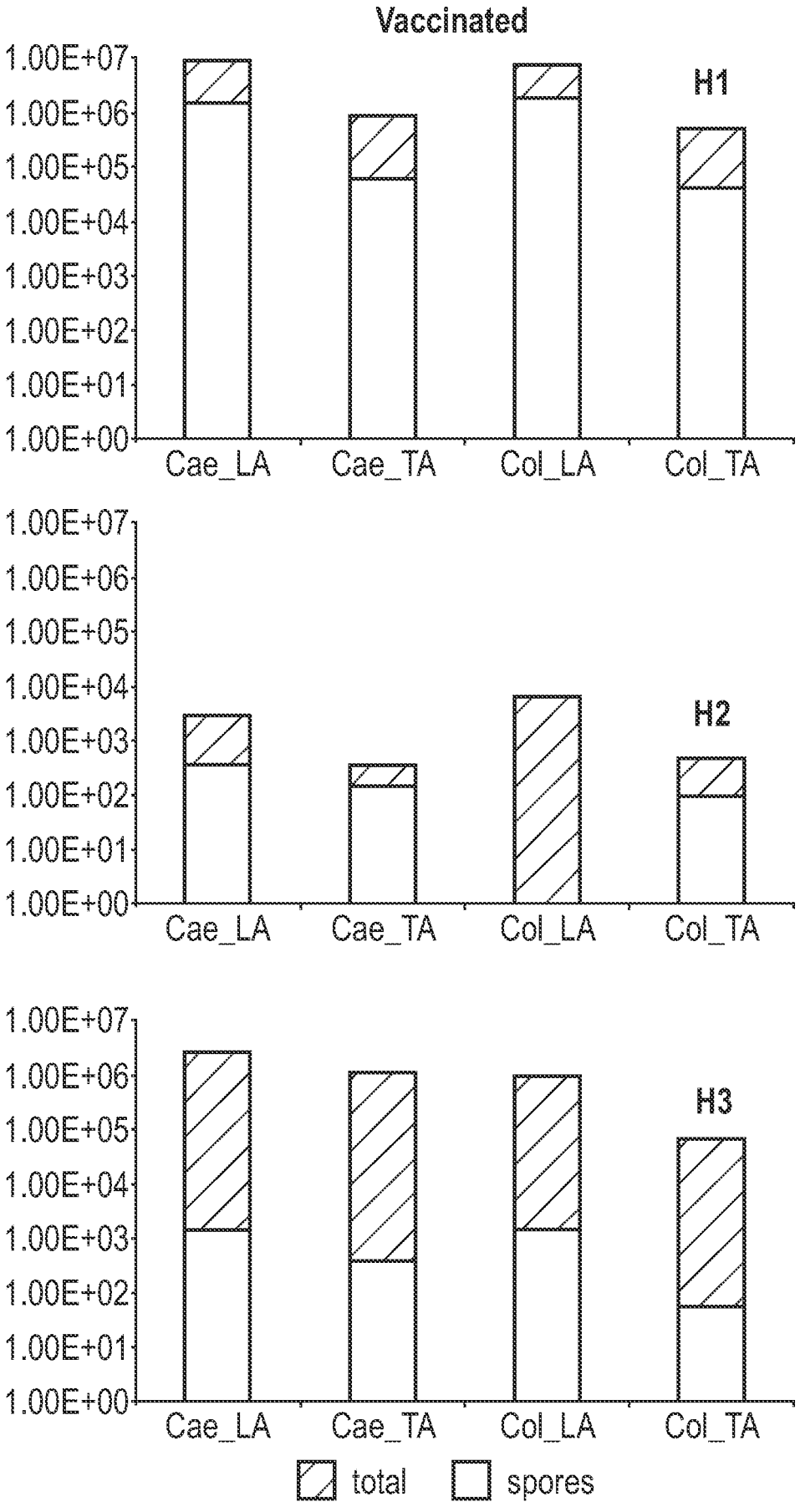

Vaccinated
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
H1
Cae_LA
Cae_TA
Col_LA
Col_TA
H2
H3
total
spores

FIG. 13(contd)

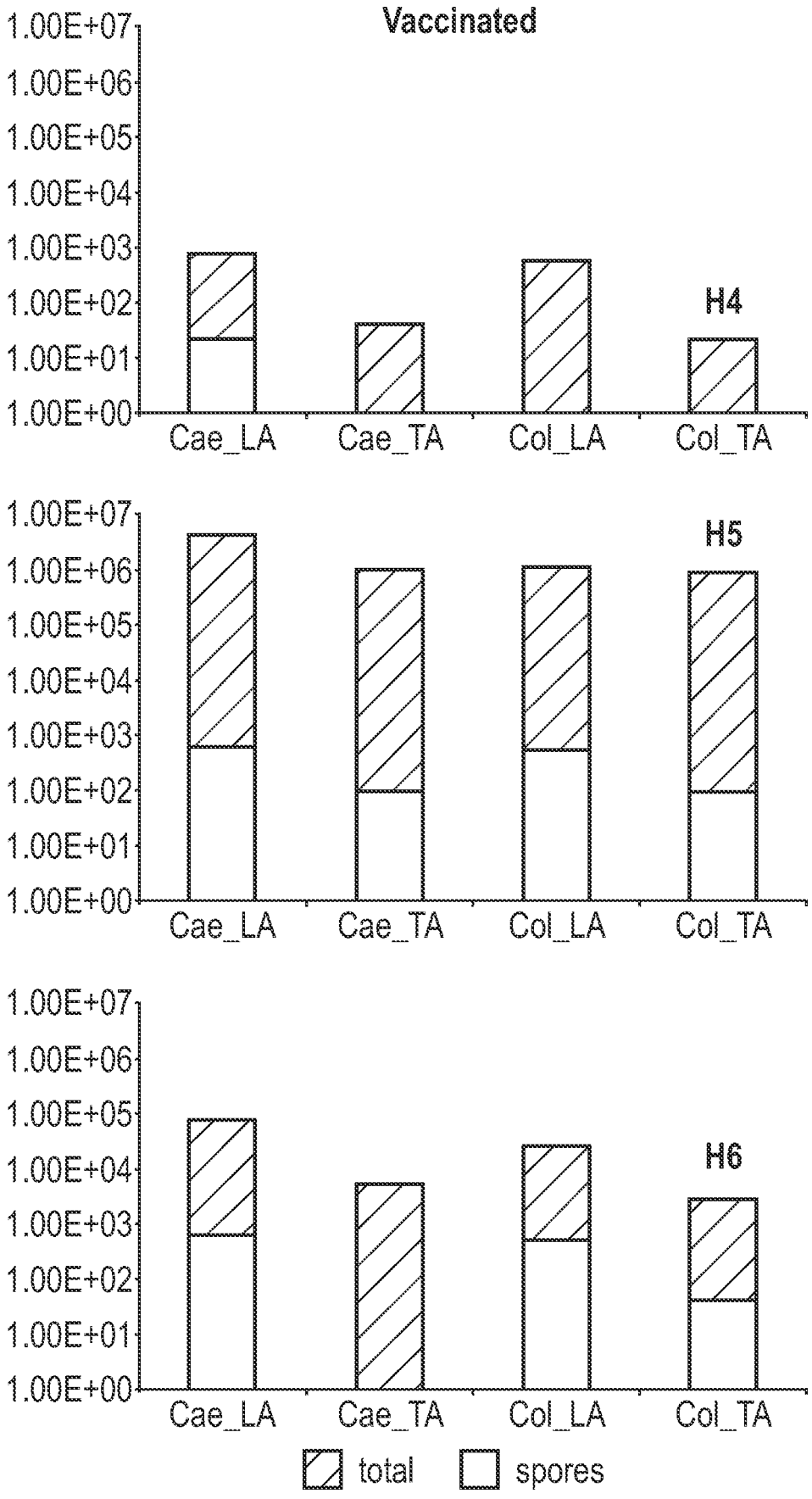
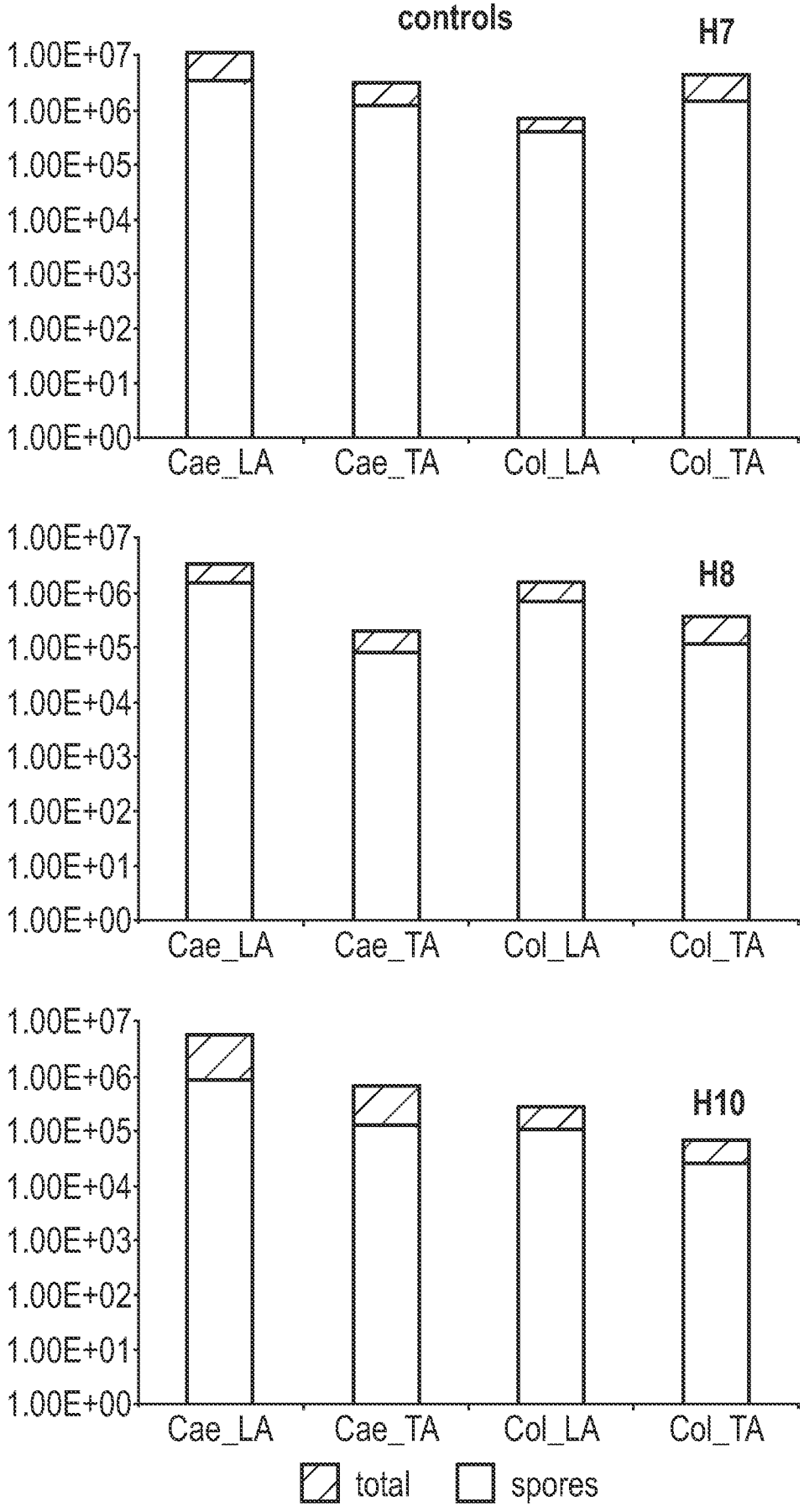

Vaccinated
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
H4
Cae_LA
Cae_TA
Col_LA
Col_TA
H5
H6
total
spores

FIG. 13(contd)


controls
H7
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae_LA
Cae_TA
Col_LA
Col_TA
H8
H10
total
spores

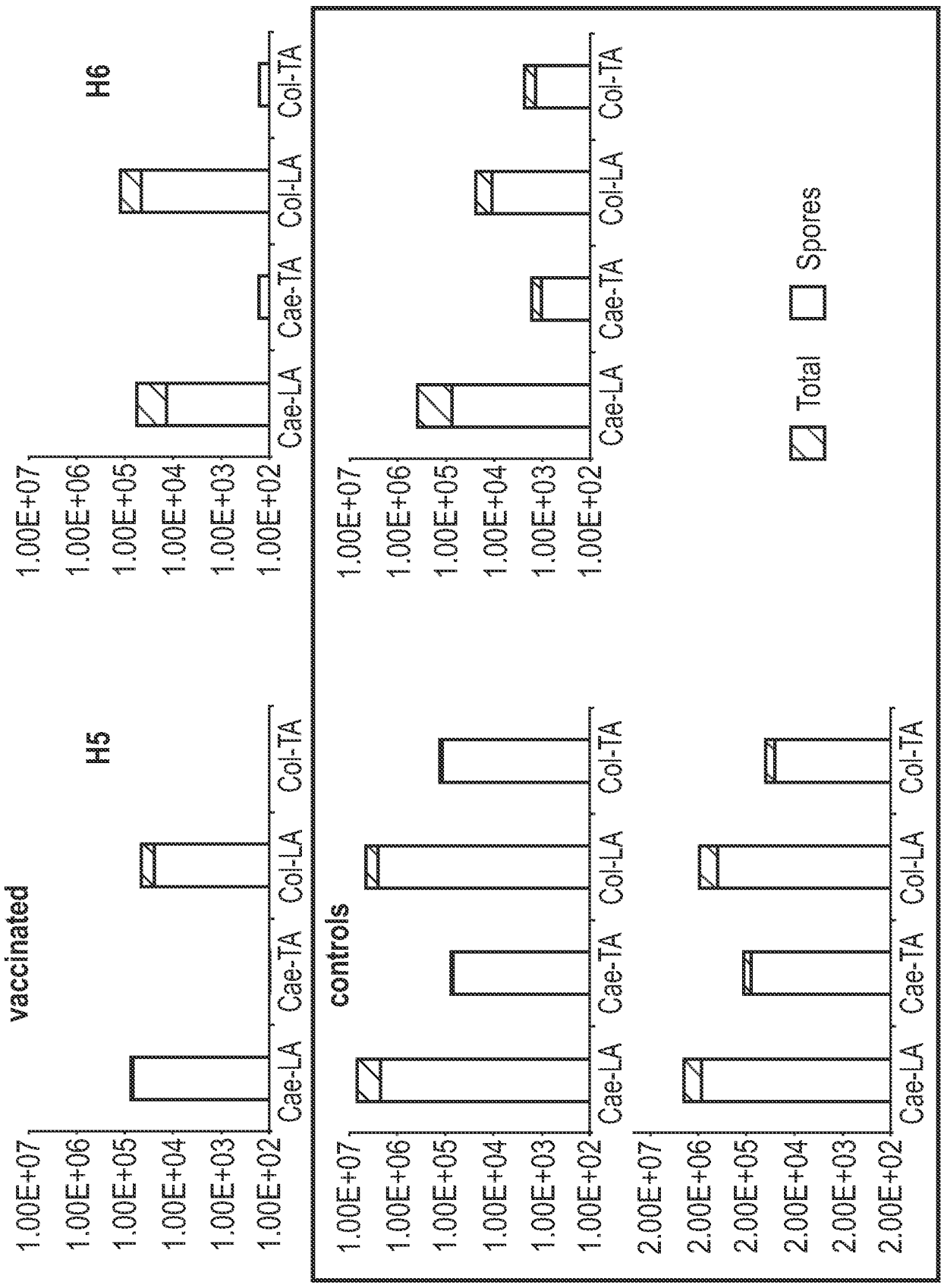

vaccinated
H5
H6
controls
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
2.00E+07
2.00E+06
2.00E+05
2.00E+04
2.00E+03
2.00E+02
Cae-LA
Cae-TA
Col-LA
Col-TA
Total
Spores

FIG. 14

FIG. 15

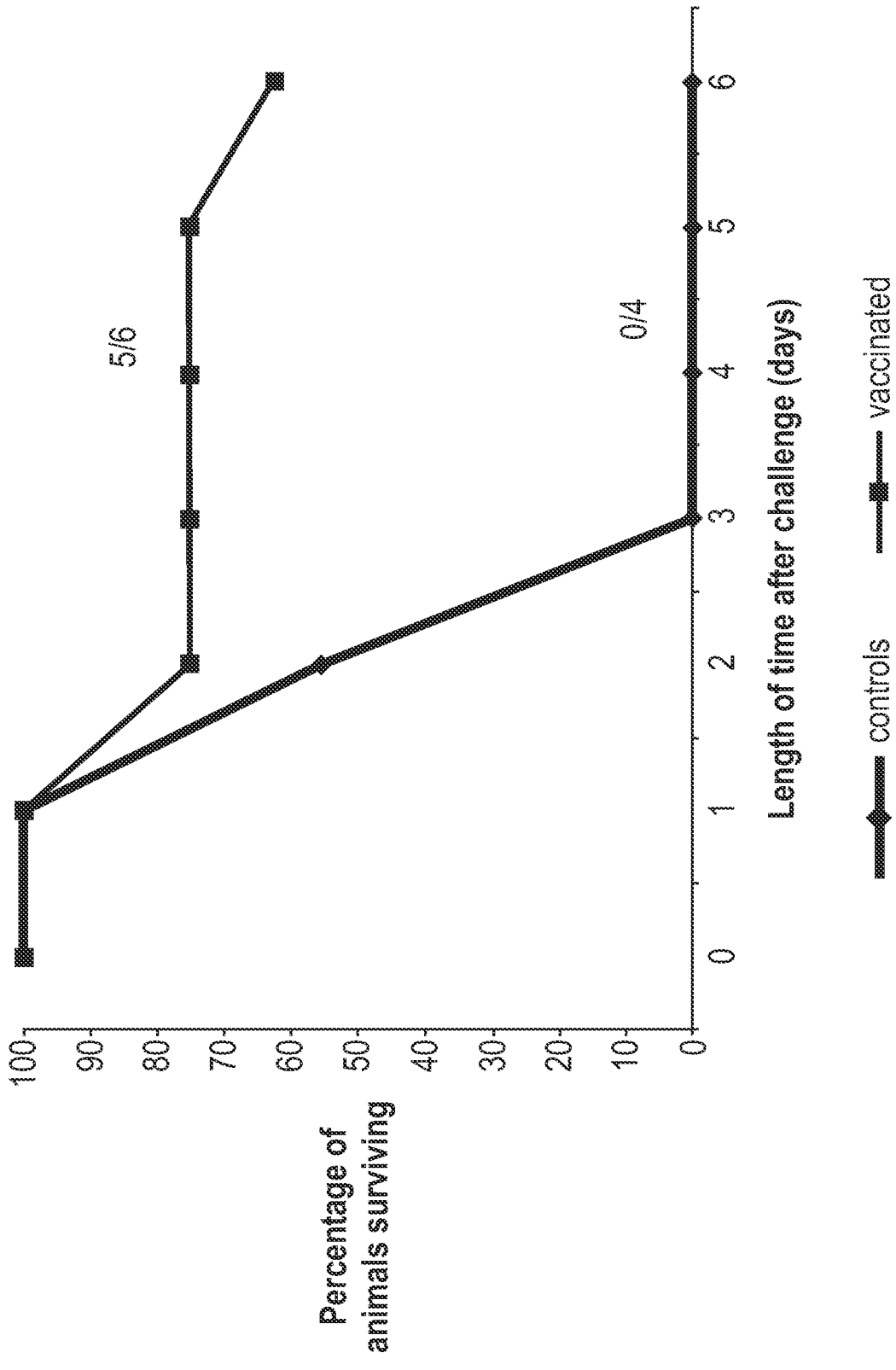

Percentage of animals surviving
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
Length of time after challenge (days)
5/6
0/4
controls
vaccinated

FIG. 16

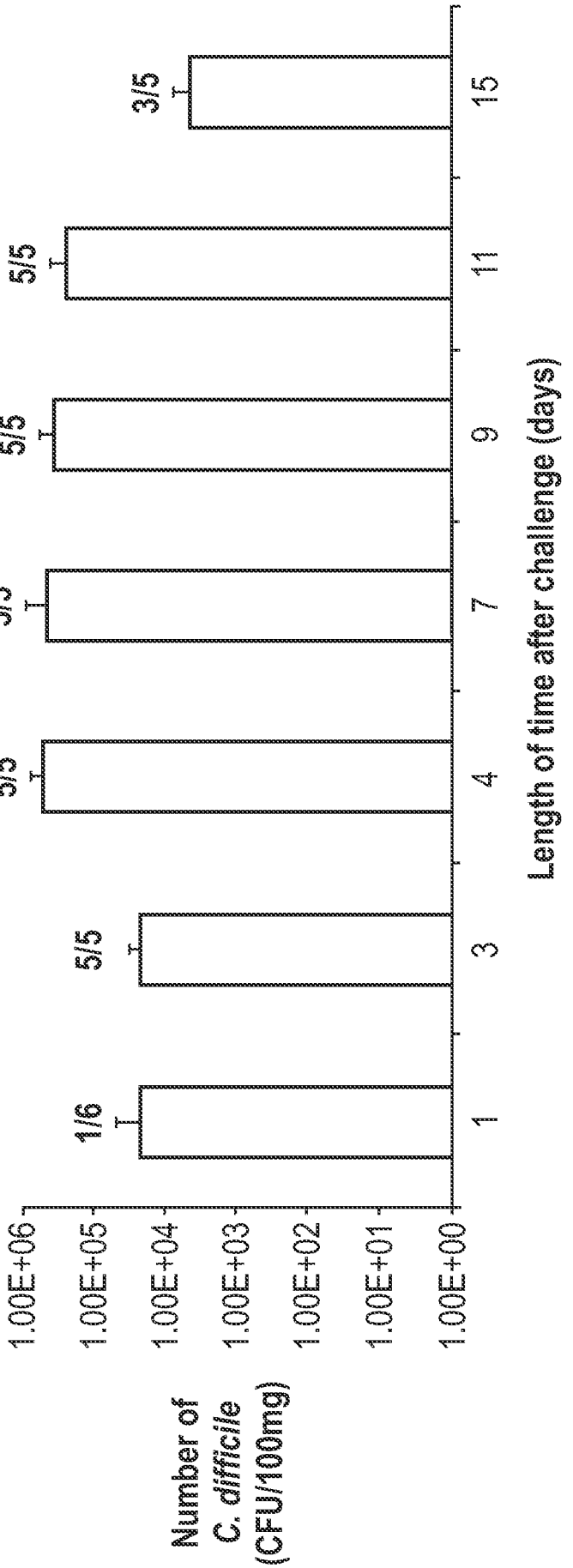
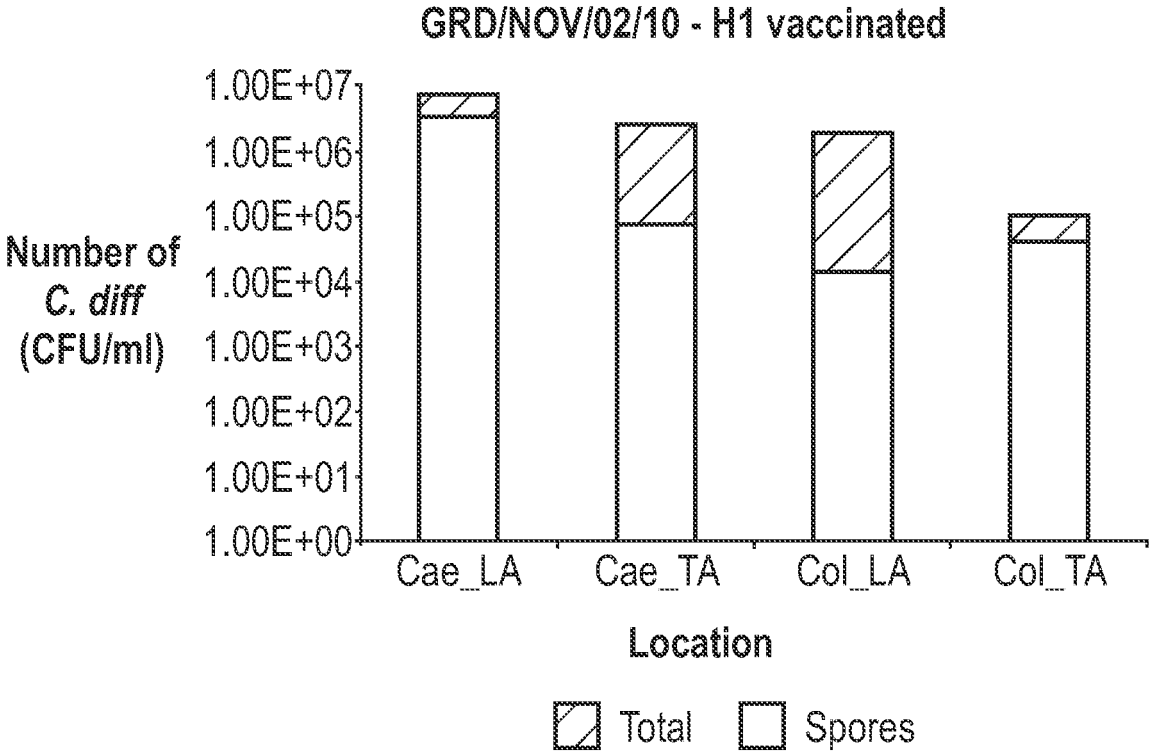

Number of C. difficile (CFU/100mg)
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1/6
5/5
5/5
5/5
5/5
5/5
3/5
1
3
4
7
9
11
15
Length of time after challenge (days)

FIG. 17


GRD/NOV/02/10 - H1 vaccinated
Number of C. diff (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae_LA
Cae_TA
Col_LA
Col_TA
Location
Total
Spores

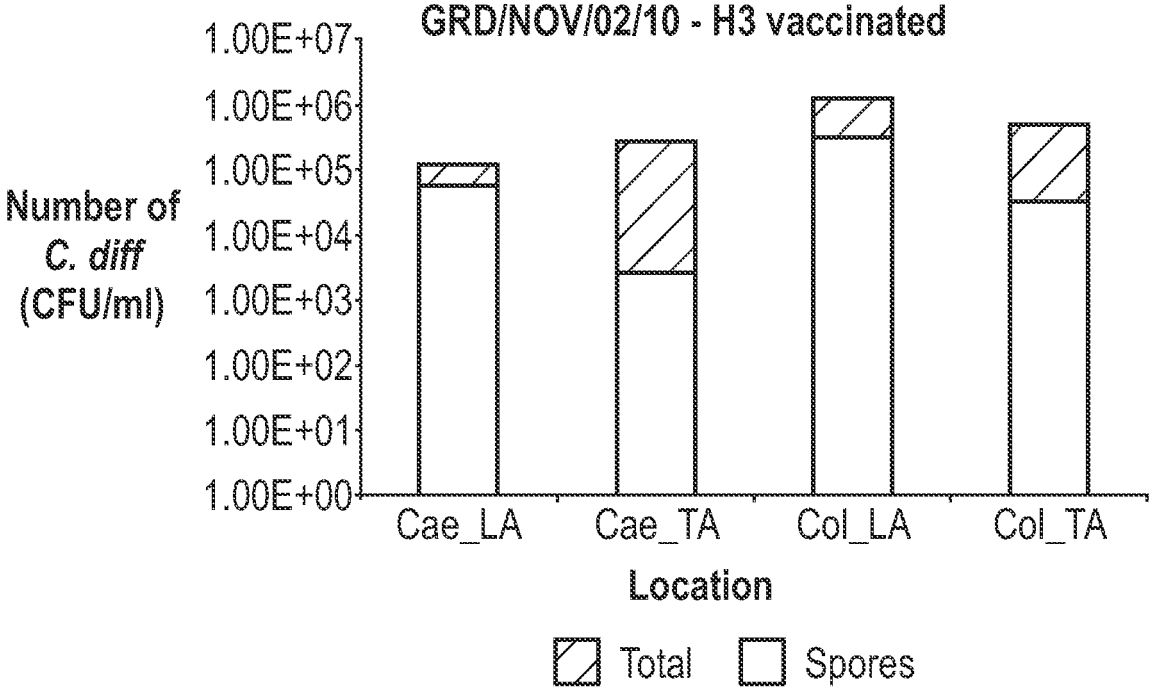
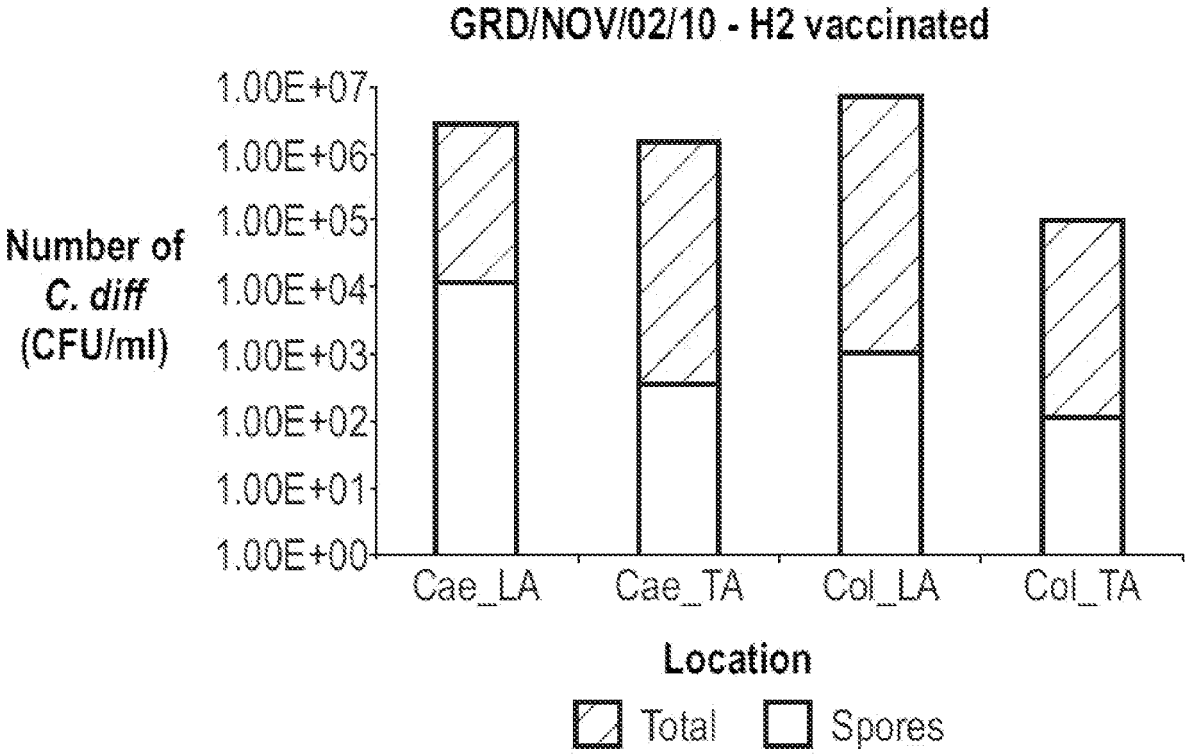
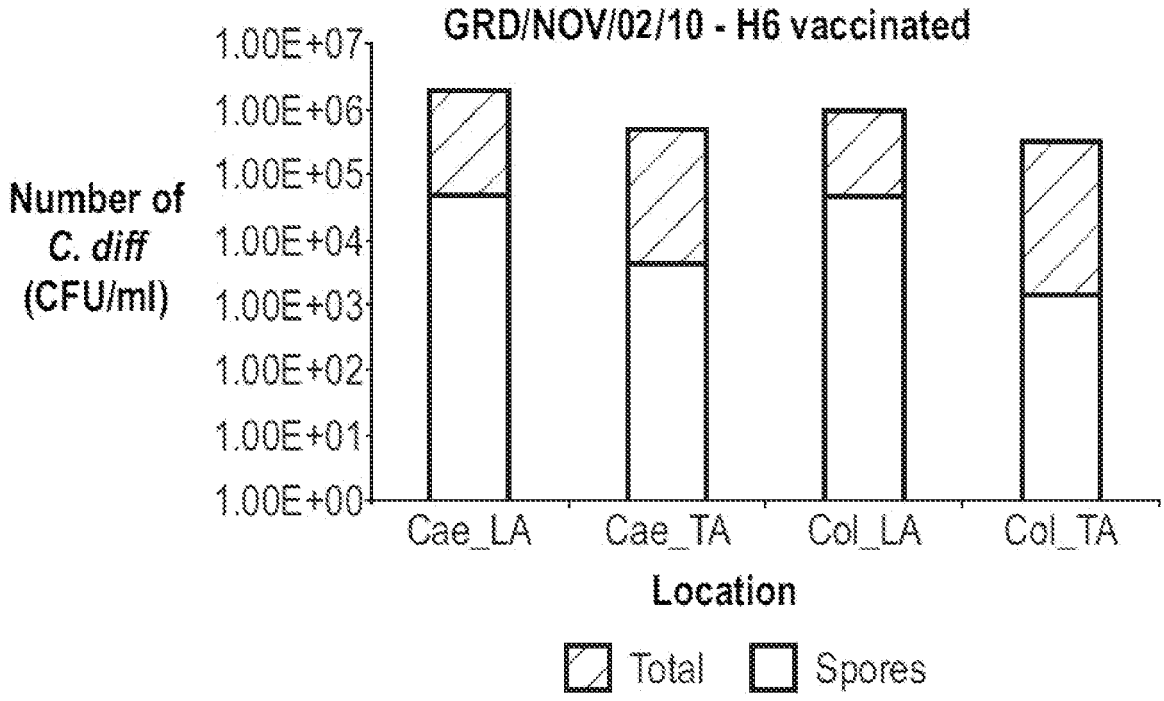

GRD/NOV/02/10 - H3 vaccinated
Number of C. diff (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae_LA
Cae_TA
Col_LA
Col_TA
Location
Total
Spores

FIG. 17(contd)


GRD/NOV/02/10 - H2 vaccinated
Number of C. diff (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae_LA
Cae_TA
Col_LA
Col_TA
Location
Total
Spores


GRD/NOV/02/10 - H6 vaccinated
Number of C. diff (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae_LA
Cae_TA
Col_LA
Col_TA
Location
Total
Spores

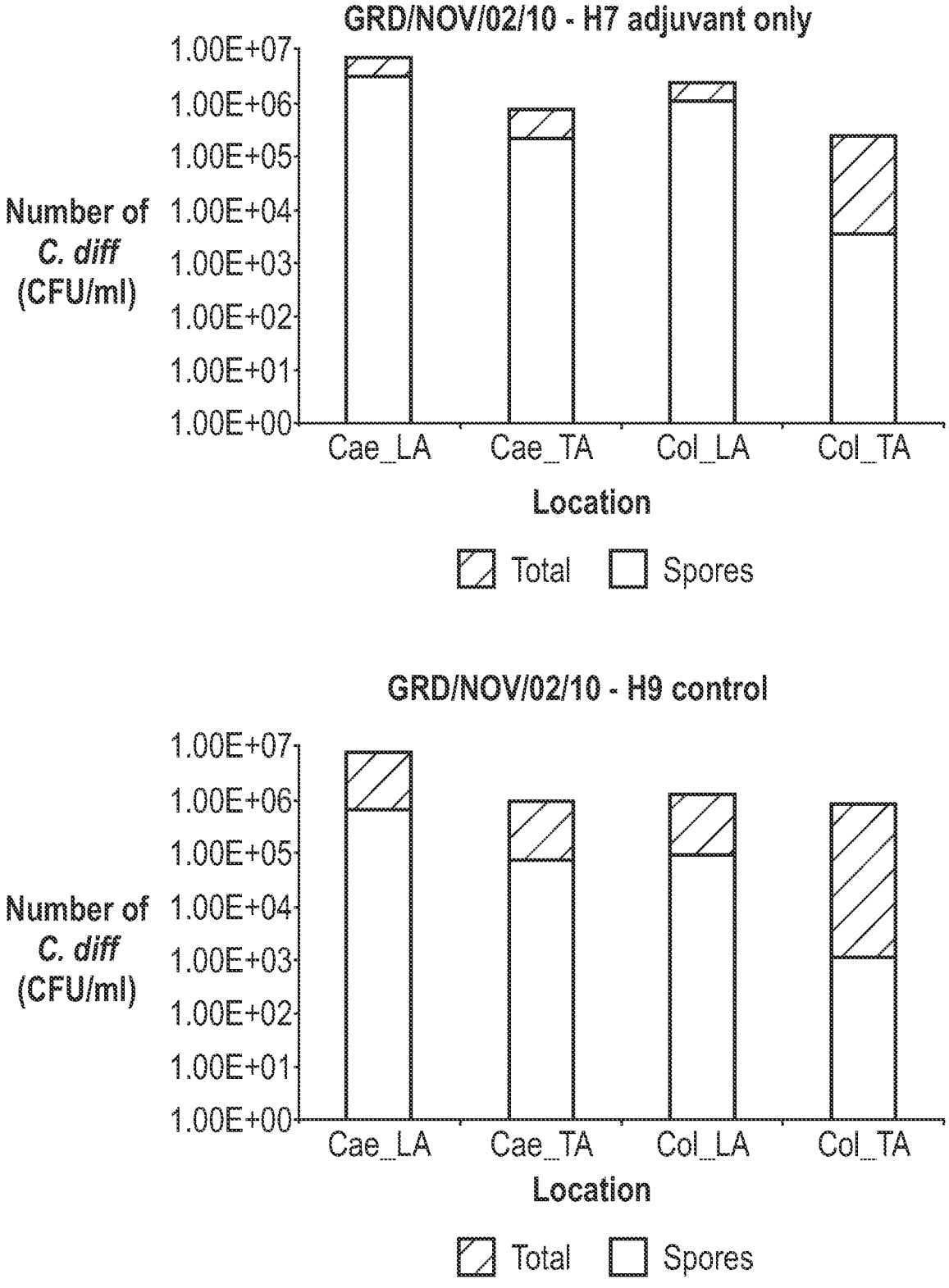

GRD/NOV/02/10 - H7 adjuvant only
Number of C. diff (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae_LA
Cae_TA
Col_LA
Col_TA
Location
Total
Spores
GRD/NOV/02/10 - H9 control
Number of C. diff (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae_LA
Cae_TA
Col_LA
Col_TA
Location
Total
Spores

FIG. 17(contd)

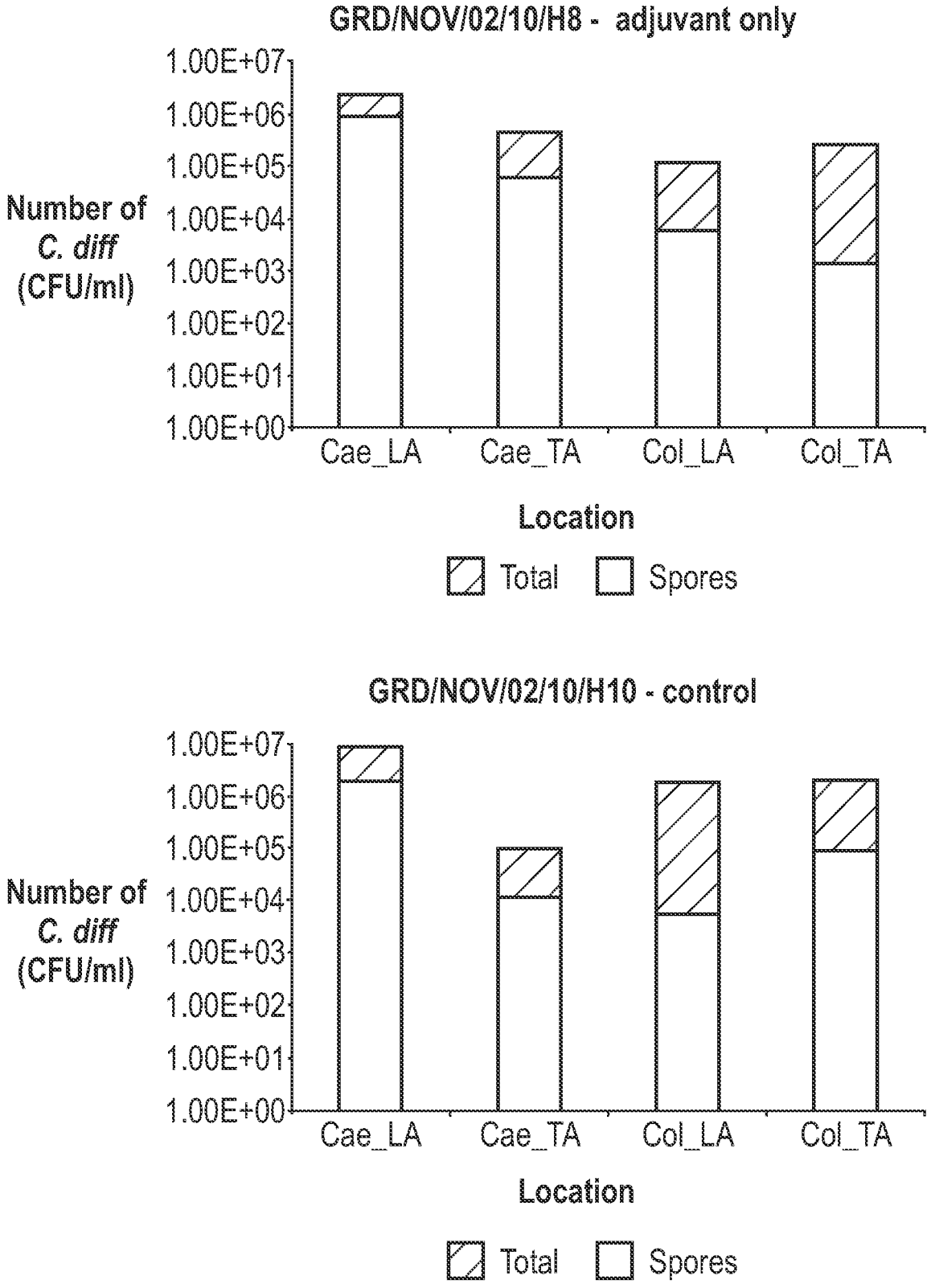

GRD/NOV/02/10/H8 - adjuvant only
Number of C. diff (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae_LA
Cae_TA
Col_LA
Col_TA
Location
Total
Spores
GRD/NOV/02/10/H10 - control
Number of C. diff (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae_LA
Cae_TA
Col_LA
Col_TA
Location
Total
Spores

FIG. 17(contd)

FIG. 18

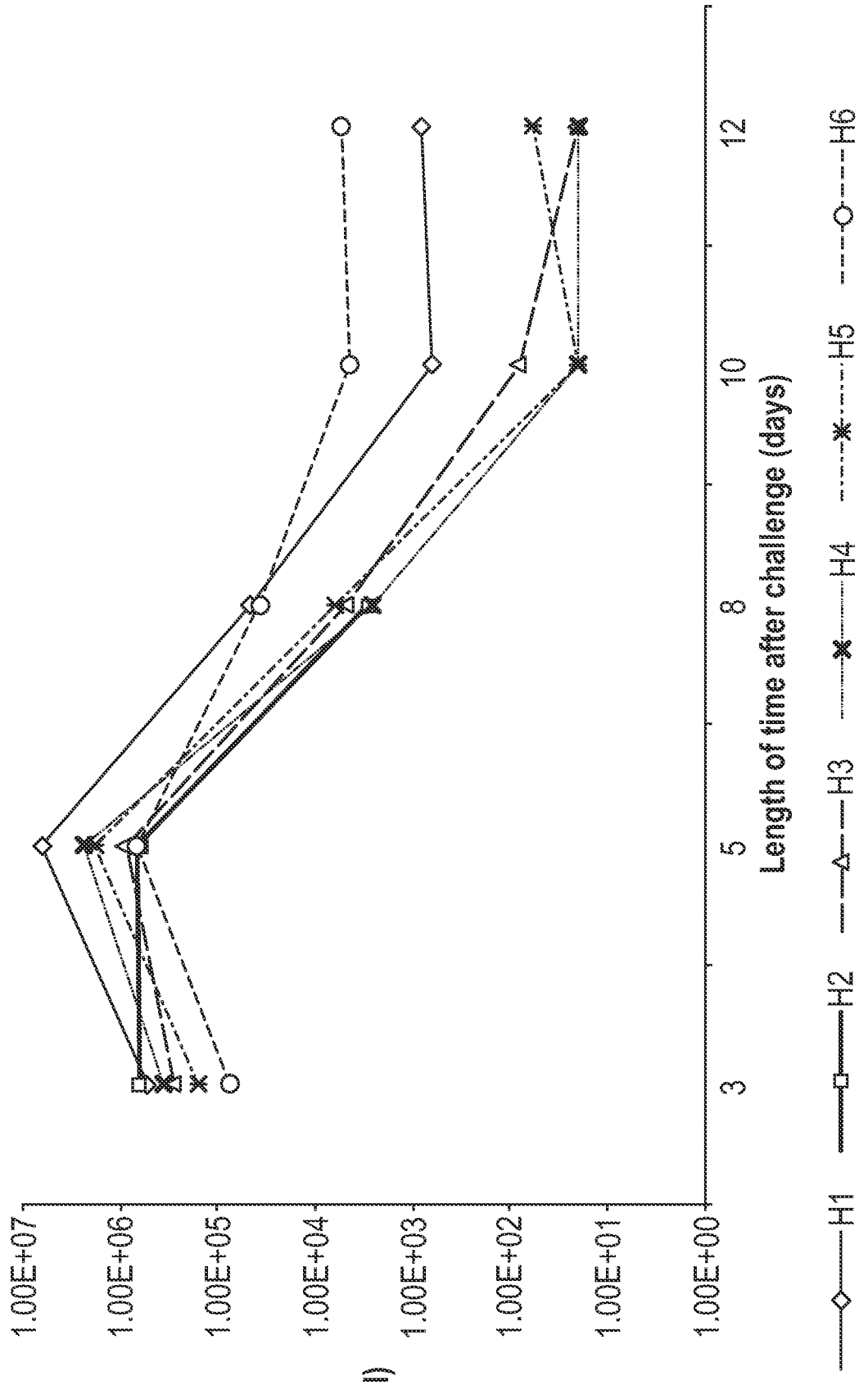

Colonisation of C. difficile in faeces
Number of C. diff (cfu/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
3
5
8
10
12
Length of time after challenge (days)
H1
H2
H3
H4
H5
H6

FIG. 18(contd)

Average colonisation of *C. difficile* in H1- H6 faeces

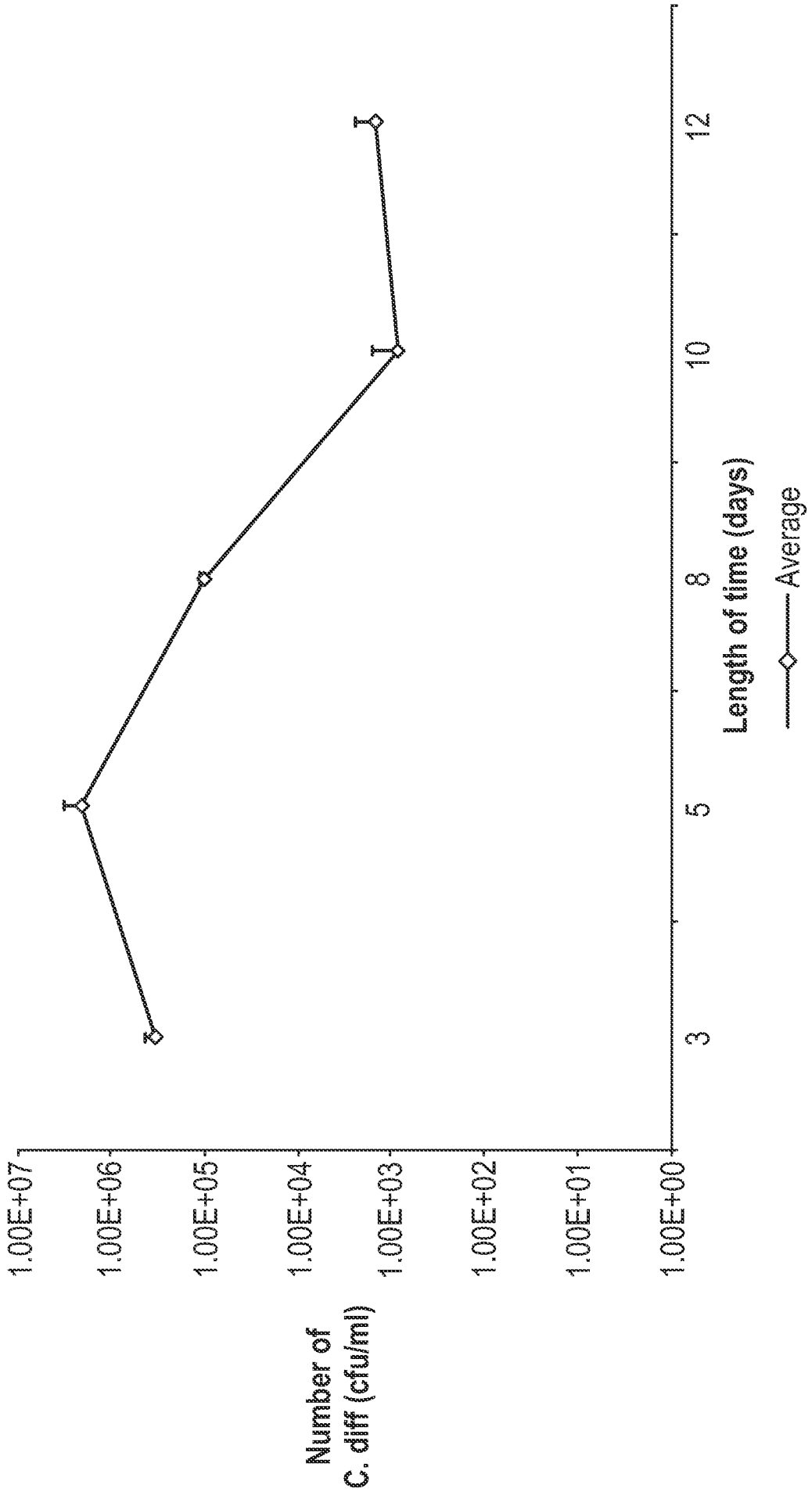
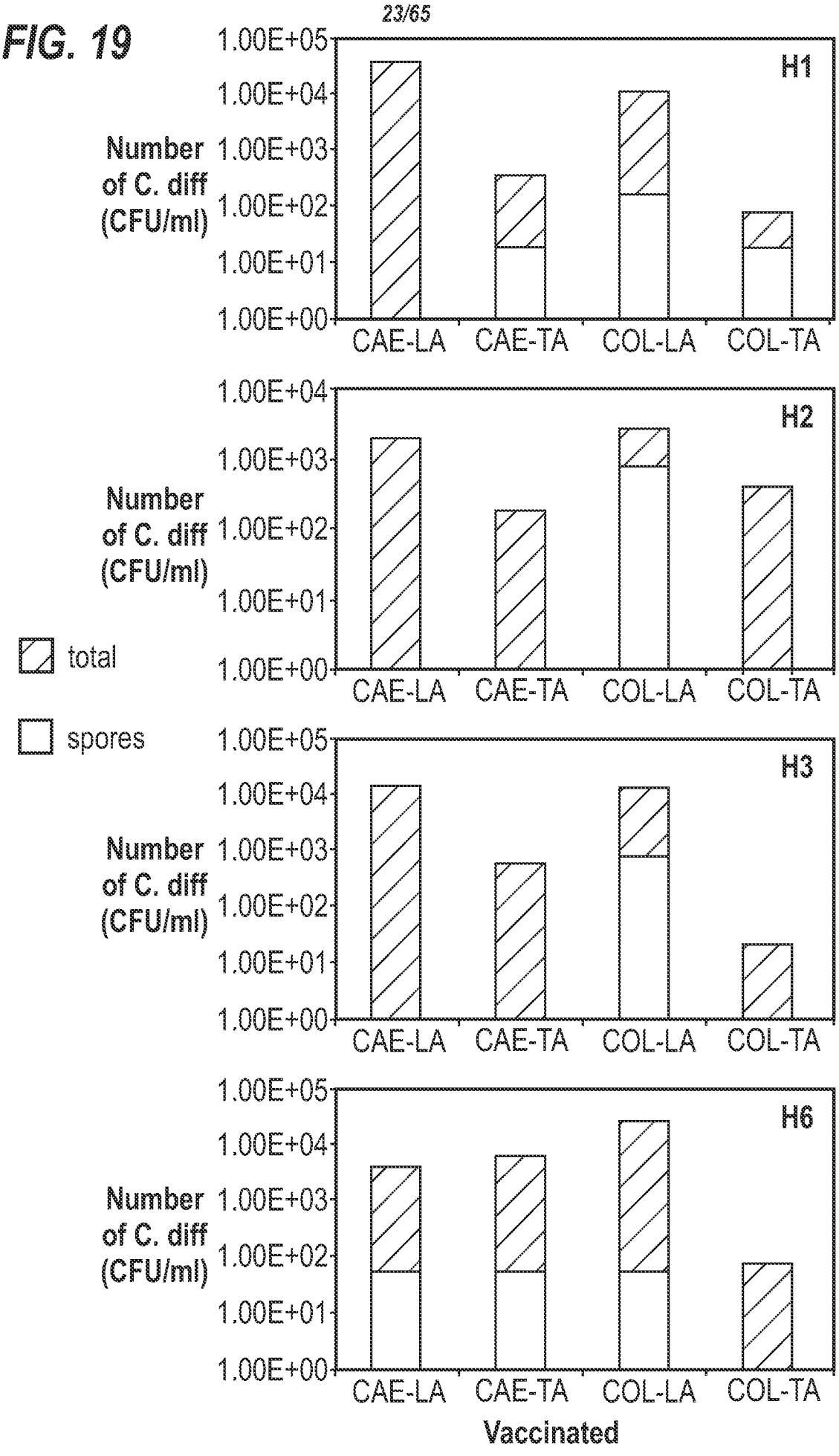


FIG. 19


H1
H2
H3
H6
Number of C. diff (CFU/ml)
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
CAE-LA
CAE-TA
COL-LA
COL-TA
Vaccinated
total
spores

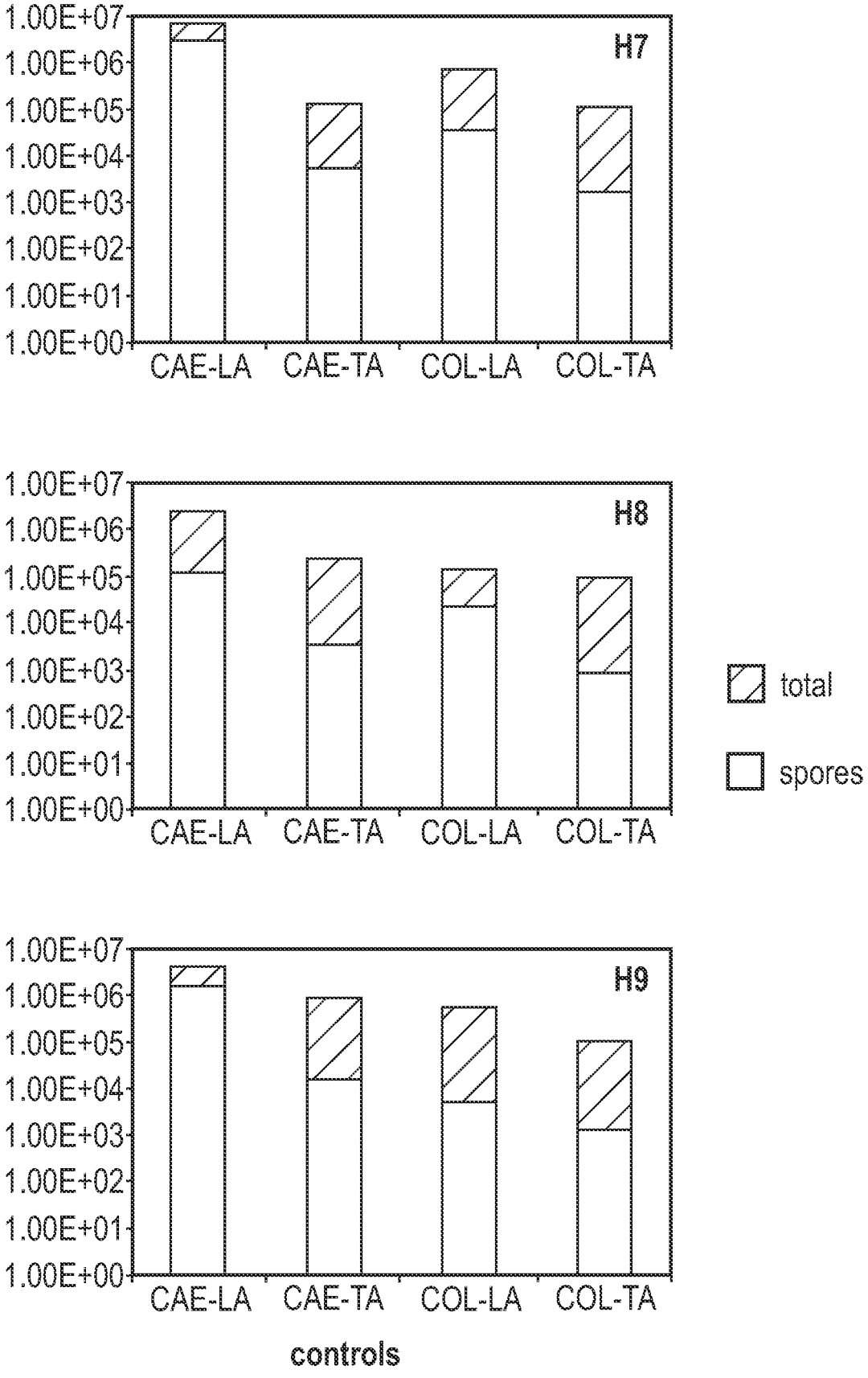

1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
H7
CAE-LA
CAE-TA
COL-LA
COL-TA
H8
H9
total
spores
controls

FIG. 19(contd)

FIG. 20

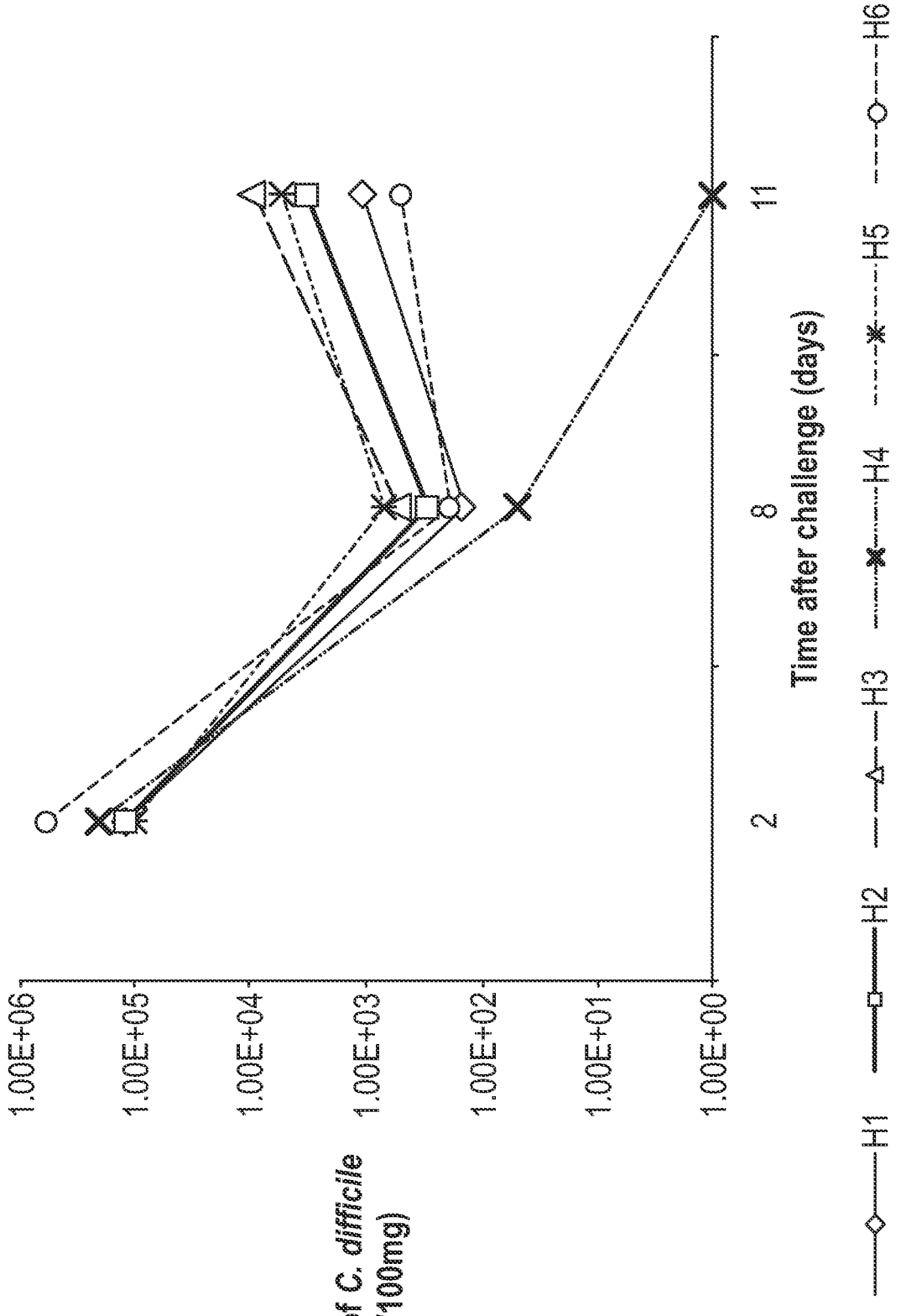
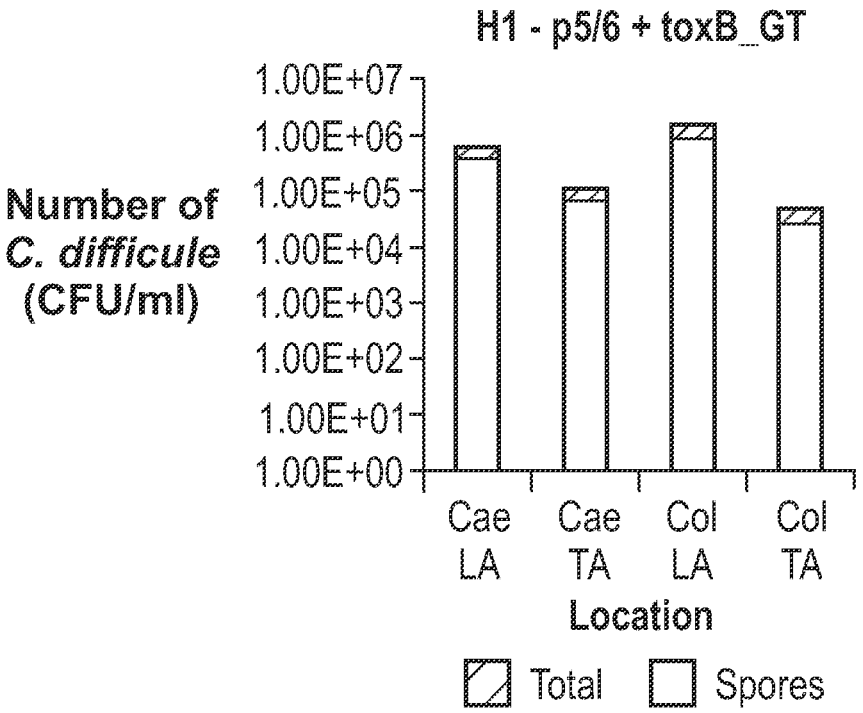

Shedding of C. difficile spores from vaccinated animals
Number of C. difficile (CFU/100mg)
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
2
8
11
Time after challenge (days)
H1
H2
H3
H4
H5
H6

FIG. 21

Hamster 1: Survived - culled 14 days



Hamster 2: Survived - culled at 14 days

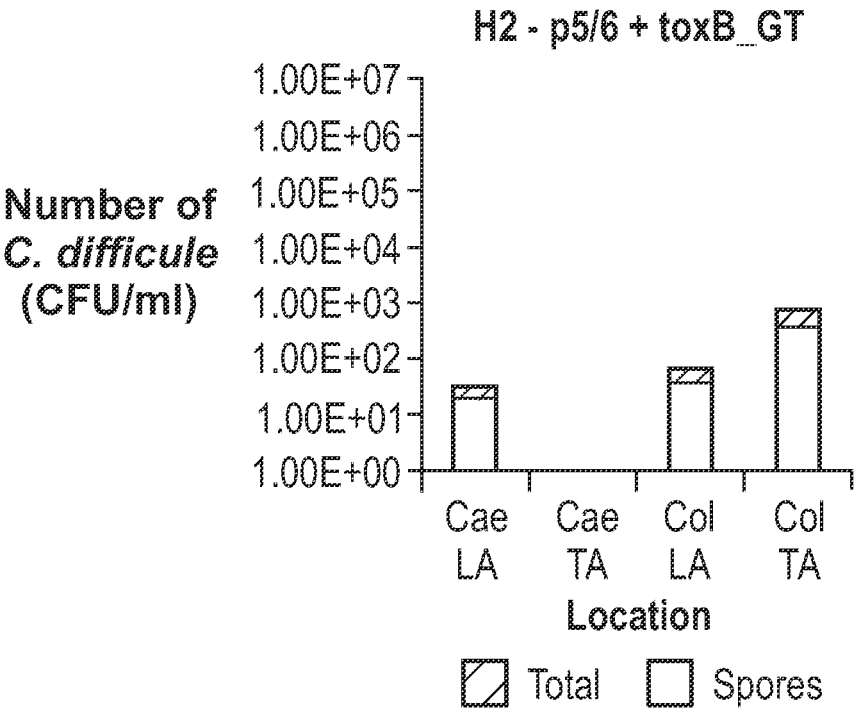
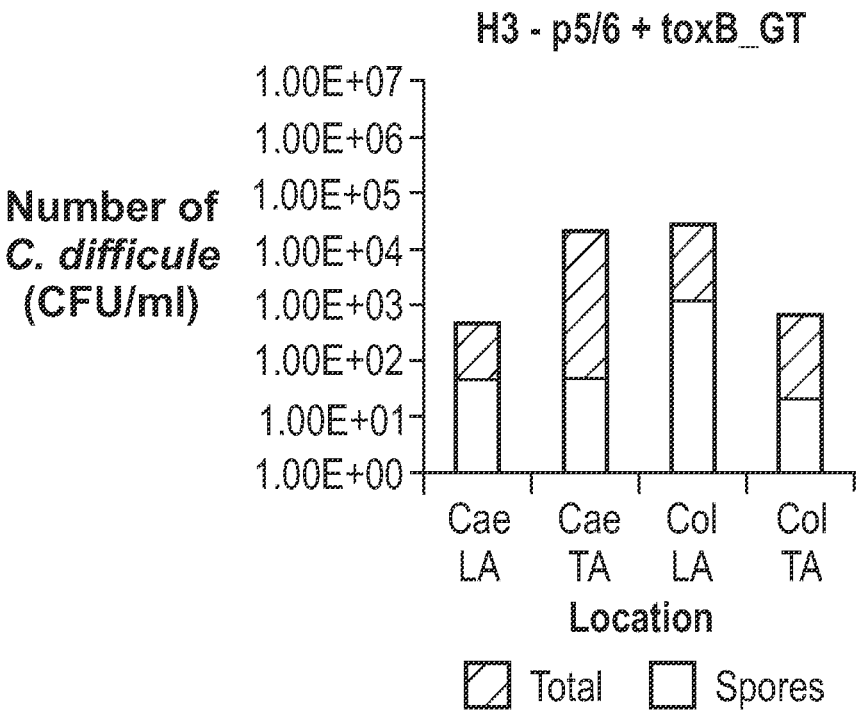


FIG. 21(contd)

Hamster 3: Survived - culled at 14 days



Hamster 4: Survived - culled at 14 days

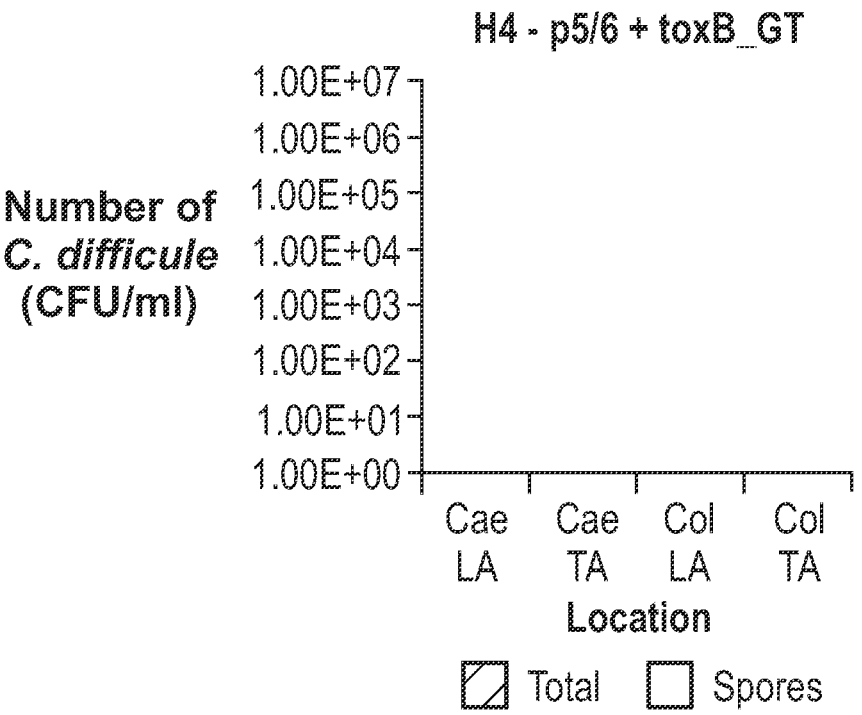
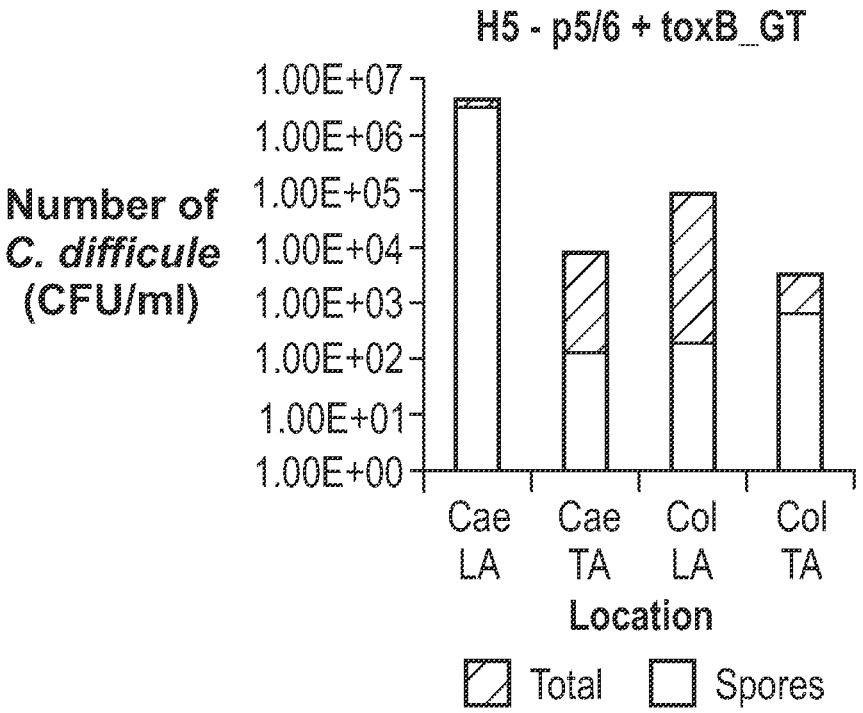


FIG. 21(contd)

Hamster 5: Survived - culled at 14 days



Hamster 6: Survived - culled at 14 days

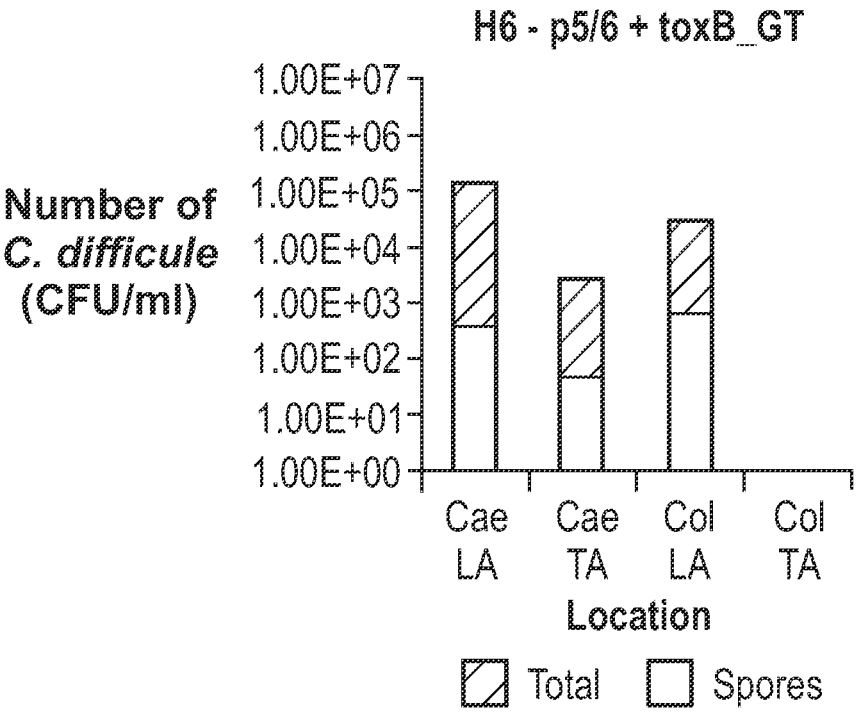


FIG. 21(contd)

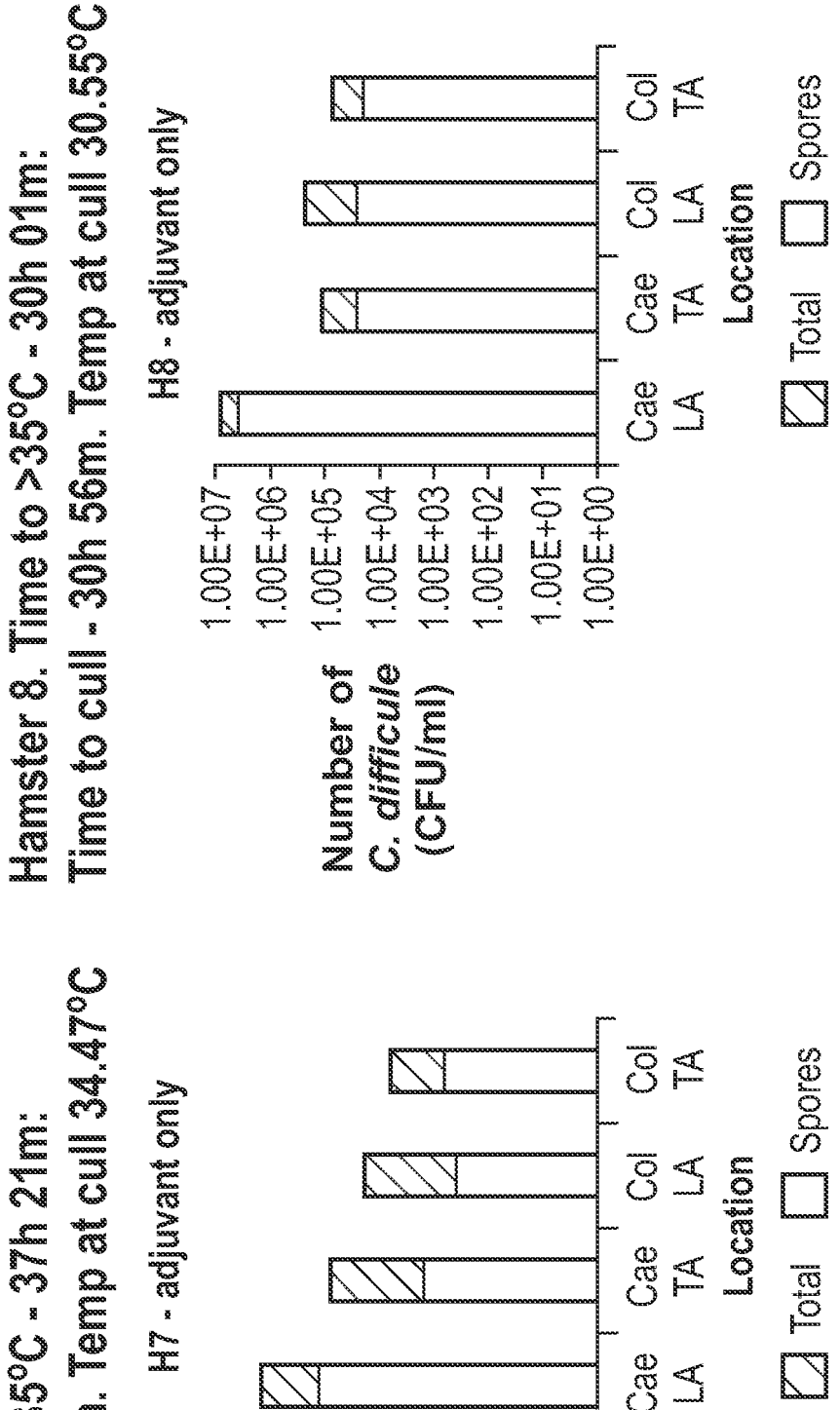

Hamster 7. Time to >35°C - 37h 21m:
Time to cull - 37h 36m. Temp at cull 34.47°C
H7 - adjuvant only
Number of C. difficile (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae LA
Cae TA
Col LA
Col TA
Location
Total
Spores
Hamster 8. Time to >35°C - 30h 01m:
Time to cull - 30h 56m. Temp at cull 30.55°C
H8 - adjuvant only
Number of C. difficile (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae LA
Cae TA
Col LA
Col TA
Location
Total
Spores

FIG. 22

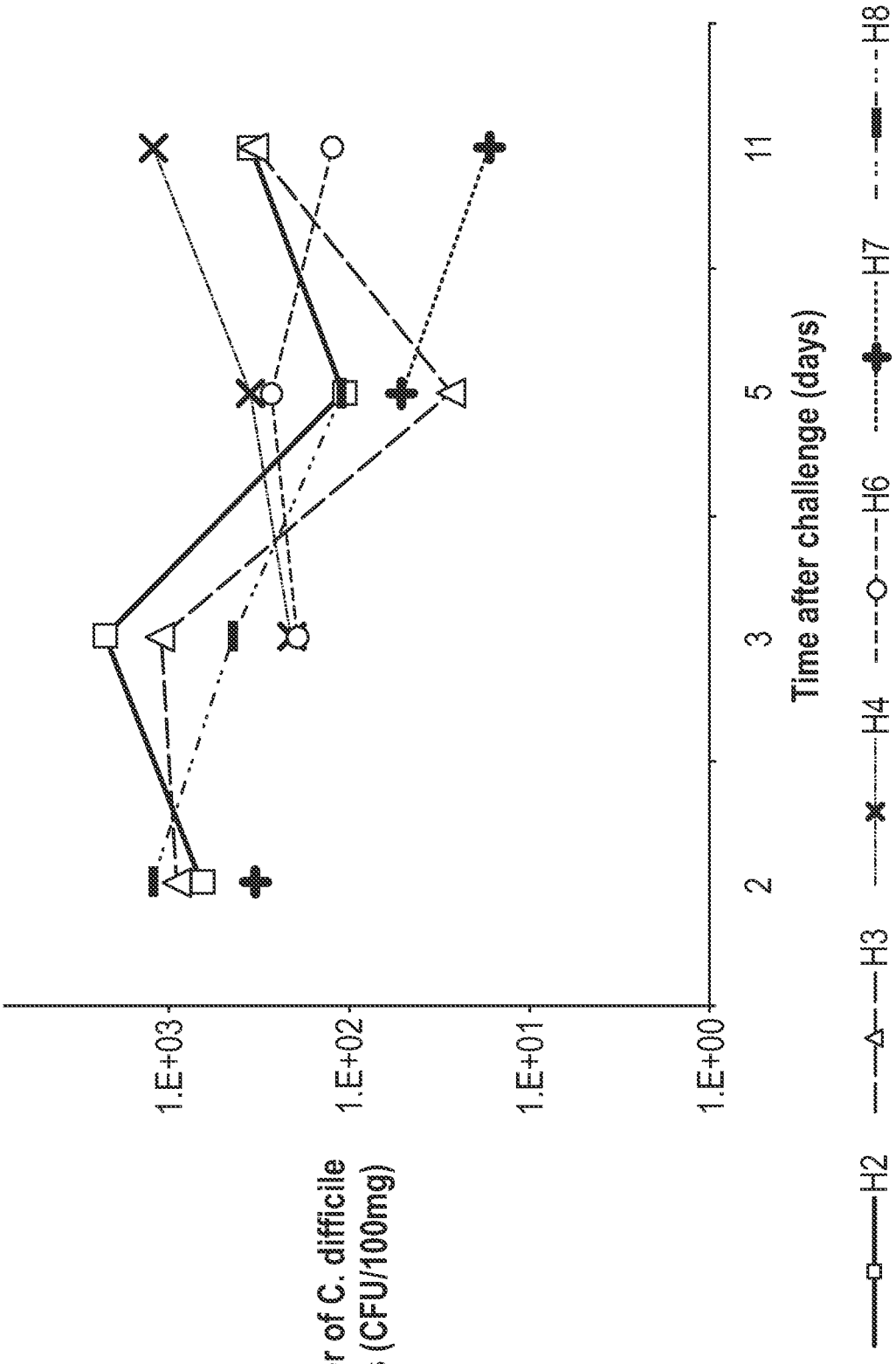
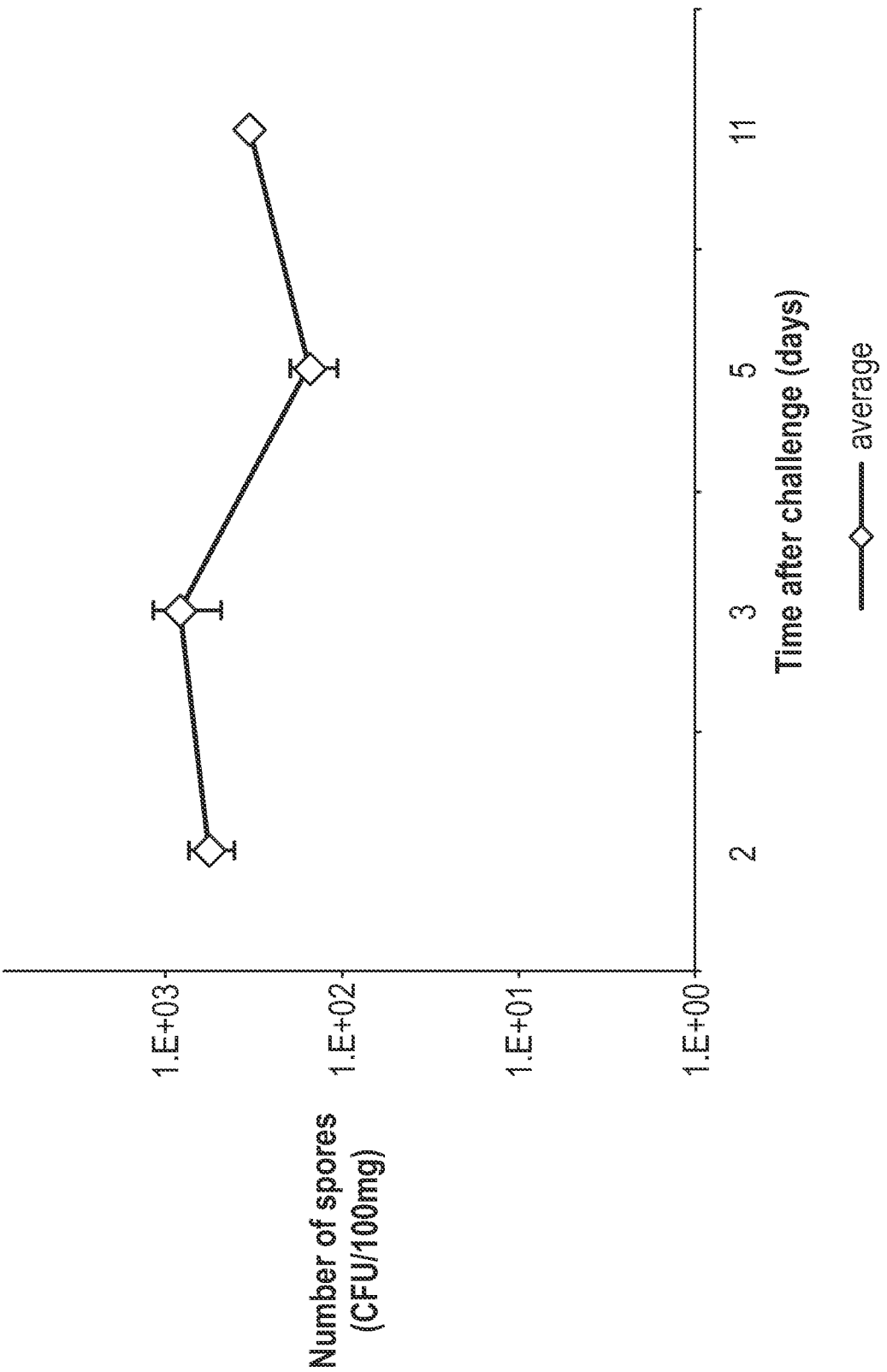

Number of C. difficile spores (CFU/100mg)
1.E+03
1.E+02
1.E+01
1.E+00
2
3
5
11
Time after challenge (days)
H2
H3
H4
H6
H7
H8

FIG. 22(contd)


1.E+03
1.E+02
1.E+01
1.E+00
Number of spores (CFU/100mg)
2
3
5
11
Time after challenge (days)
average

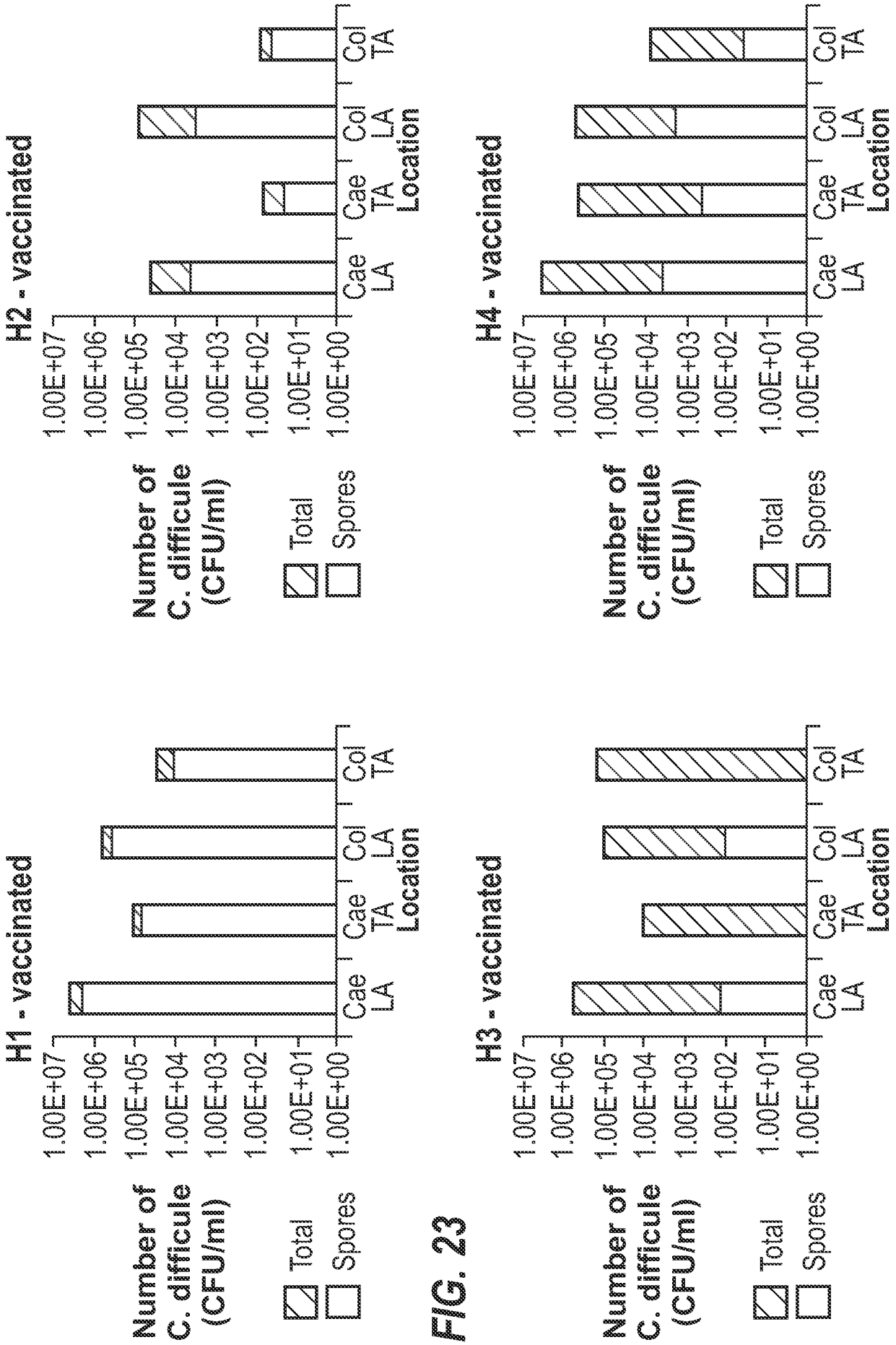
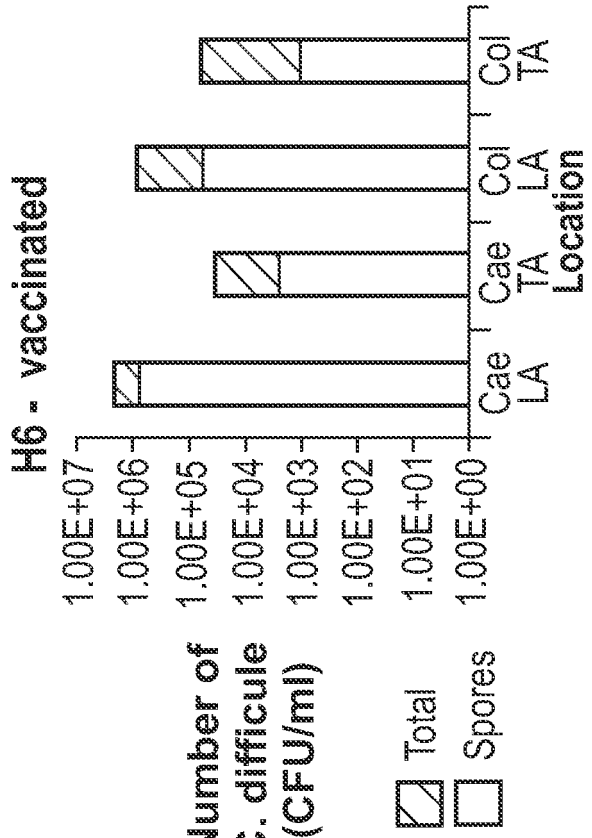
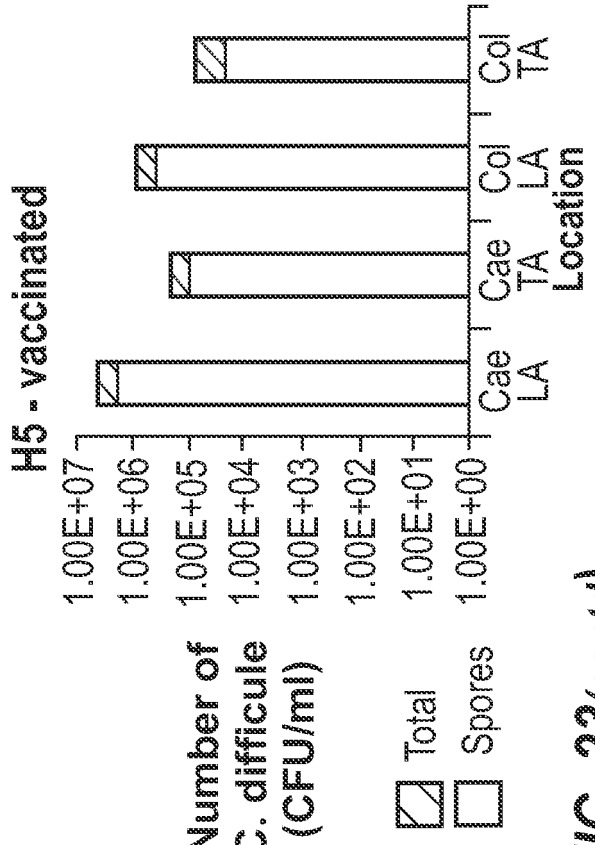

H1 - vaccinated
H2 - vaccinated
H3 - vaccinated
H4 - vaccinated
Number of C. difficule (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae LA
Cae TA
Col LA
Col TA
Location
Total
Spores

FIG. 23


H5 - vaccinated
Number of C. difficule (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae LA
Cae TA
Col LA
Col TA
Location
Total
Spores


H7 - vaccinated
Number of C. difficule (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae LA
Cae TA
Col LA
Col TA
Location
Total
Spores

H6 - vaccinated
Number of C. difficule (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae LA
Cae TA
Col LA
Col TA
Location
Total
Spores

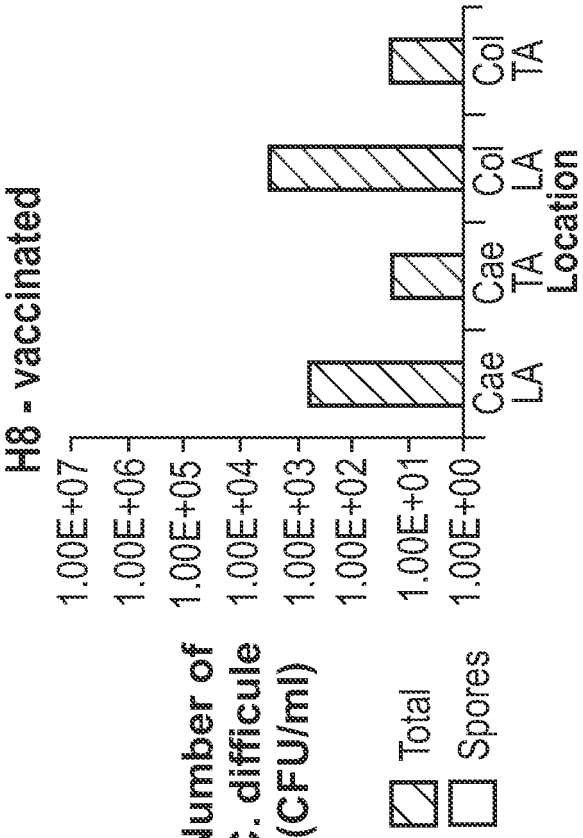

H8 - vaccinated
Number of C. difficule (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae LA
Cae TA
Col LA
Col TA
Location
Total
Spores

FIG. 23(contd)

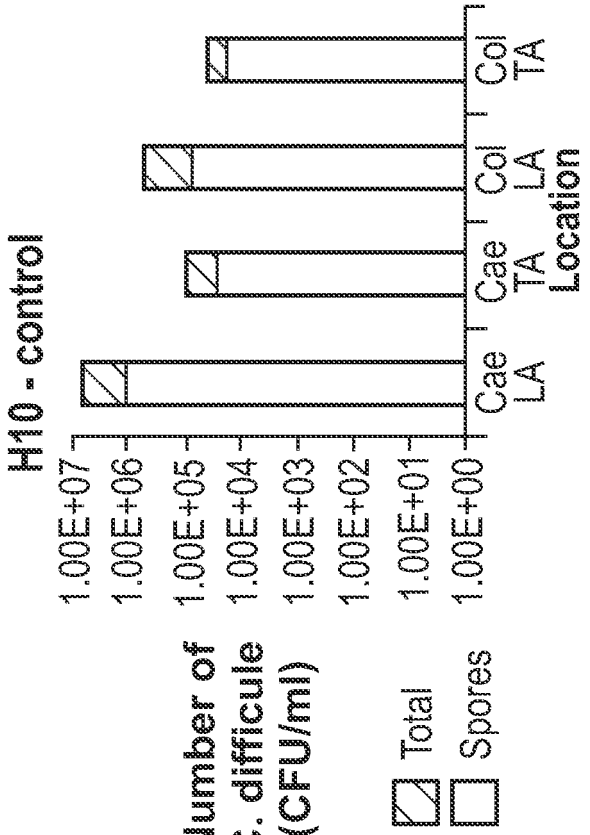

H9 - control
H10 - control
Number of C. difficule (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Total
Spores
Cae LA
Cae TA
Col LA
Col TA
Location

FIG. 23(contd)

FIG. 24

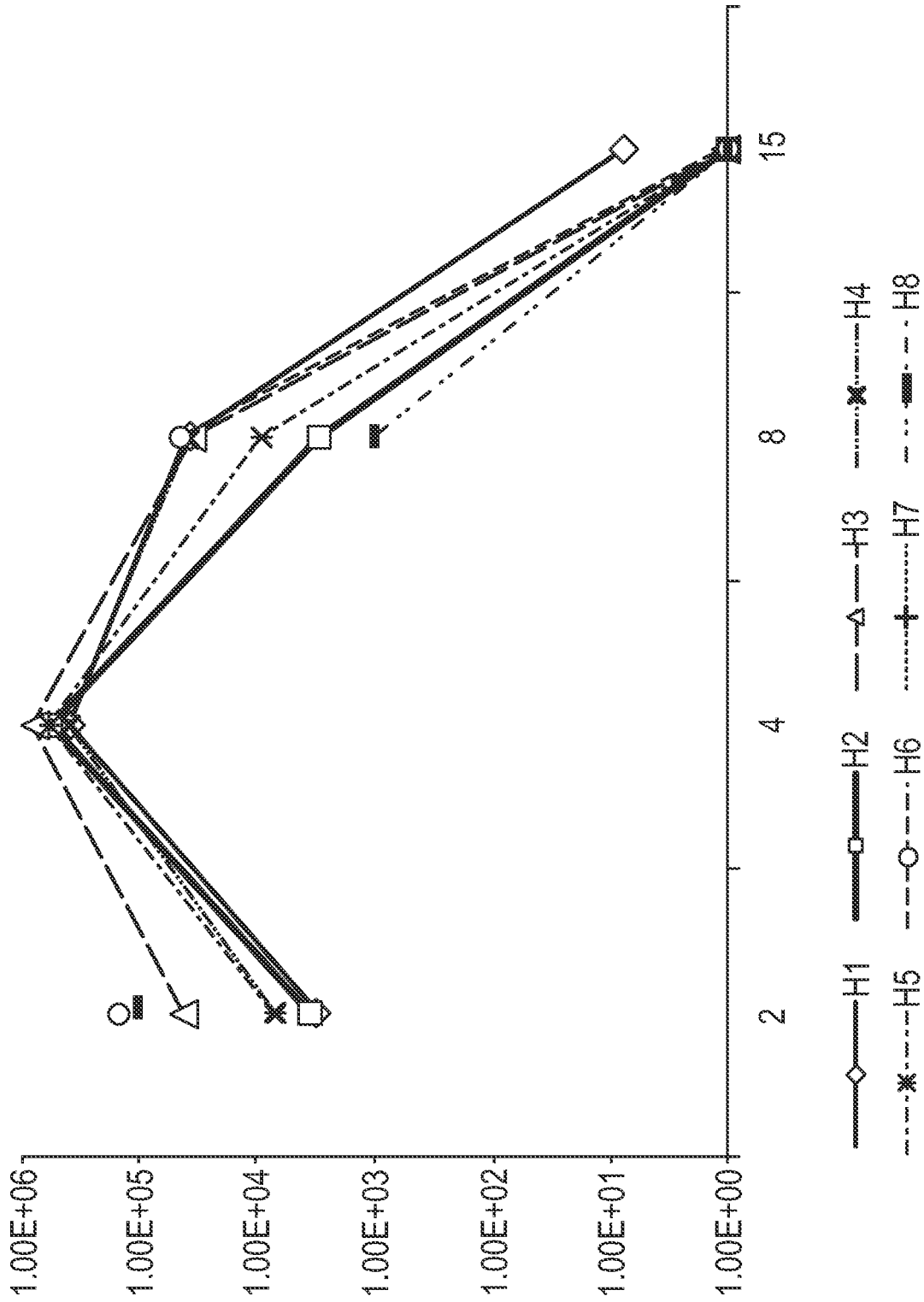

1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
2
4
8
15
H1
H2
H3
H4
H5
H6
H7
H8

FIG. 25

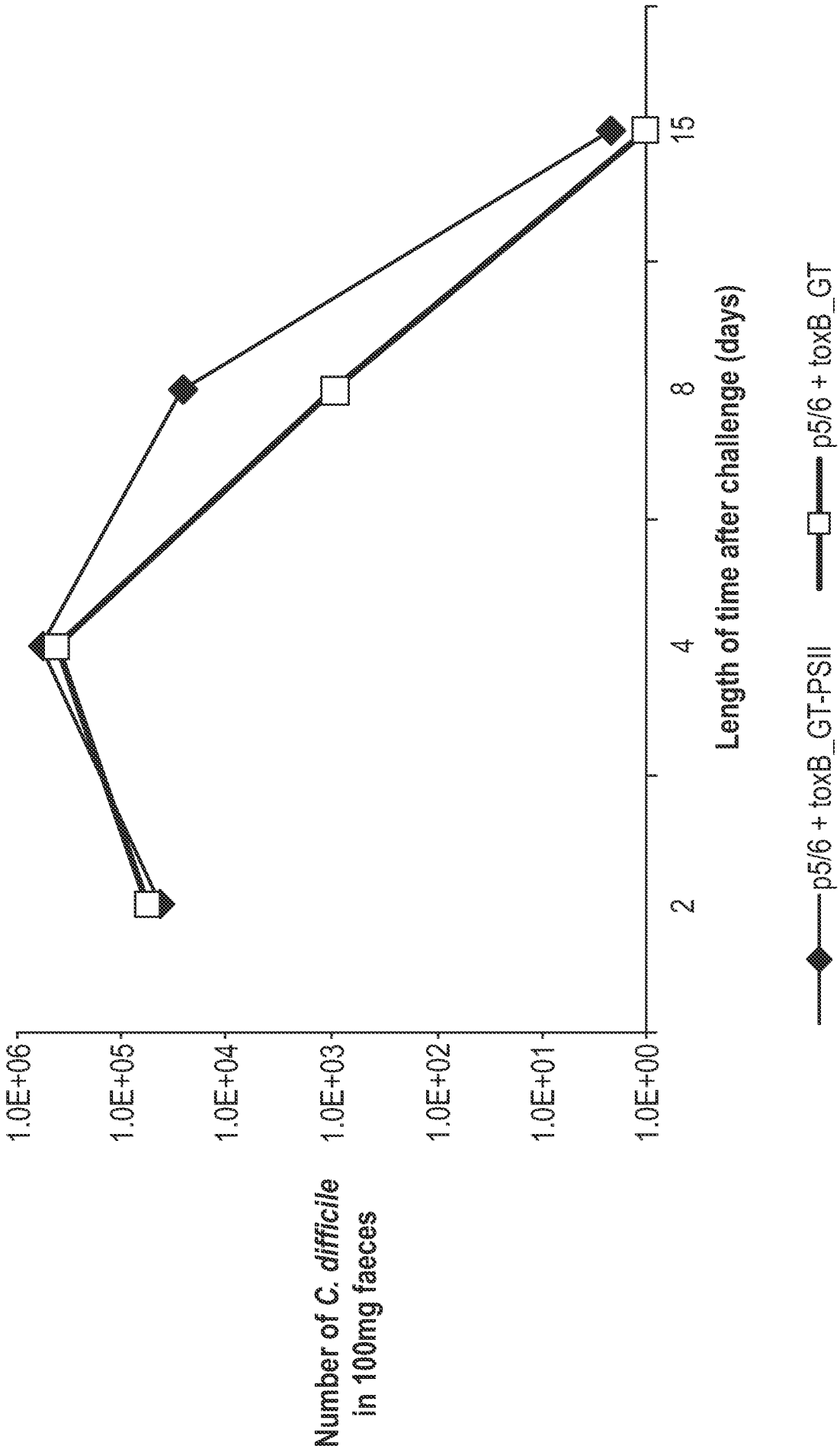

1.0E+06
1.0E+05
1.0E+04
1.0E+03
1.0E+02
1.0E+01
1.0E+00
Number of C. difficile in 100mg faeces
2
4
8
15
Length of time after challenge (days)
p5/6 + toxB_GT-PSII
p5/6 + toxB_GT

FIG. 26(a)

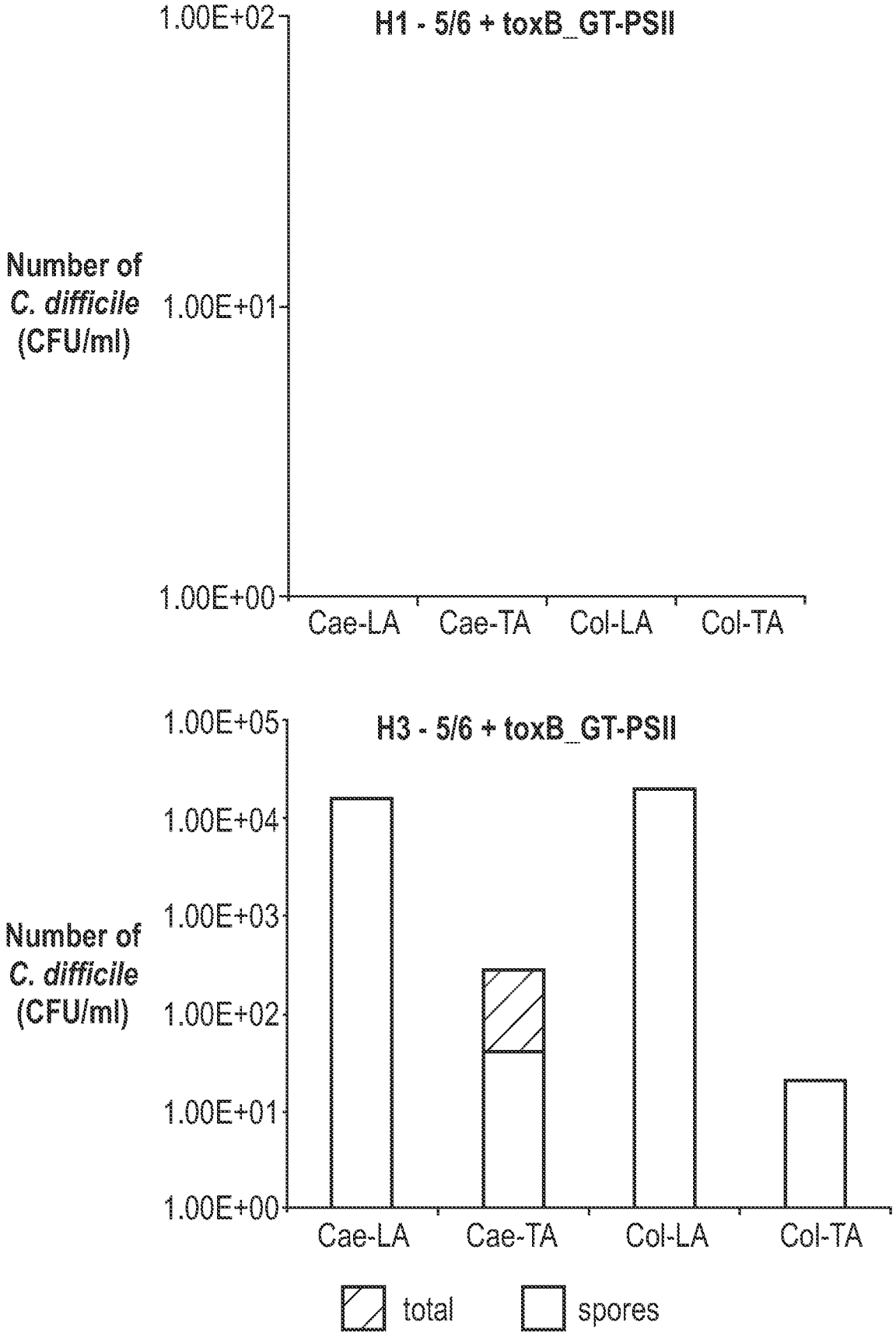

H1 - 5/6 + toxB_GT-PSII
1.00E+02
1.00E+01
1.00E+00
Number of C. difficile (CFU/ml)
Cae-LA
Cae-TA
Col-LA
Col-TA
H3 - 5/6 + toxB_GT-PSII
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Number of C. difficile (CFU/ml)
Cae-LA
Cae-TA
Col-LA
Col-TA
total
spores

FIG. 26(a)(contd)

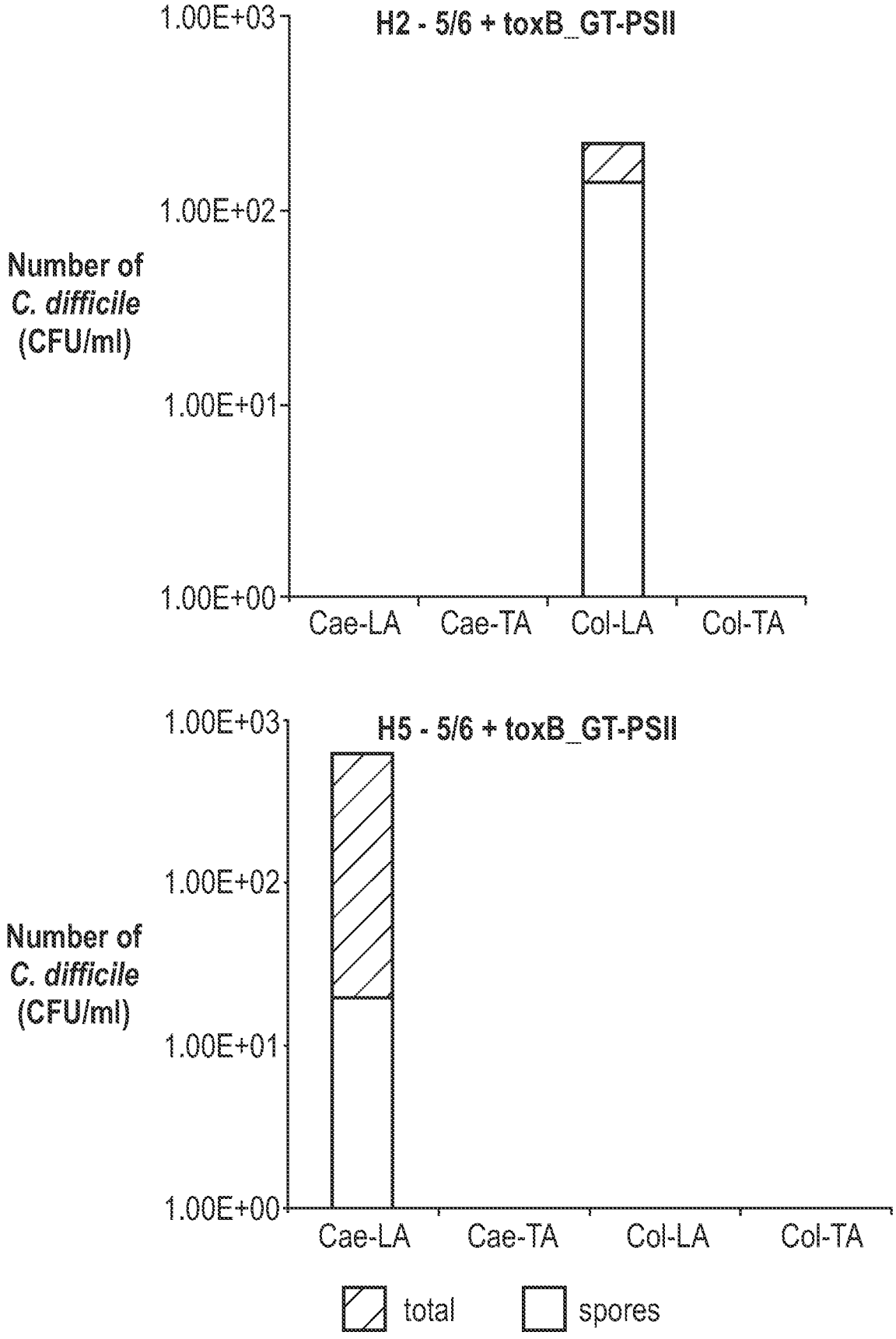


FIG. 26(a)(contd)

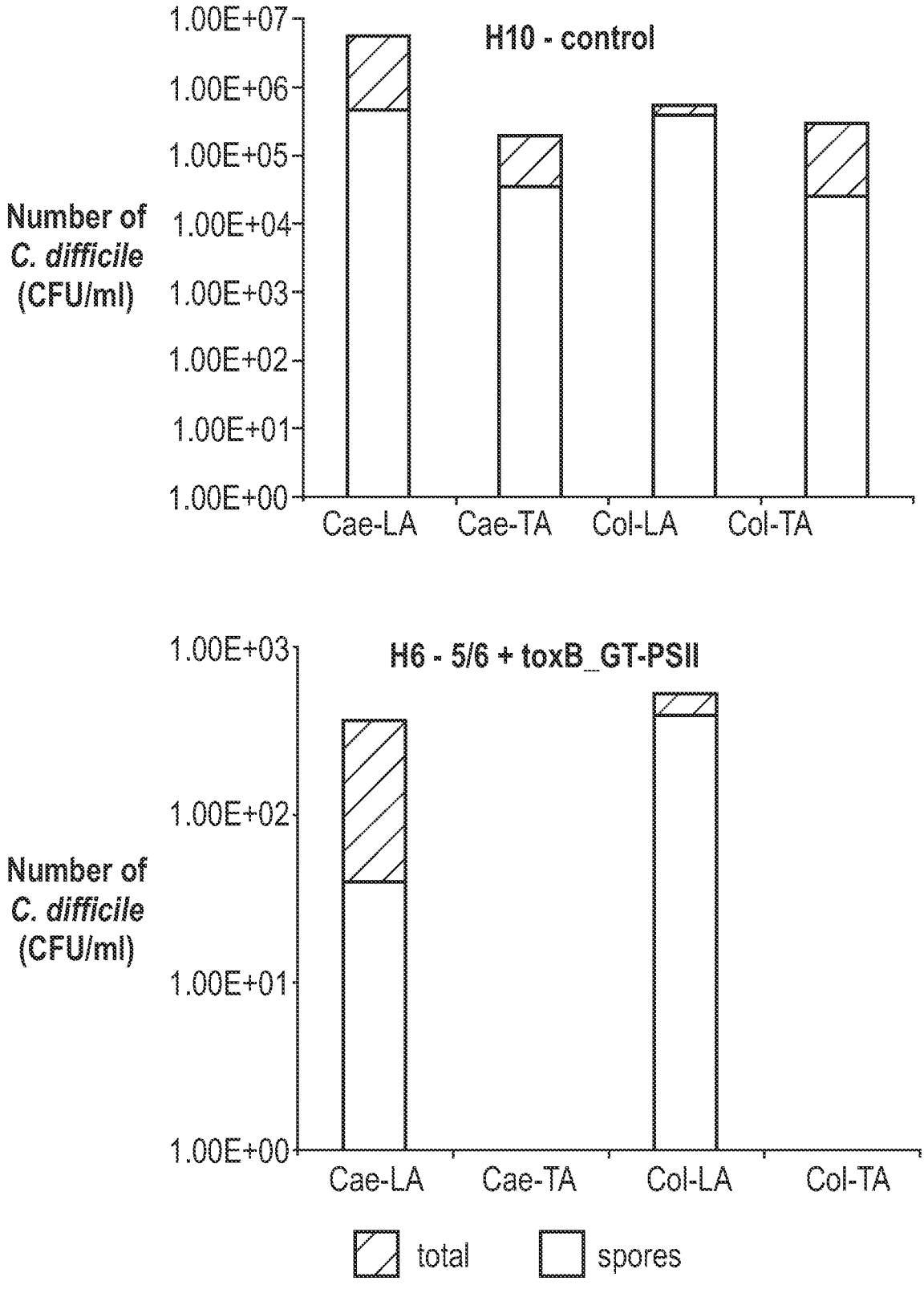
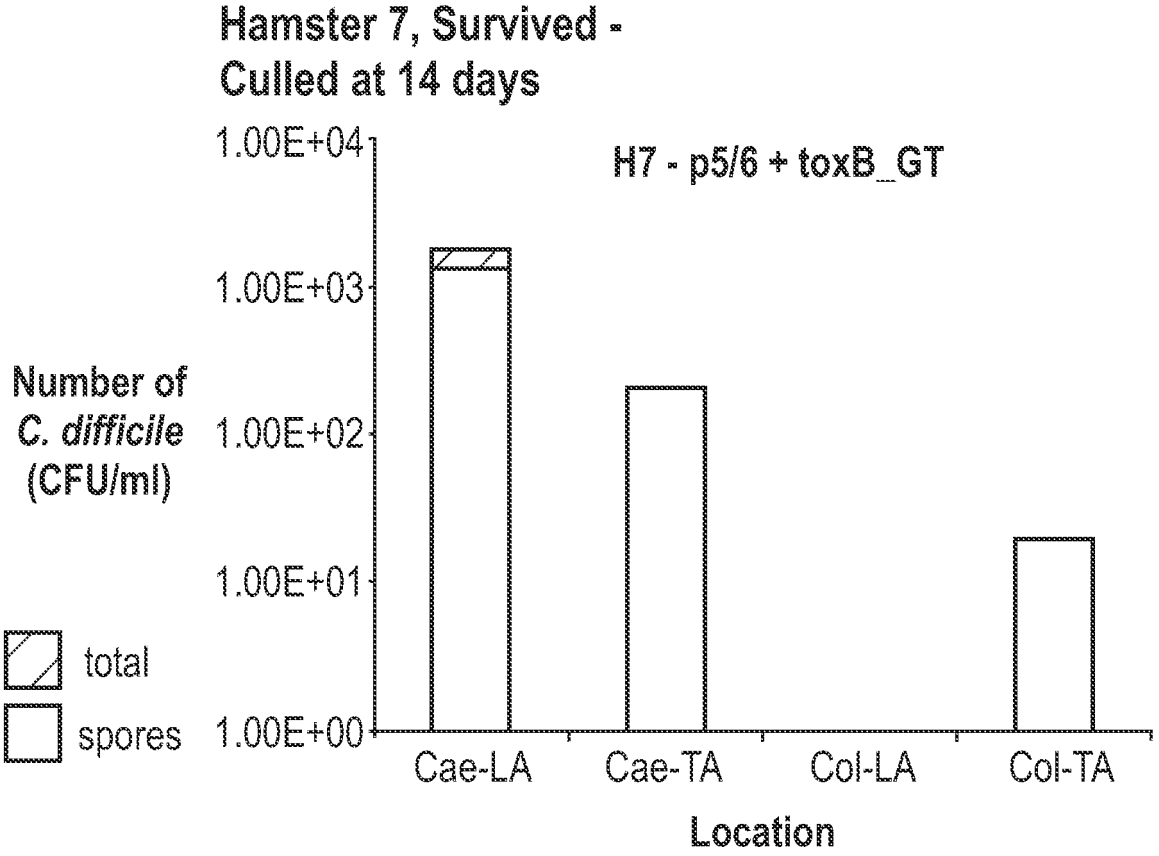


FIG. 26(b)


Hamster 7, Survived -
Culled at 14 days
H7 - p5/6 + toxB_GT
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Number of C. difficile (CFU/ml)
total
spores
Cae-LA
Cae-TA
Col-LA
Col-TA
Location

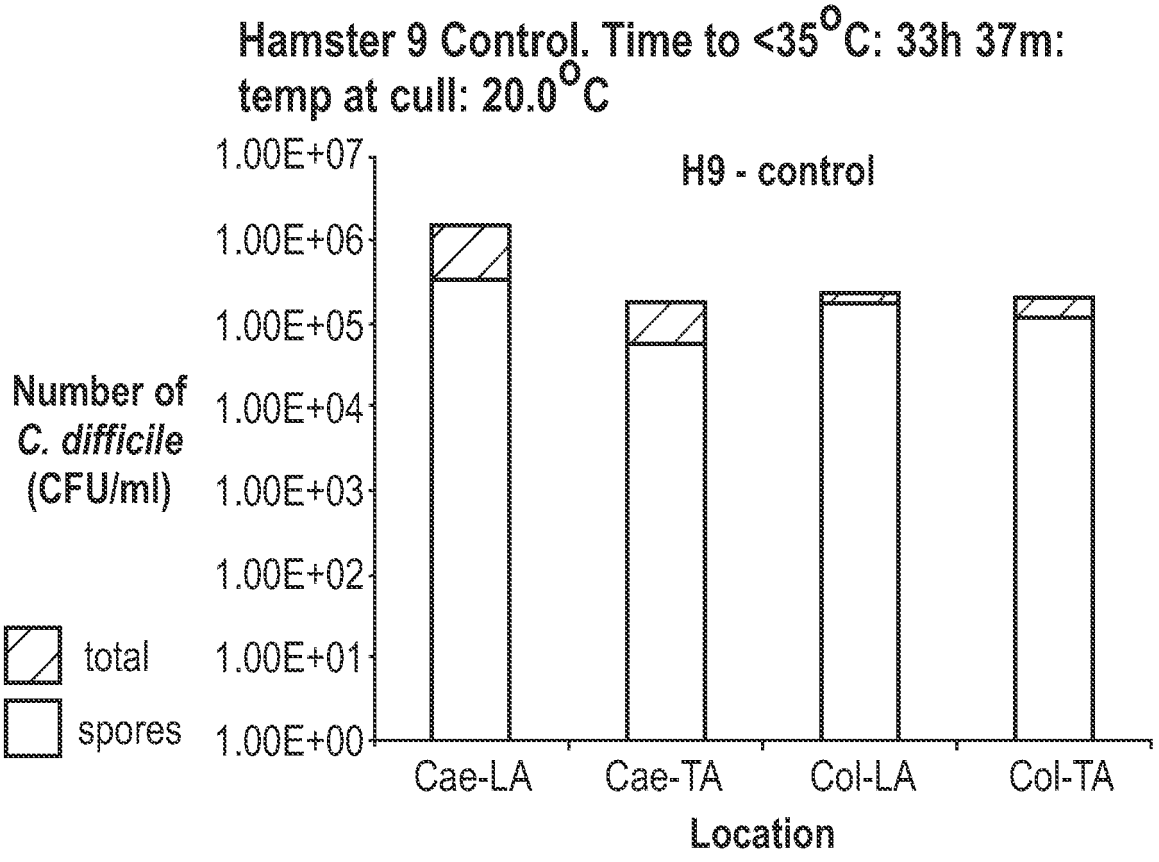
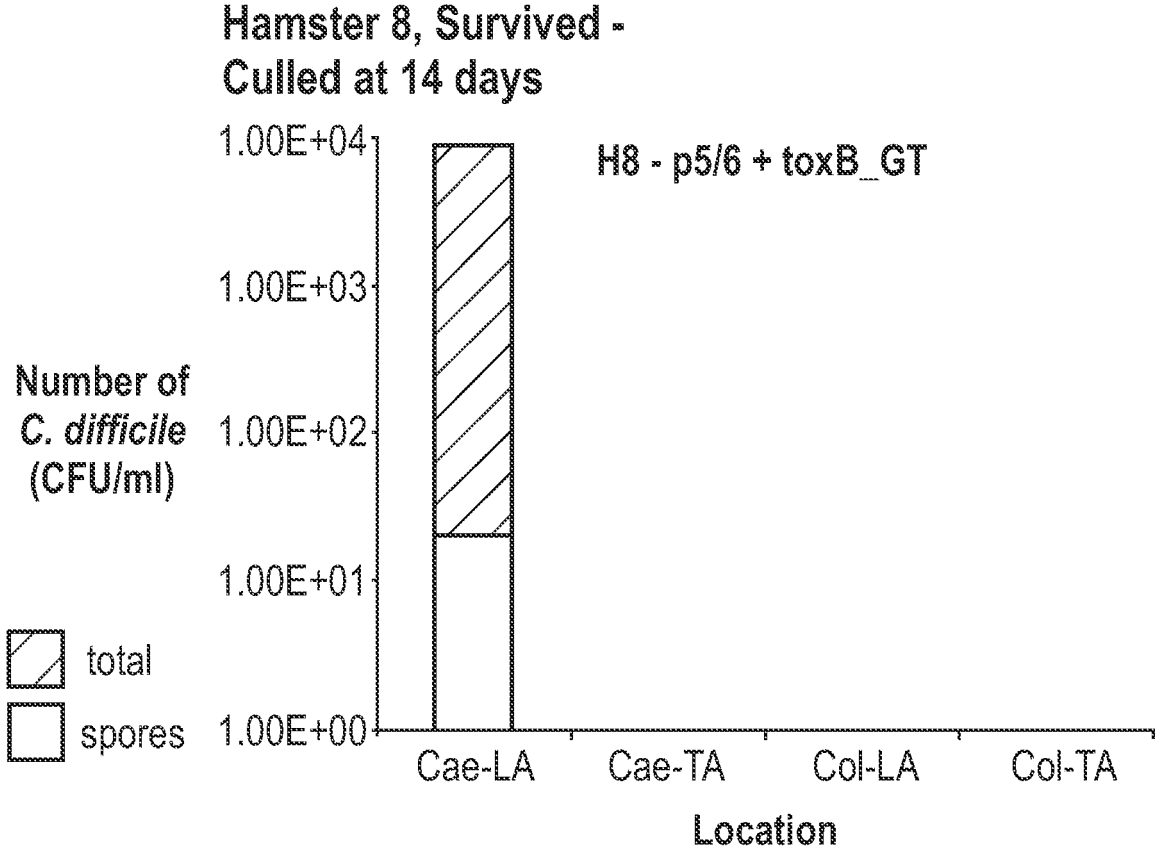

Hamster 9 Control. Time to <35°C: 33h 37m:
temp at cull: 20.0°C
H9 - control
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Number of C. difficile (CFU/ml)
total
spores
Cae-LA
Cae-TA
Col-LA
Col-TA
Location

FIG. 26(b)(contd)



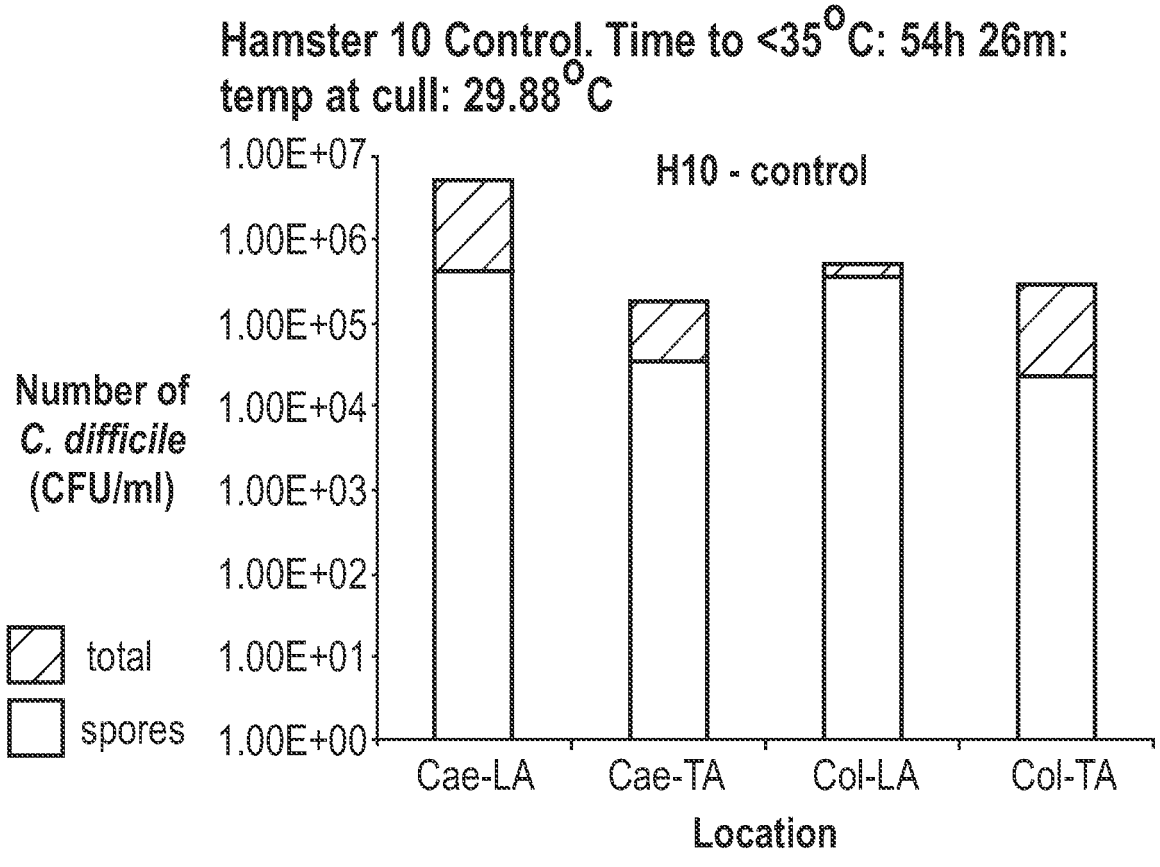
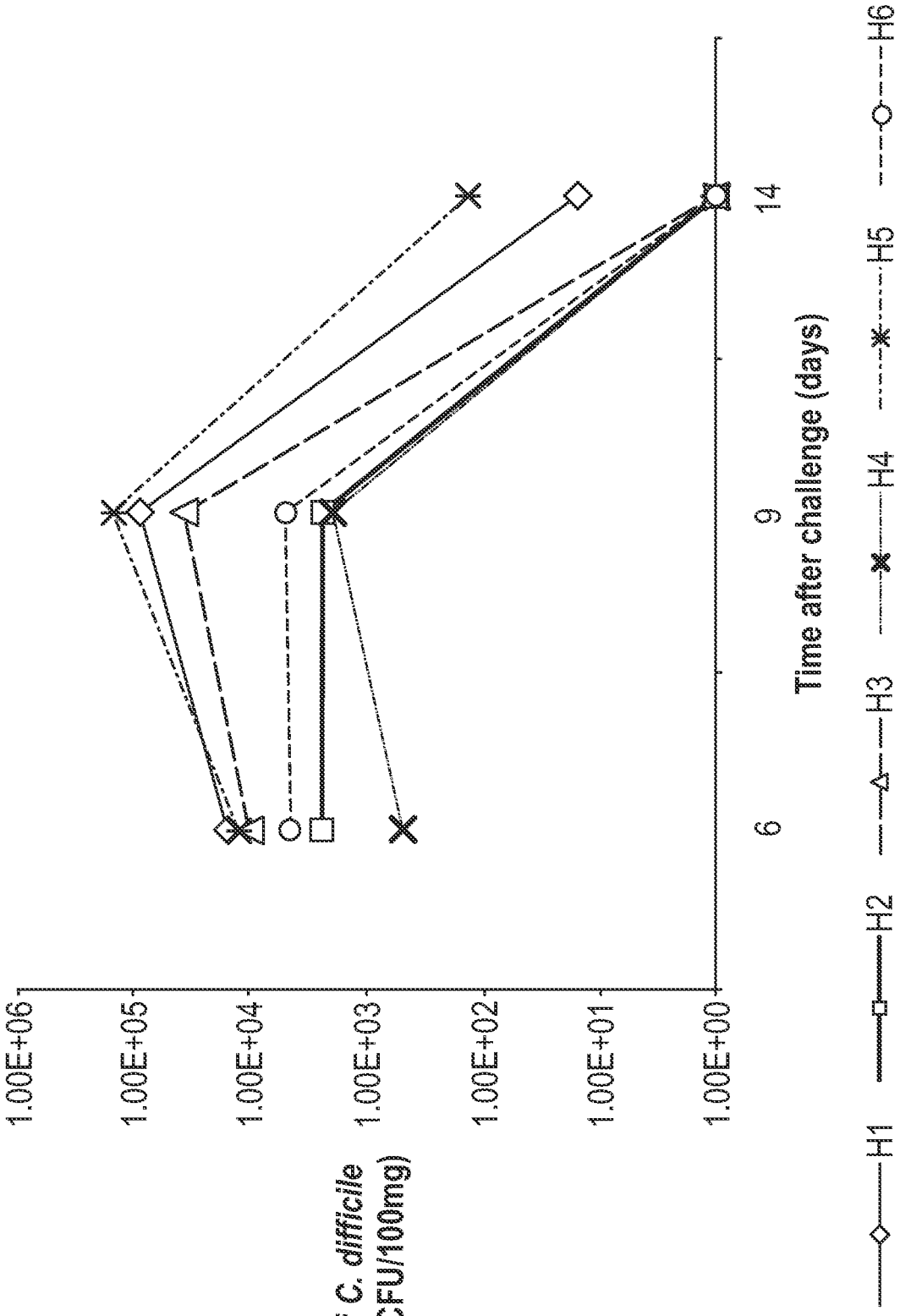
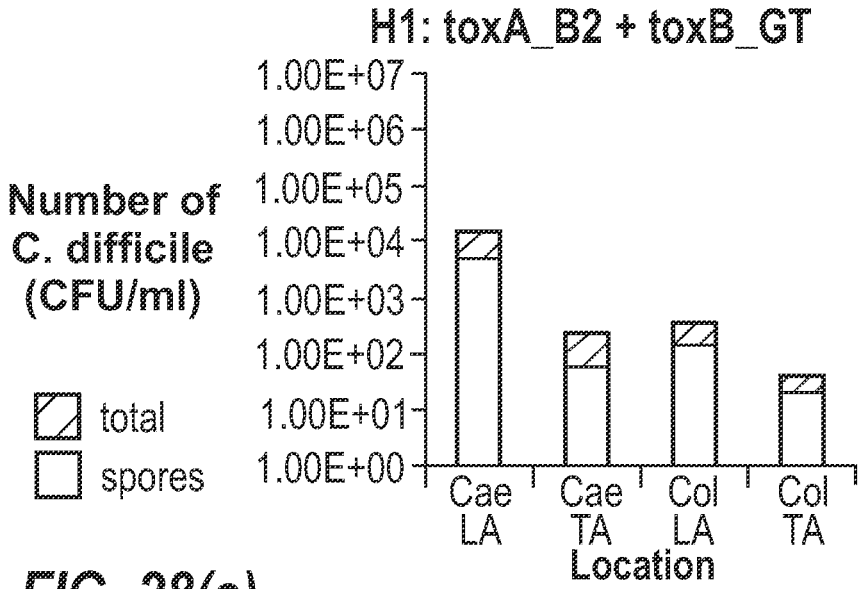


FIG. 27


Shedding of C. difficile spores in faeces of vaccinated animals
Number of C. difficile in faeces (CFU/100mg)
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
6
9
14
Time after challenge (days)
H1
H2
H3
H4
H5
H6


H1: toxA_B2 + toxB_GT
Number of C. difficile (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
total
spores
Cae LA
Cae TA
Col LA
Col TA
Location

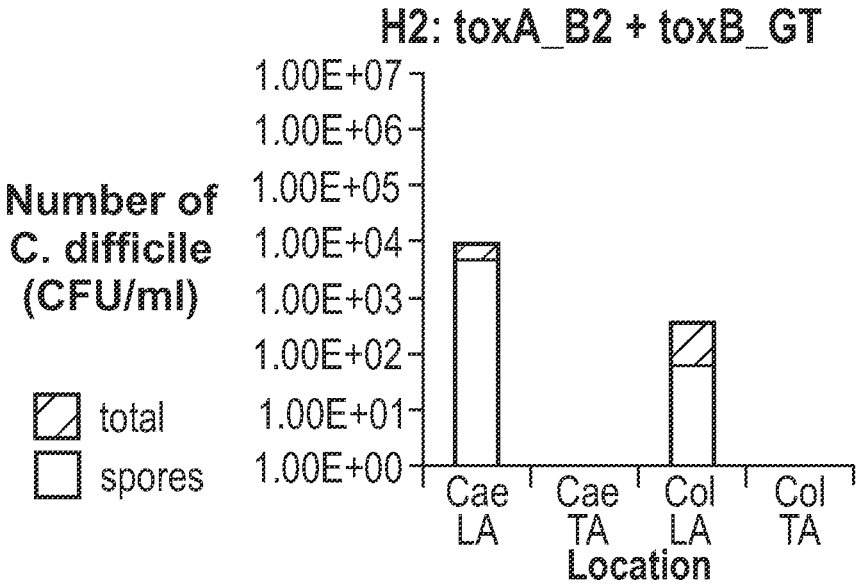
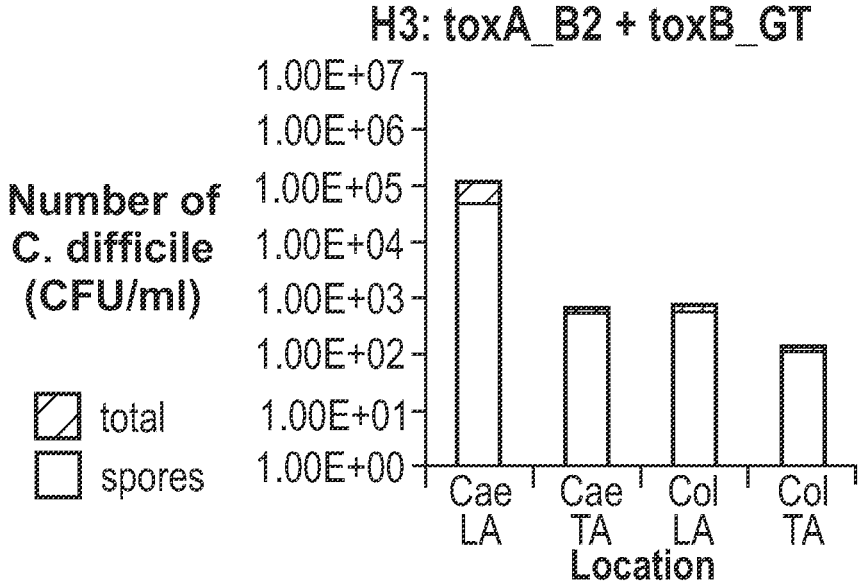
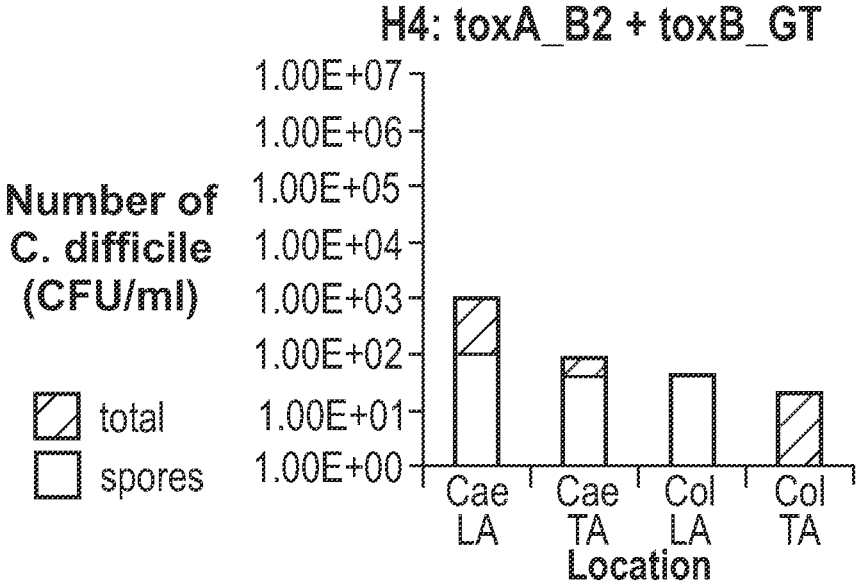

H2: toxA_B2 + toxB_GT
Number of C. difficile (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
total
spores
Cae LA
Cae TA
Col LA
Col TA
Location

FIG. 28(a)


H3: toxA_B2 + toxB_GT
Number of C. difficile (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
total
spores
Cae LA
Cae TA
Col LA
Col TA
Location


H4: toxA_B2 + toxB_GT
Number of C. difficile (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
total
spores
Cae LA
Cae TA
Col LA
Col TA
Location

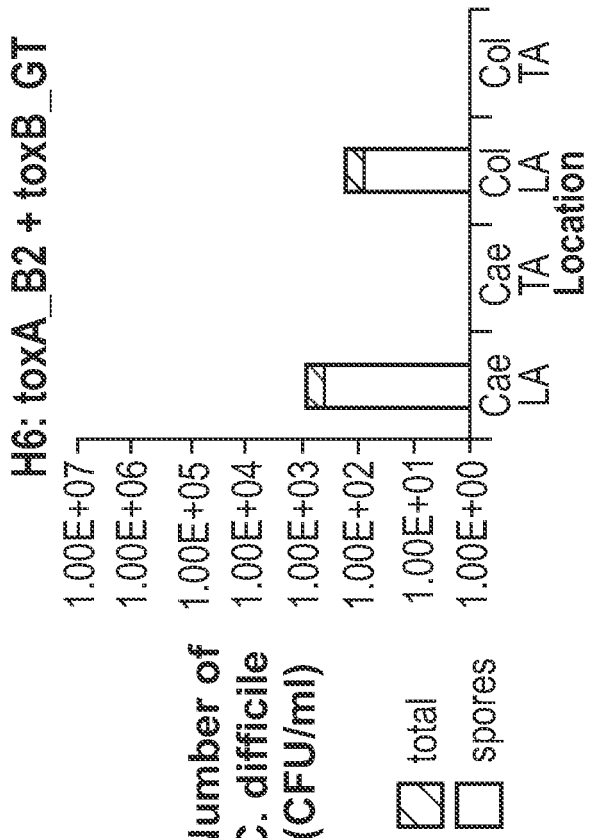


FIG. 28(a)(contd)

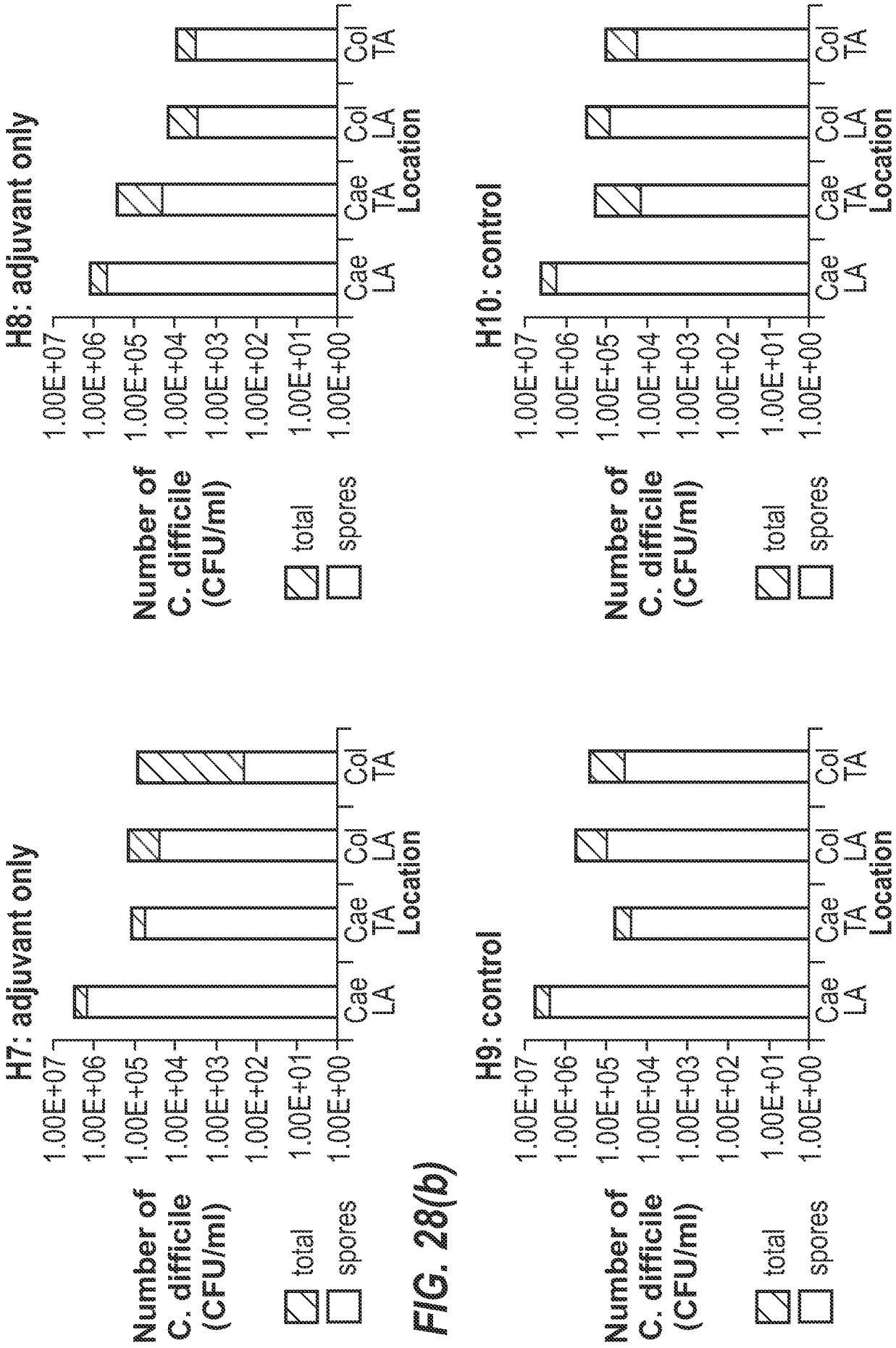

H7: adjuvant only
H8: adjuvant only
H9: control
H10: control
Number of C. difficile (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae LA
Cae TA
Col LA
Col TA
Location
total
spores

FIG. 28(b)

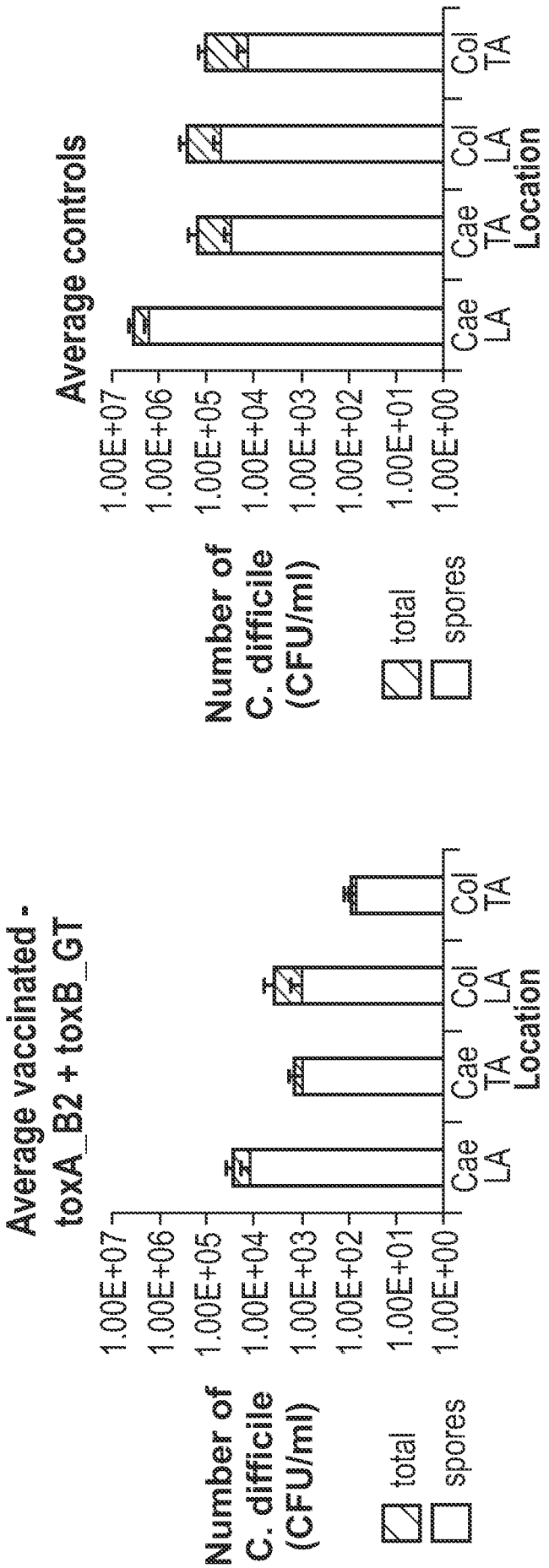


FIG. 28(b)(contd)

FIG. 29

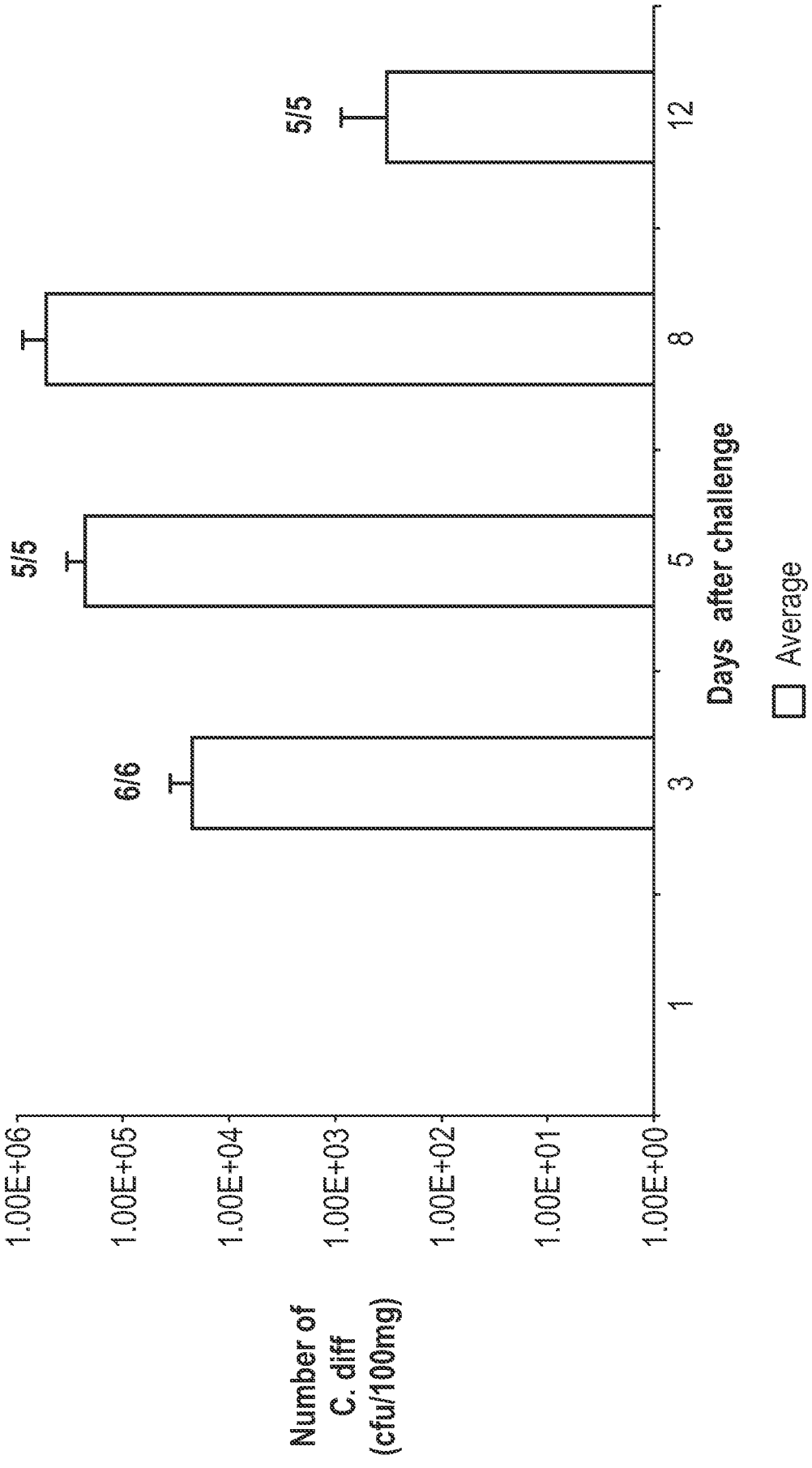

1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Number of C. diff (cfu/100mg)
1
3
5
8
12
Days after challenge
6/6
5/5
5/5
5/5
Average

FIG. 30

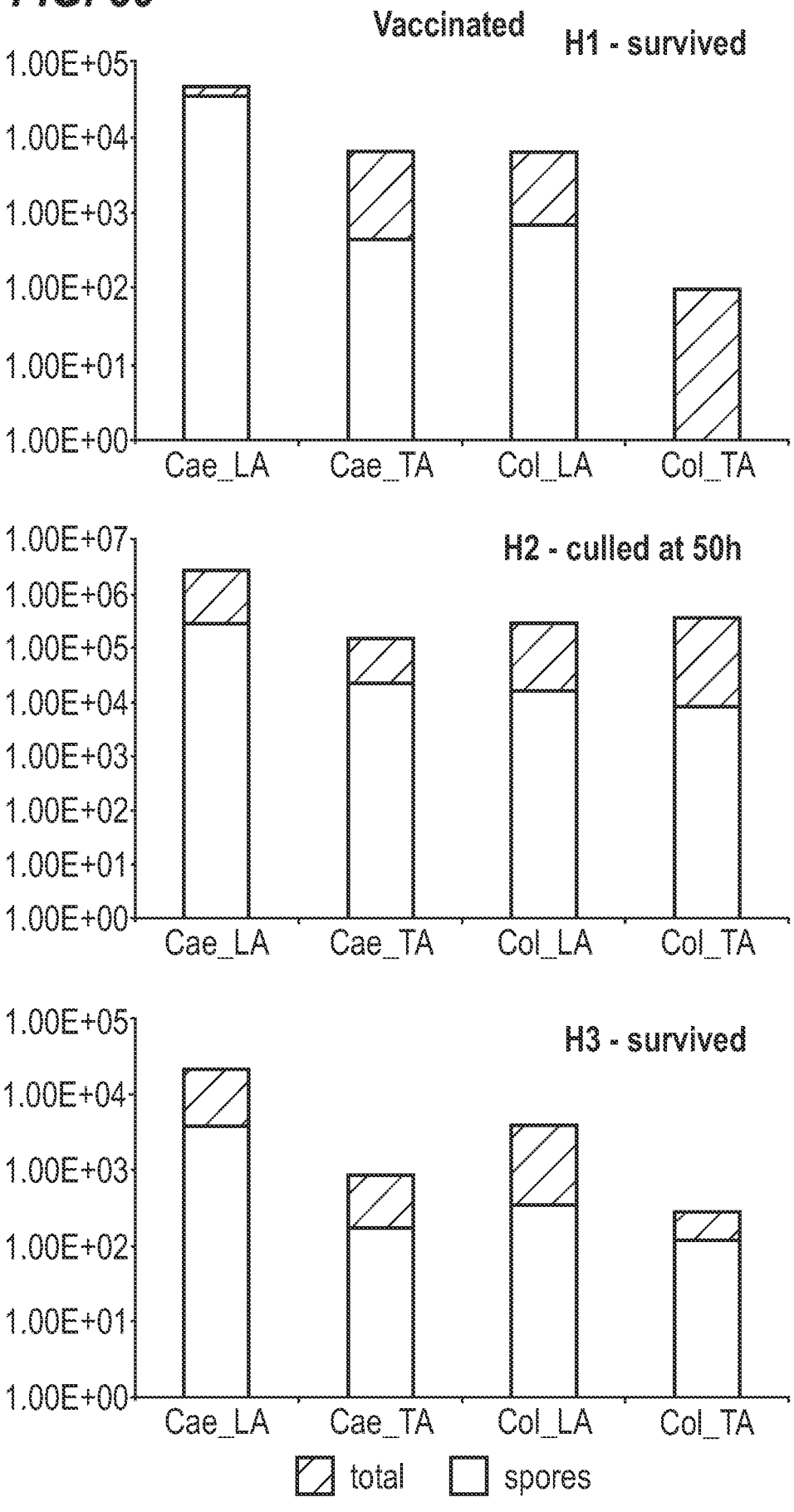

Vaccinated
H1 - survived
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae_LA
Cae_TA
Col_LA
Col_TA
H2 - culled at 50h
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae_LA
Cae_TA
Col_LA
Col_TA
H3 - survived
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae_LA
Cae_TA
Col_LA
Col_TA
total
spores

FIG. 30(contd)

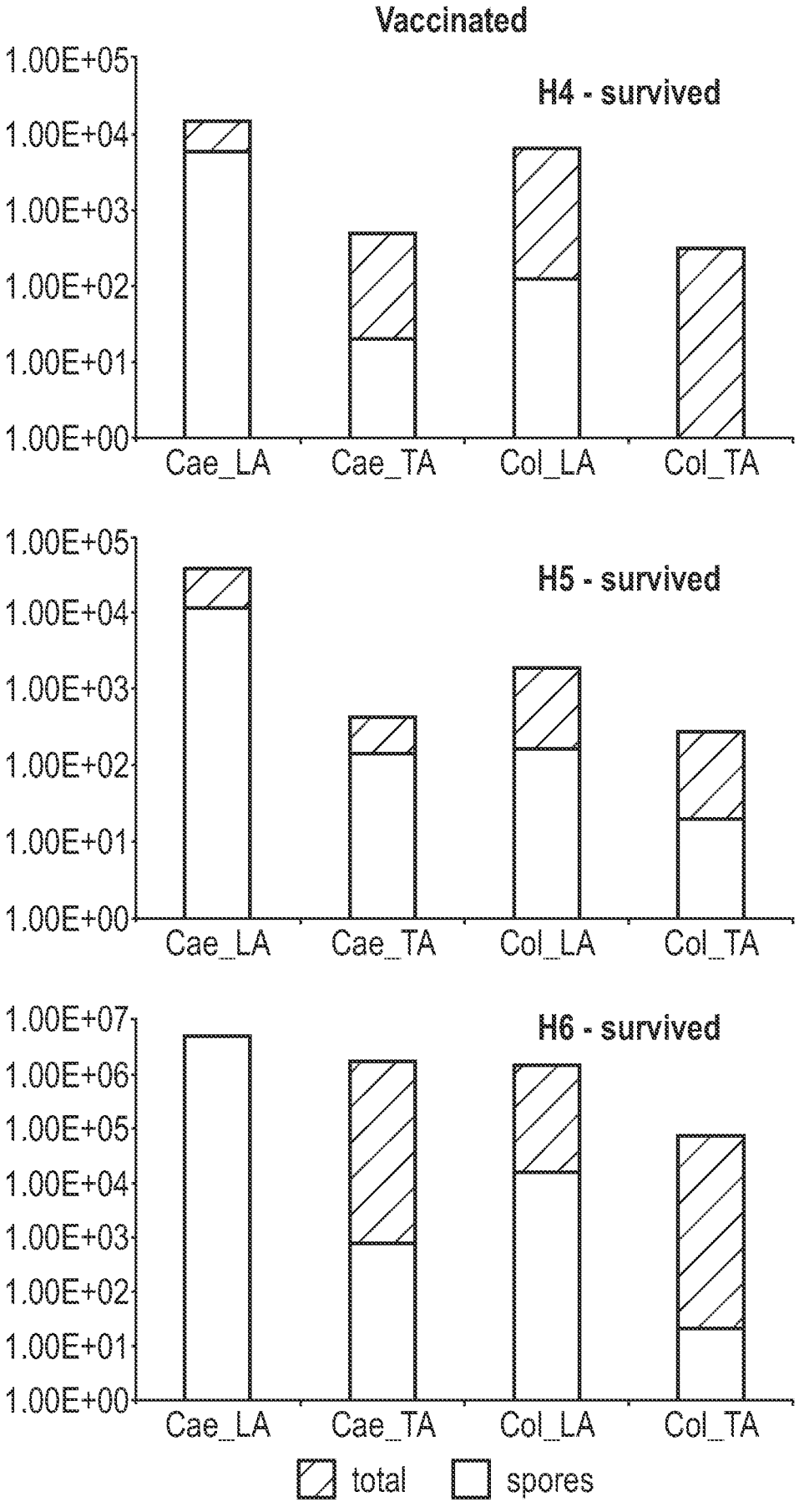

Vaccinated
H4 - survived
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae_LA
Cae_TA
Col_LA
Col_TA
H5 - survived
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae_LA
Cae_TA
Col_LA
Col_TA
H6 - survived
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae_LA
Cae_TA
Col_LA
Col_TA
total
spores

FIG. 30(contd)

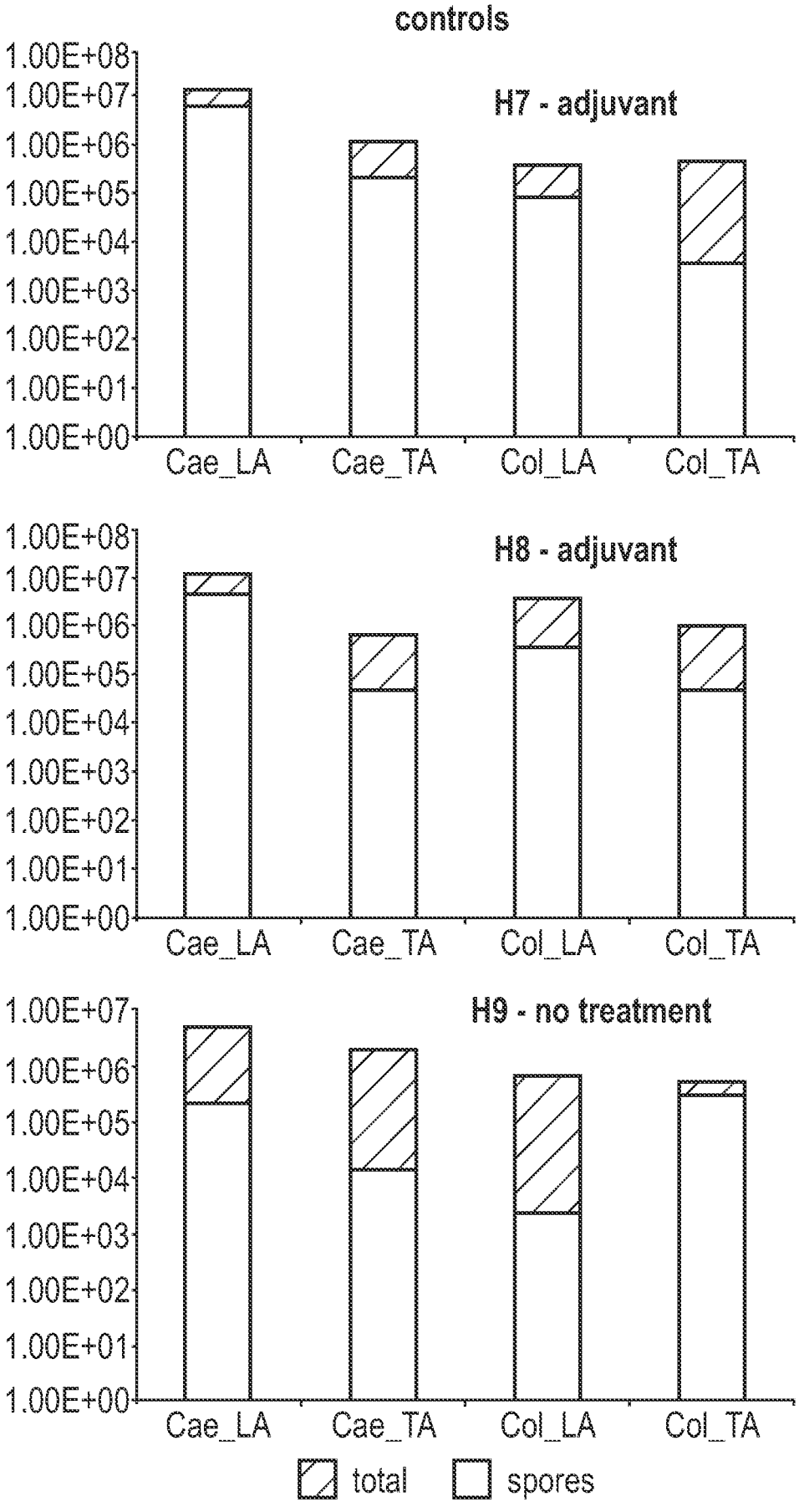

controls
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
H7 - adjuvant
Cae_LA
Cae_TA
Col_LA
Col_TA
H8 - adjuvant
H9 - no treatment
total
spores

FIG. 31

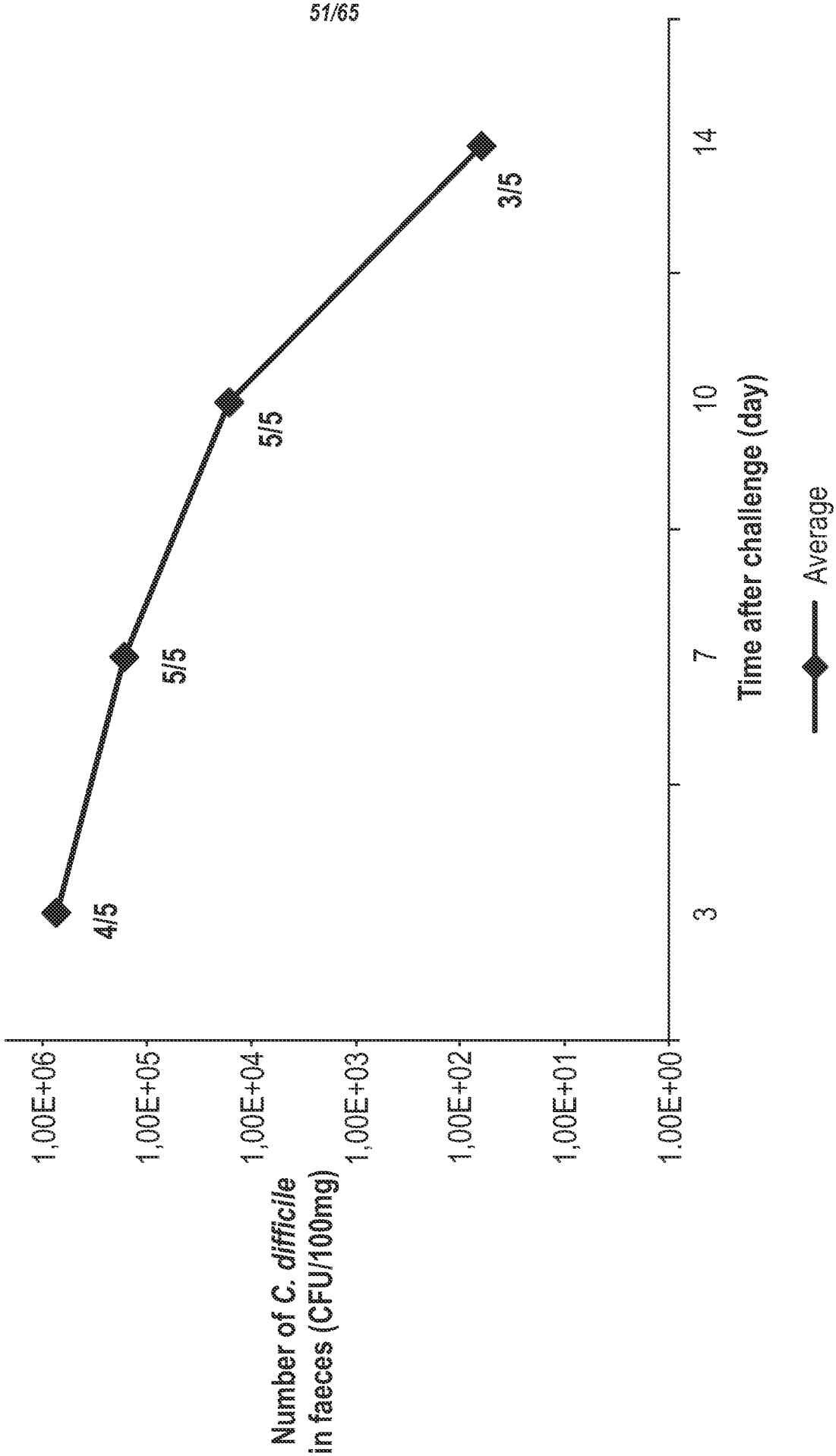

4/5
5/5
5/5
3/5
1,00E+06
1,00E+05
1,00E+04
1,00E+03
1,00E+02
1,00E+01
1,00E+00
Number of C. difficile in faeces (CFU/100mg)
3
7
10
14
Time after challenge (day)
Average

FIG. 32

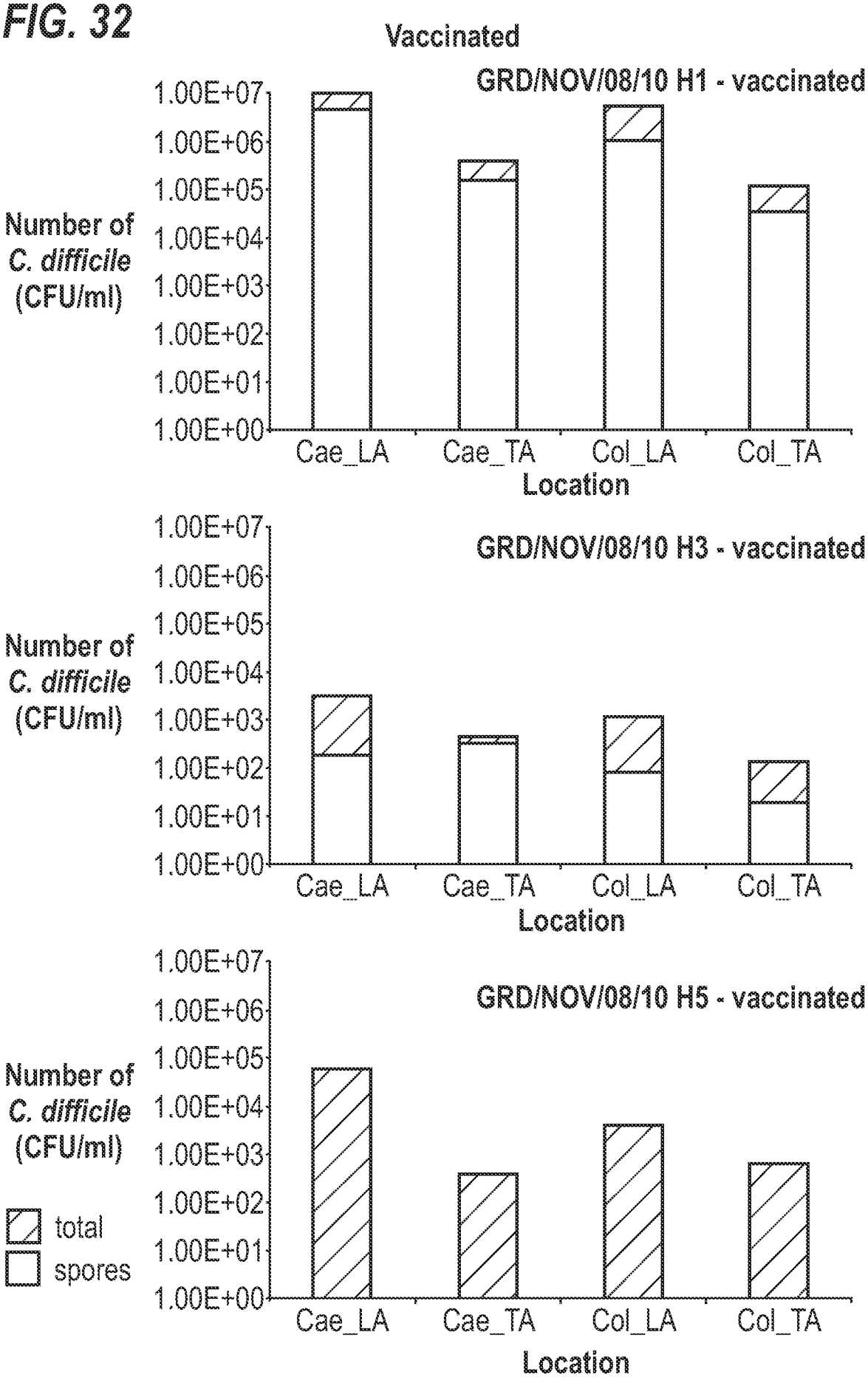

Vaccinated
GRD/NOV/08/10 H1 - vaccinated
GRD/NOV/08/10 H3 - vaccinated
GRD/NOV/08/10 H5 - vaccinated
Number of C. difficile (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae_LA
Cae_TA
Col_LA
Col_TA
Location
total
spores

FIG. 32(contd)

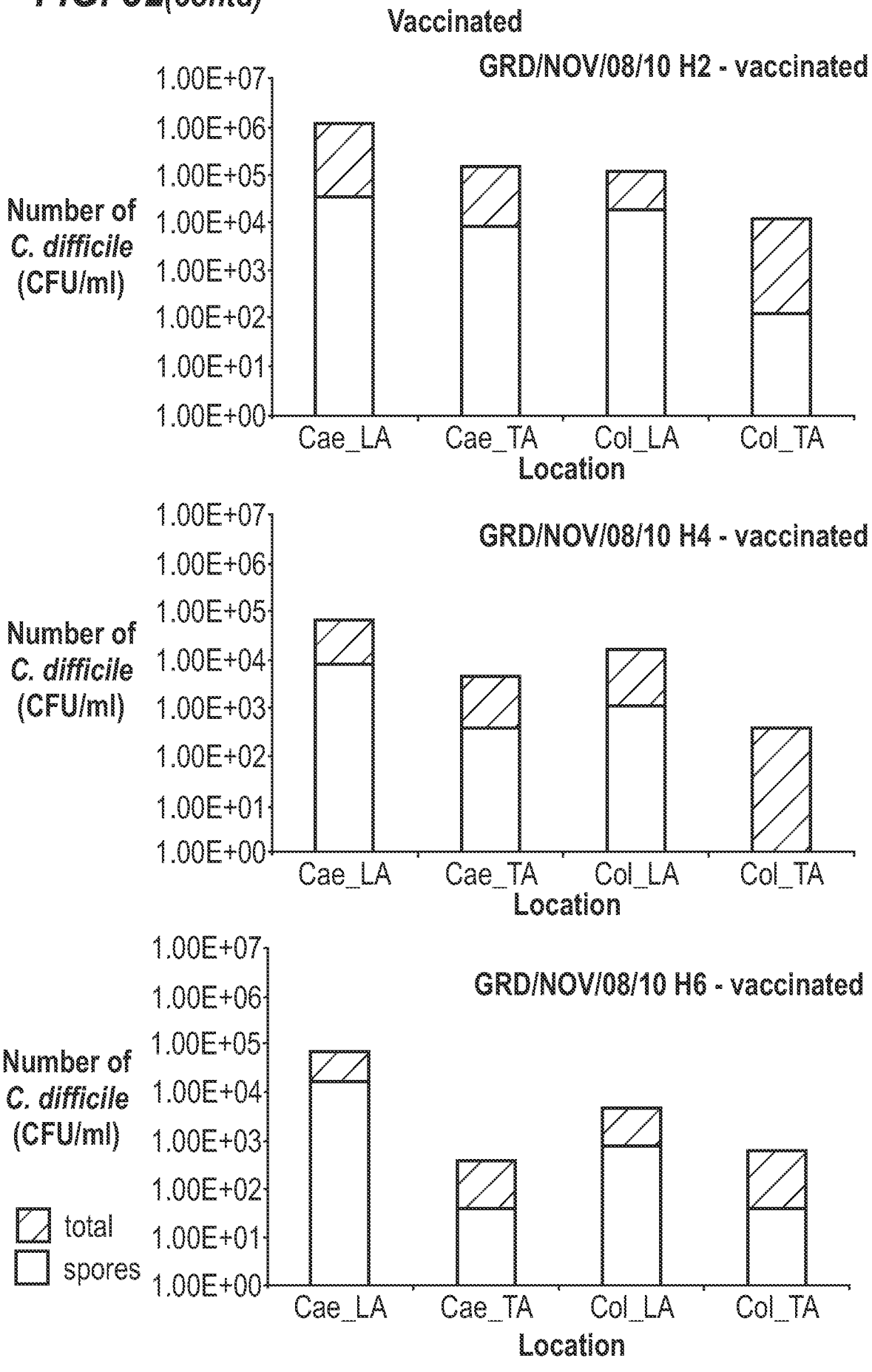

Vaccinated
GRD/NOV/08/10 H2 - vaccinated
GRD/NOV/08/10 H4 - vaccinated
GRD/NOV/08/10 H6 - vaccinated
Number of C. difficile (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae_LA
Cae_TA
Col_LA
Col_TA
Location
total
spores

FIG. 32(contd)

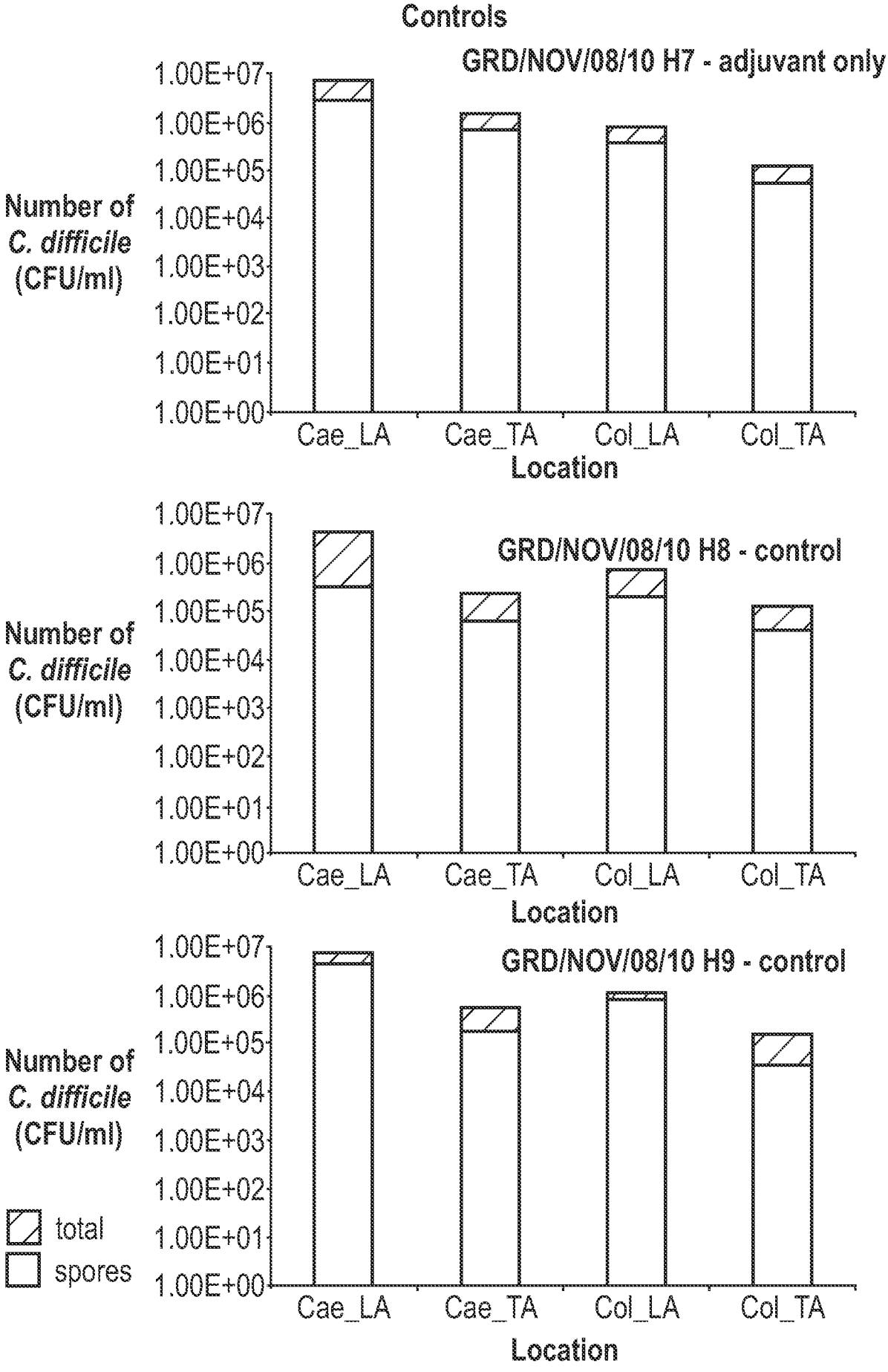

Controls
GRD/NOV/08/10 H7 - adjuvant only
Number of C. difficile (CFU/ml)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae_LA
Cae_TA
Col_LA
Col_TA
Location
GRD/NOV/08/10 H8 - control
GRD/NOV/08/10 H9 - control
total
spores

FIG. 33

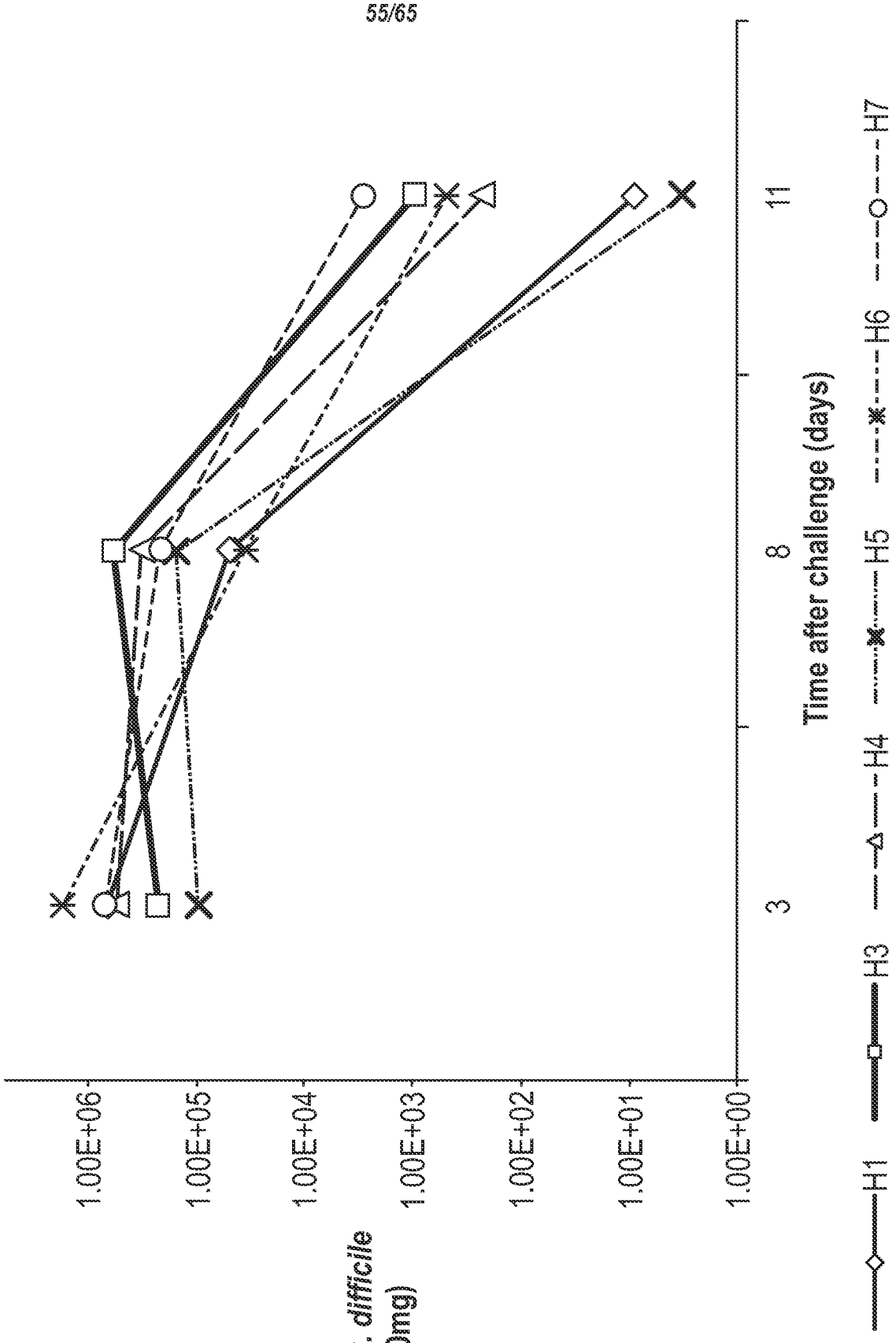

1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Number of C. difficile (CFU/100mg)
3
8
11
Time after challenge (days)
H1
H3
H4
H5
H6
H7

FIG. 34

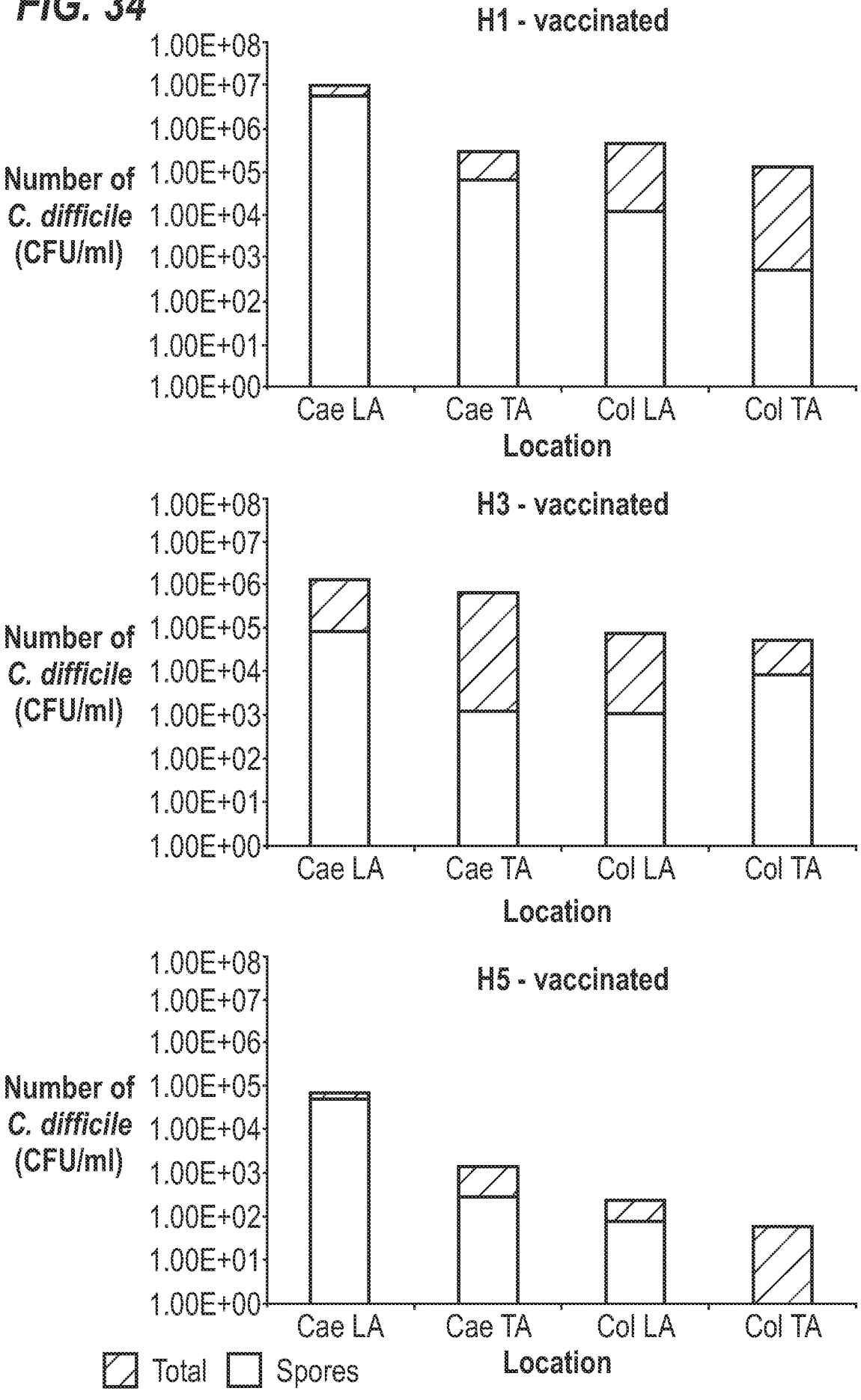
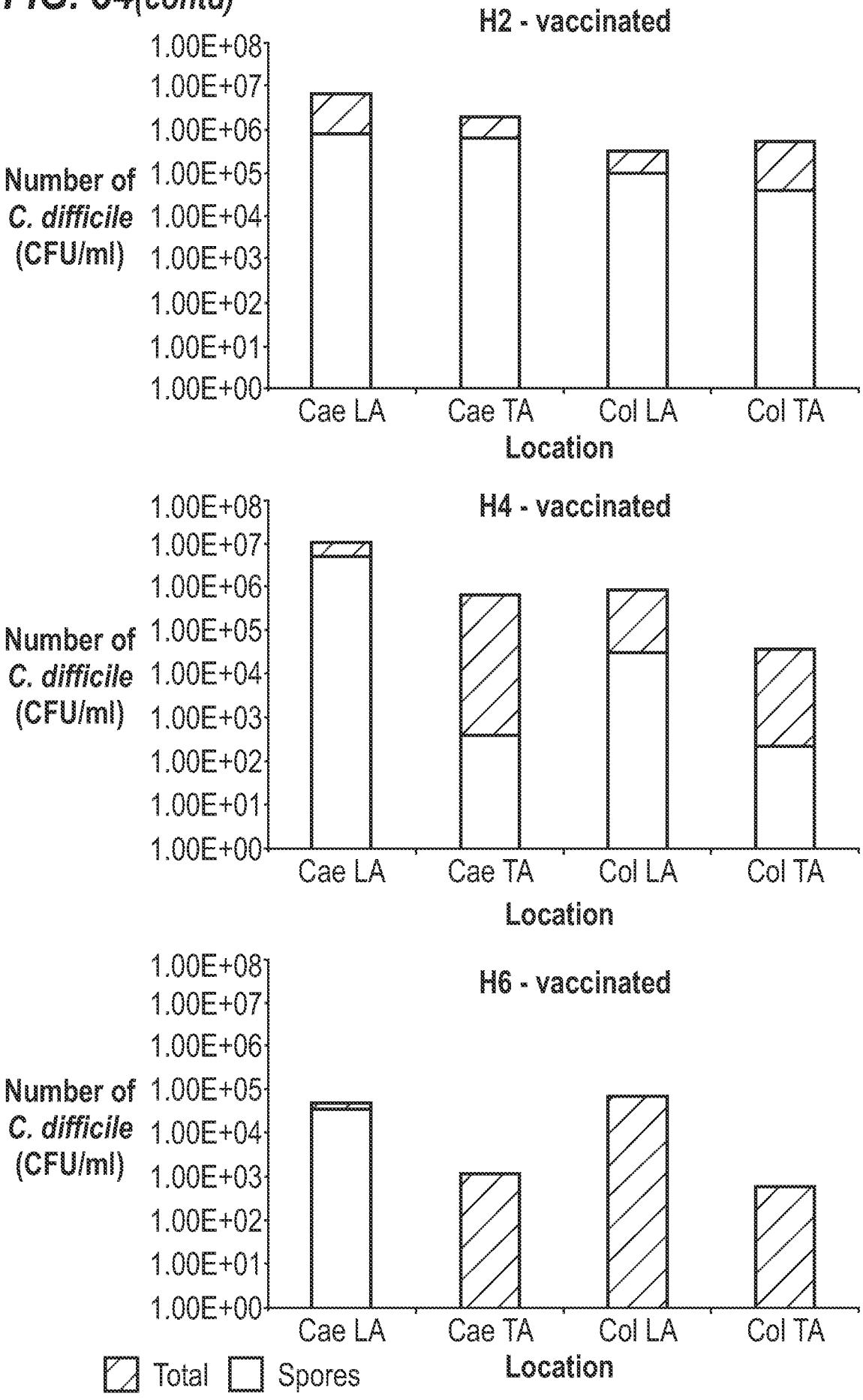

H1 - vaccinated
H3 - vaccinated
H5 - vaccinated
Number of C. difficile (CFU/ml)
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae LA
Cae TA
Col LA
Col TA
Location
Total
Spores

FIG. 34(contd)


H2 - vaccinated
Number of C. difficile (CFU/ml)
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae LA
Cae TA
Col LA
Col TA
Location
H4 - vaccinated
Number of C. difficile (CFU/ml)
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae LA
Cae TA
Col LA
Col TA
Location
H6 - vaccinated
Number of C. difficile (CFU/ml)
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae LA
Cae TA
Col LA
Col TA
Location
Total
Spores

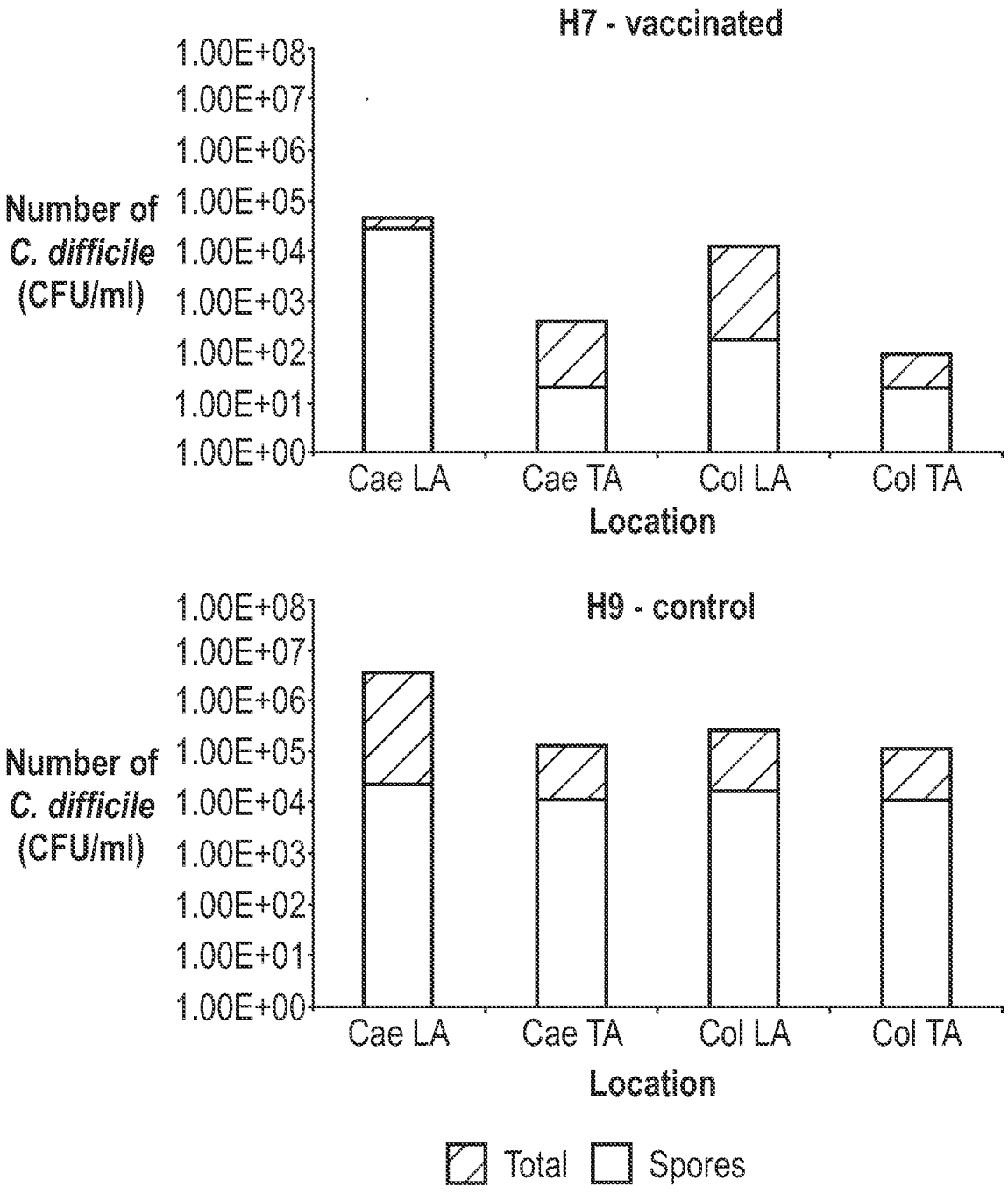

H7 - vaccinated
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Number of C. difficile (CFU/ml)
Cae LA
Cae TA
Col LA
Col TA
Location
H9 - control
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Number of C. difficile (CFU/ml)
Cae LA
Cae TA
Col LA
Col TA
Location
Total
Spores

FIG. 34(contd)

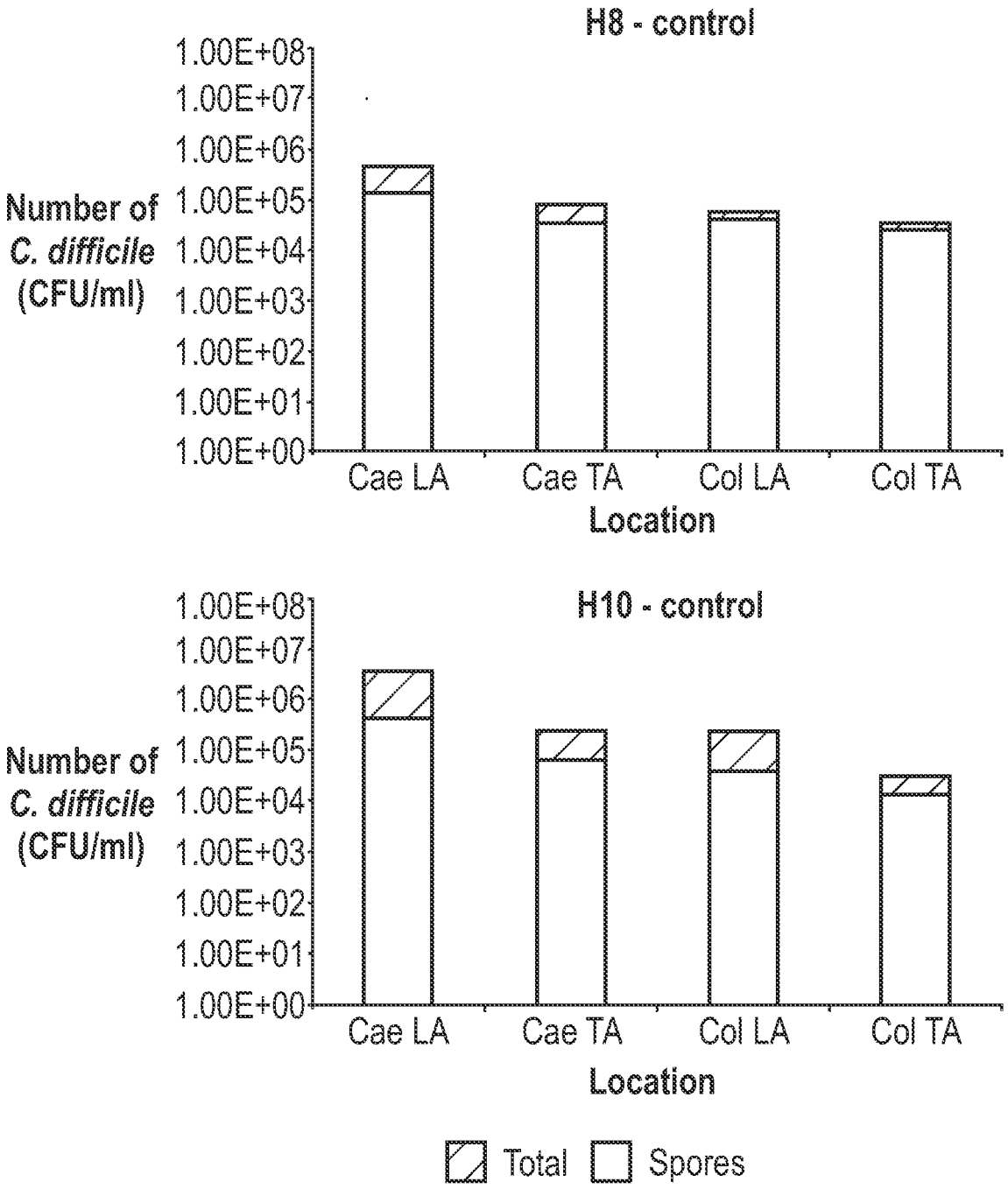

H8 - control
Number of C. difficile (CFU/ml)
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae LA
Cae TA
Col LA
Col TA
Location
H10 - control
Number of C. difficile (CFU/ml)
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Cae LA
Cae TA
Col LA
Col TA
Location
Total
Spores

FIG. 34(contd)

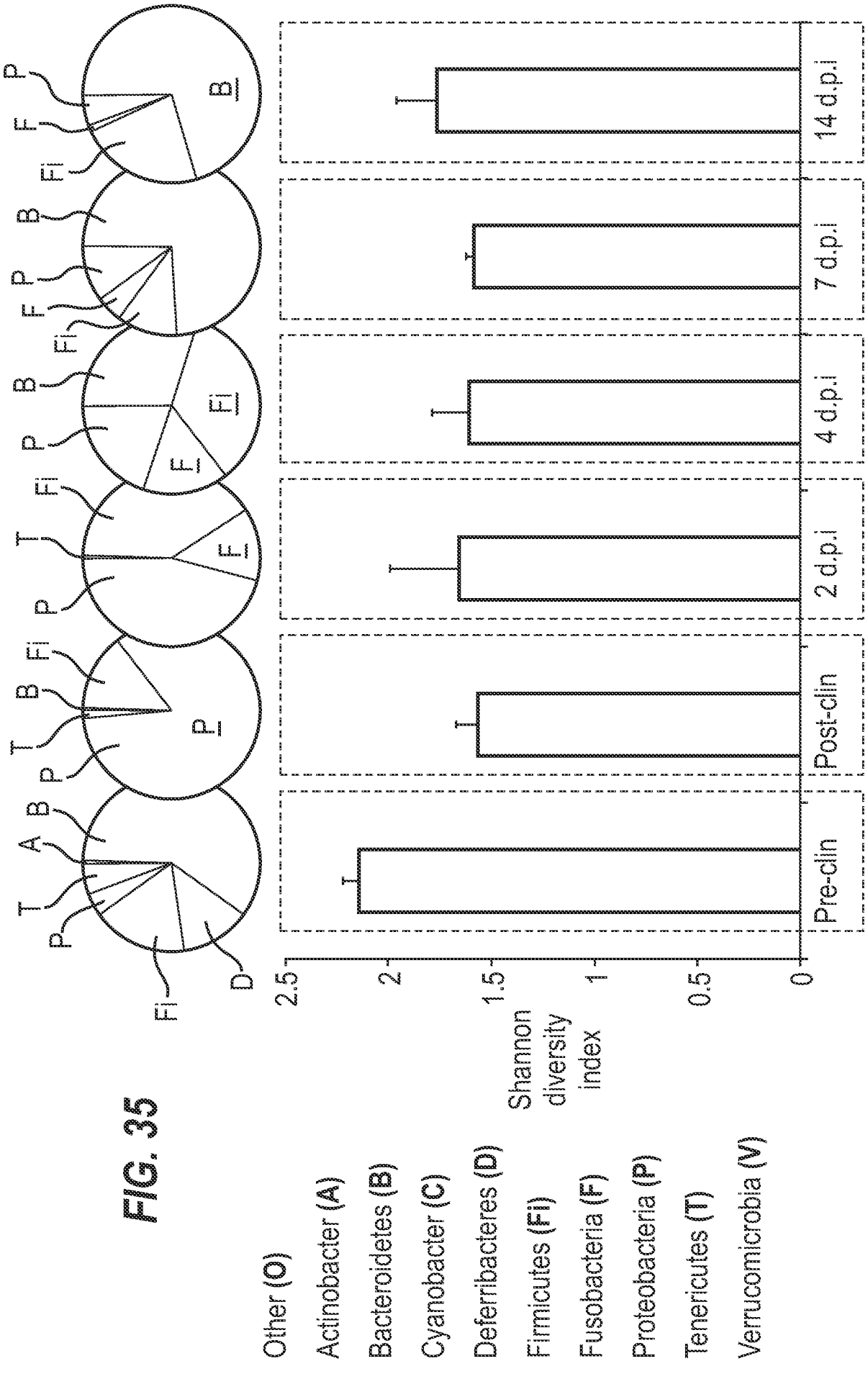

Other (O)
Actinobacter (A)
Bacteroidetes (B)
Cyanobacter (C)
Deferribacteres (D)
Firmicutes (Fi)
Fusobacteria (F)
Proteobacteria (P)
Tenericutes (T)
Verrucomicrobia (V)
Shannon diversity index
2.5
2
1.5
1
0.5
0
Pre-clin
Post-clin
2 d.p.i
4 d.p.i
7 d.p.i
14 d.p.i

FIG. 35

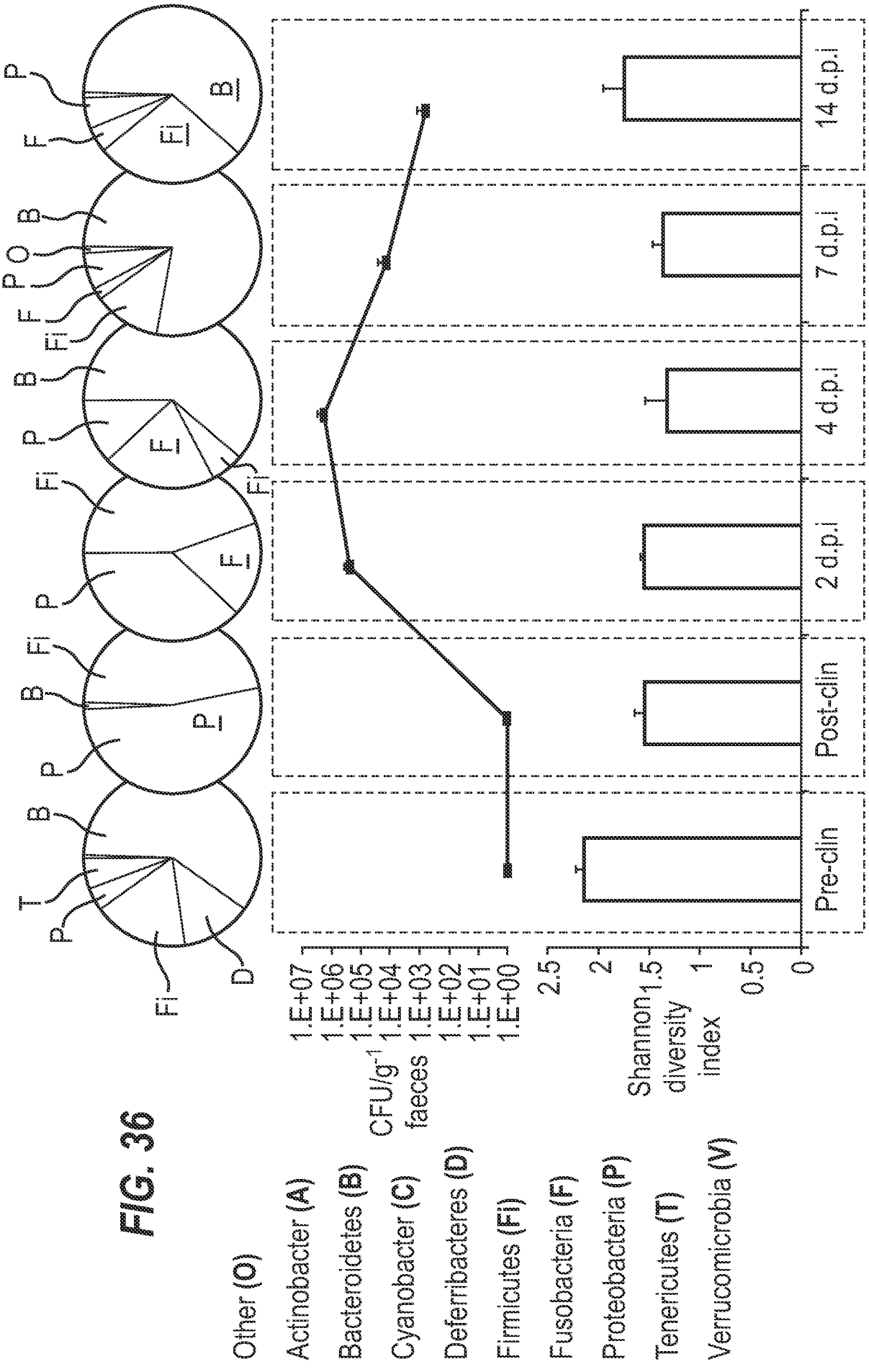

Other (O)
Actinobacter (A)
Bacteroidetes (B)
Cyanobacter (C)
Deferribacteres (D)
Firmicutes (Fi)
Fusobacteria (F)
Proteobacteria (P)
Tenericutes (T)
Verrucomicrobia (V)
CFU/g-1 faeces
1.E+07
1.E+06
1.E+05
1.E+04
1.E+03
1.E+02
1.E+01
1.E+00
Shannon diversity index
2.5
2
1.5
1
0.5
0
Pre-clin
Post-clin
2 d.p.i
4 d.p.i
7 d.p.i
14 d.p.i

FIG. 36

FIG. 37

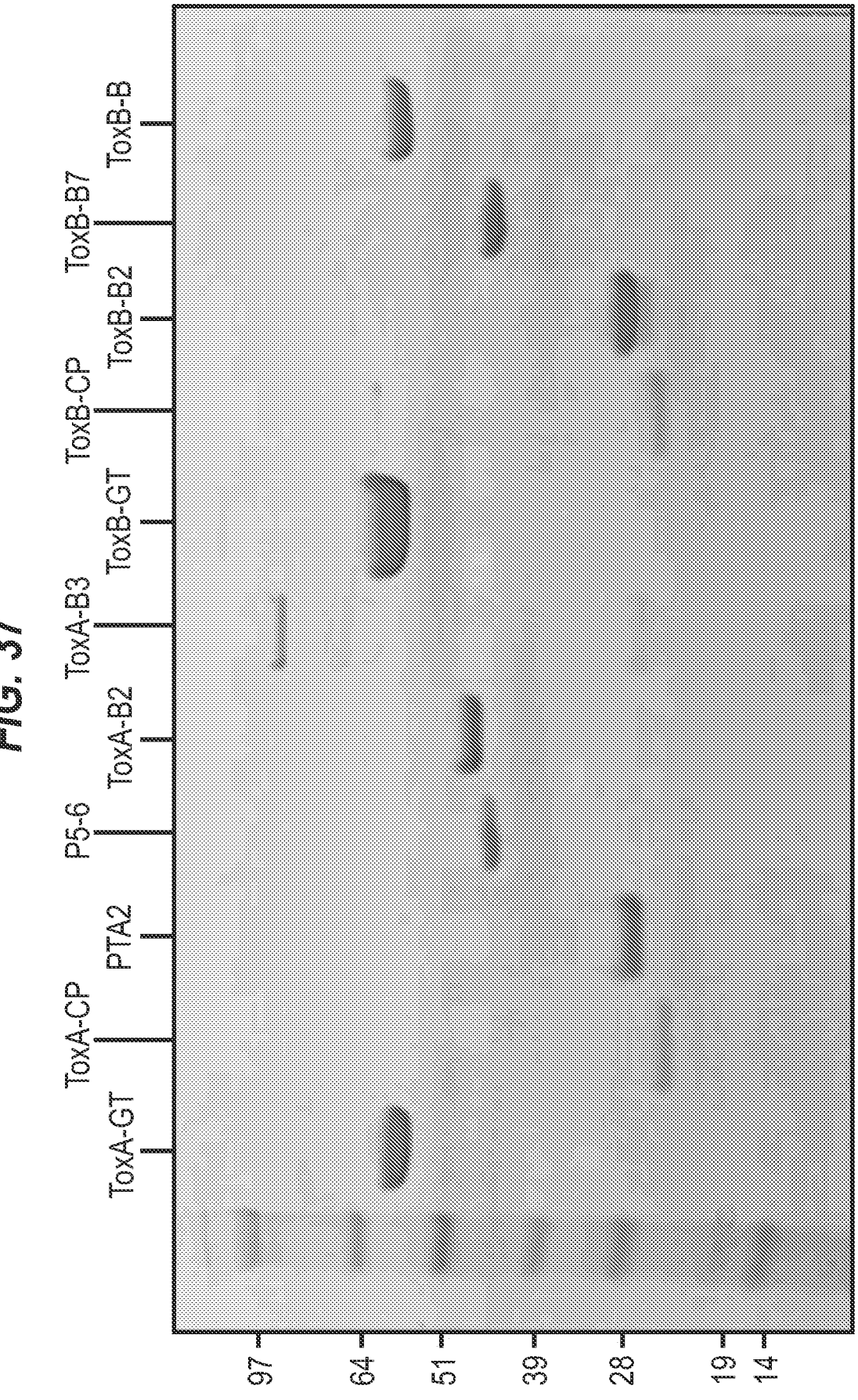

ToxA-GT
ToxA-CP
PTA2
P5-6
ToxA-B2
ToxA-B3
ToxB-GT
ToxB-CP
ToxB-B2
ToxB-B7
ToxB-B
97
64
51
39
28
19
14

FIG. 38(A)

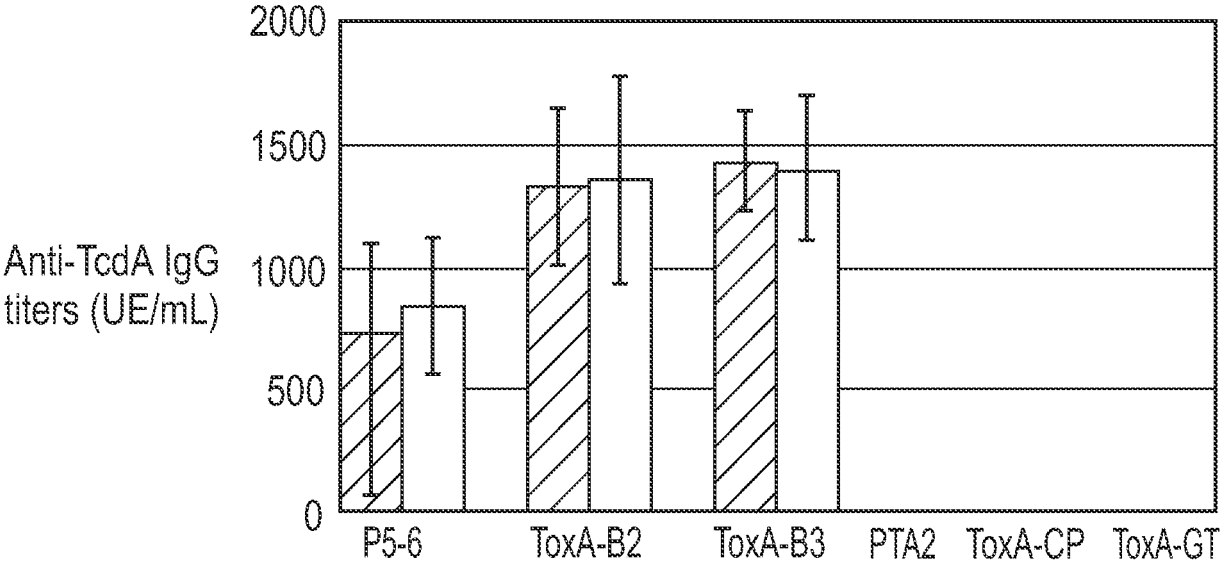


FIG. 38(A)

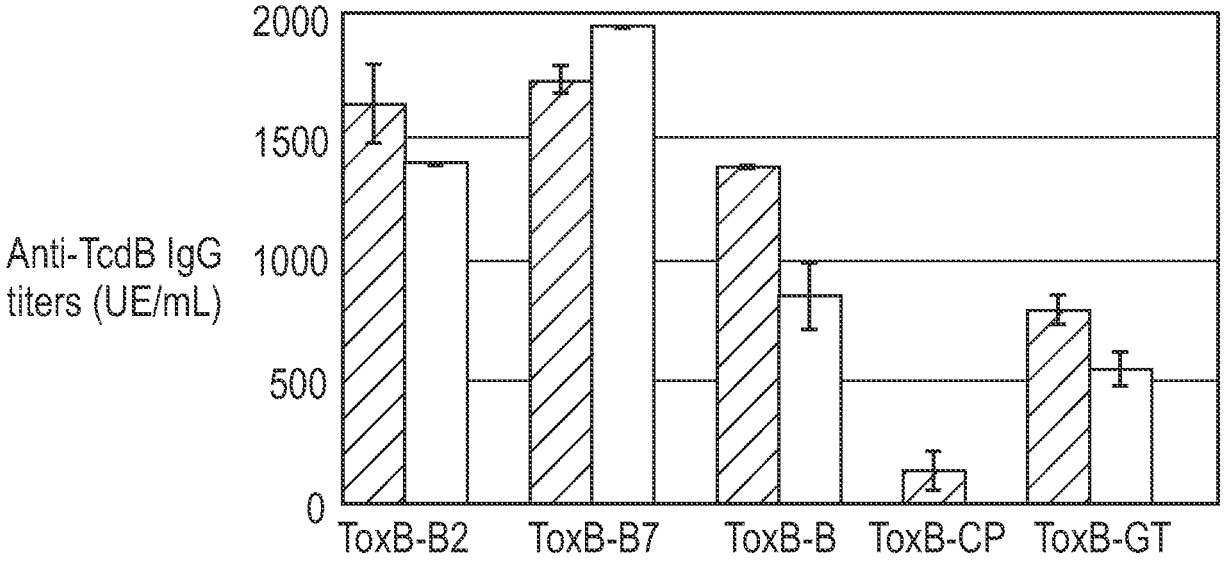


FIG. 39

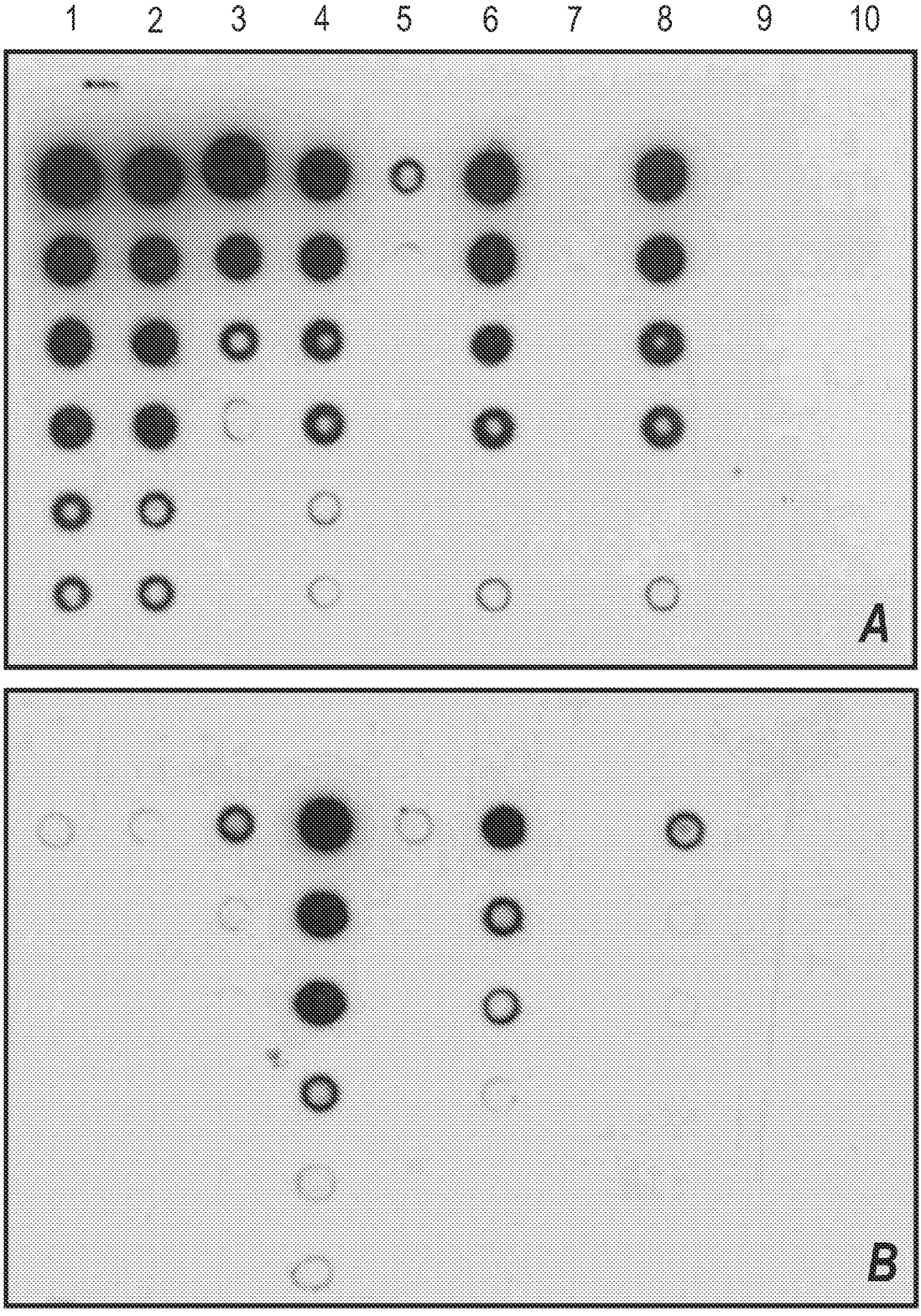
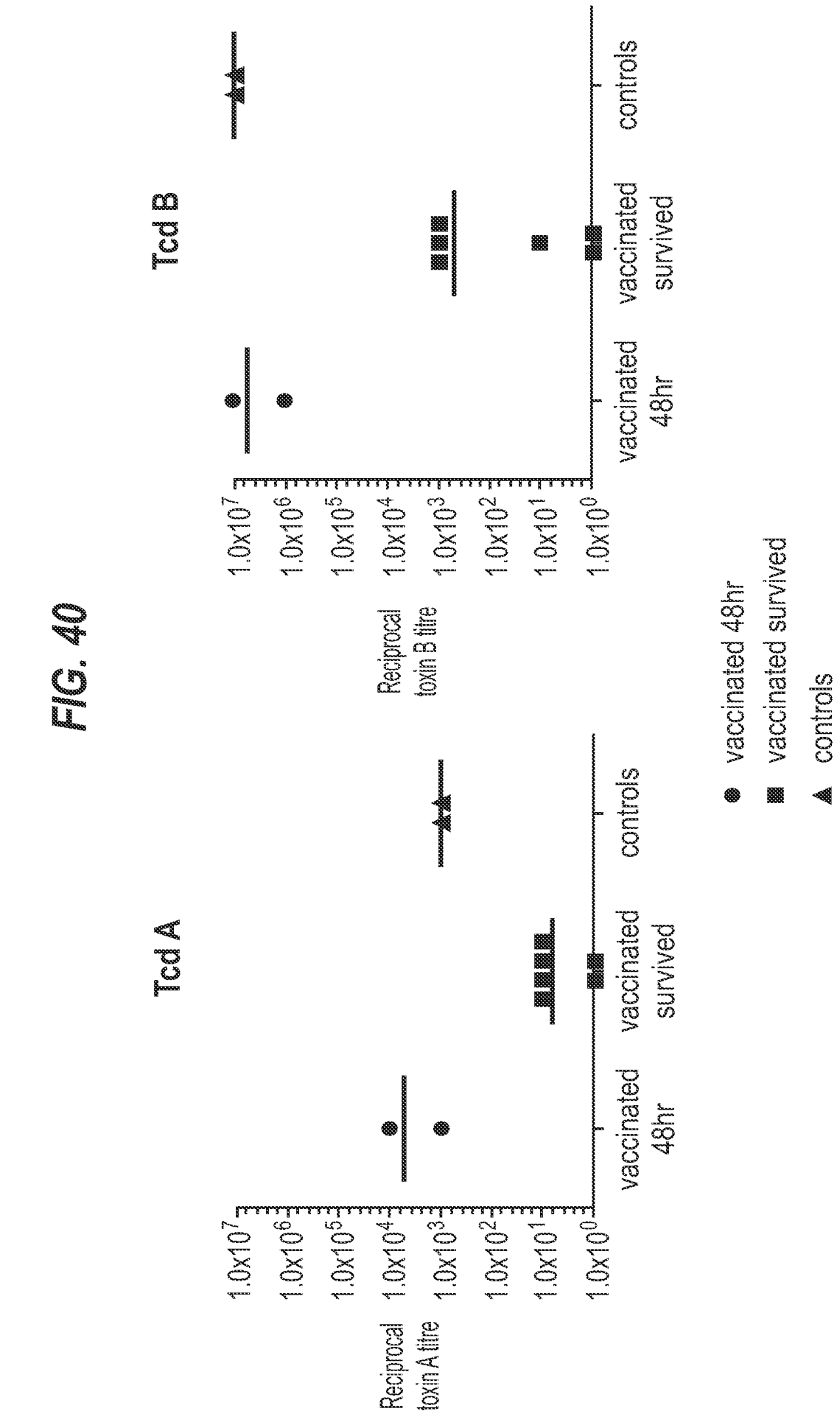


FIG. 40


Tcd A
Tcd B
Reciprocal toxin A titre
Reciprocal toxin B titre
1.0x10^7
1.0x10^6
1.0x10^5
1.0x10^4
1.0x10^3
1.0x10^2
1.0x10^1
1.0x10^0
vaccinated 48hr
vaccinated survived
controls
vaccinated 48hr
vaccinated survived
controls