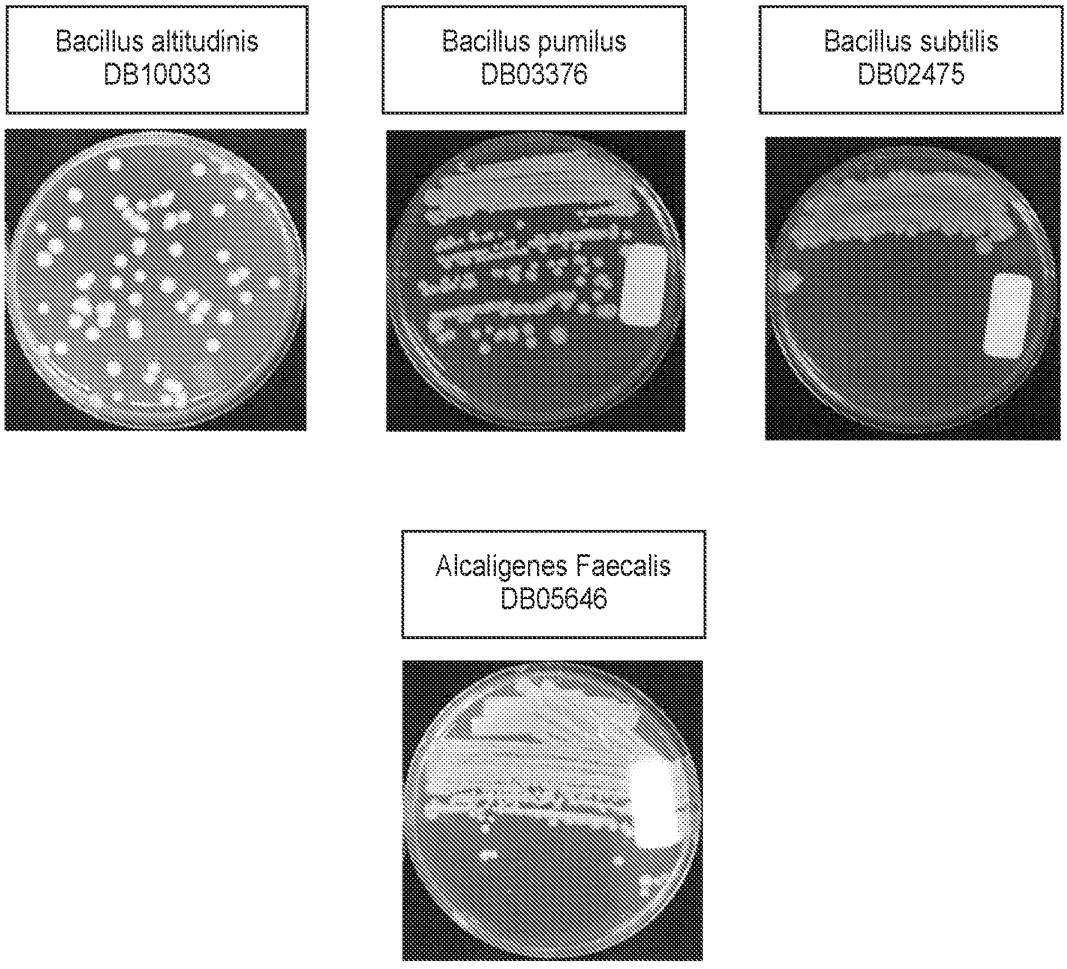
Bacillus altitudinis
DB10033
Bacillus pumilus
DB03376
Bacillus subtilis
DB02475
Alcaligenes Faecalis
DB05646

FIG. 1

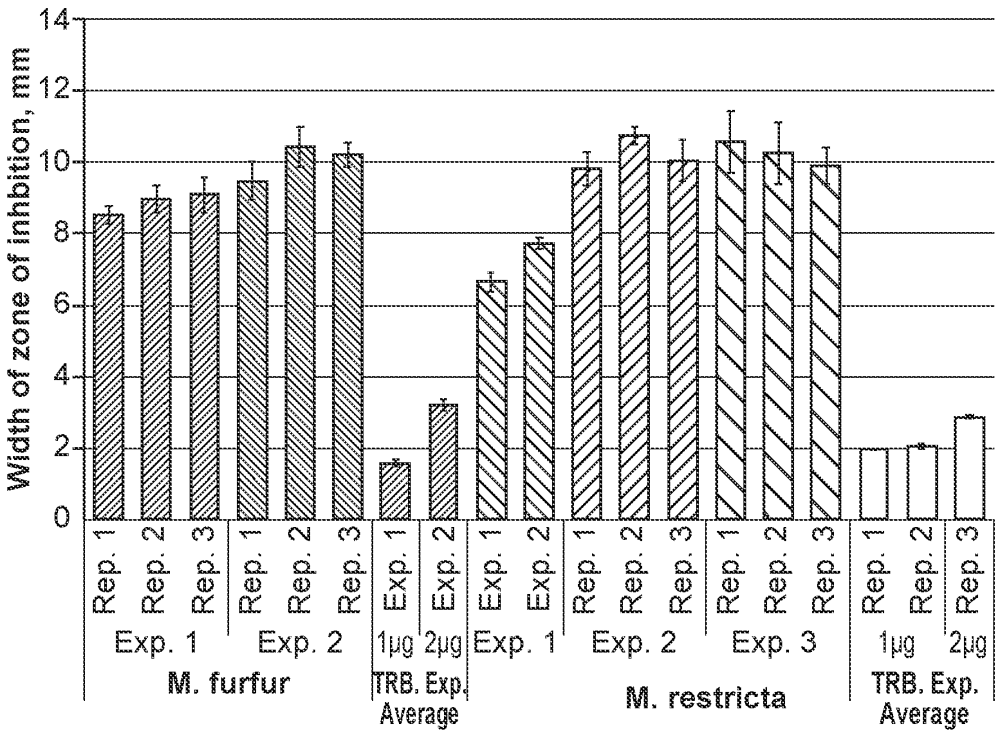
Width of zone of inhbition, mm
14
12
10
8
6
4
2
0
Rep. 1
Rep. 2
Rep. 3
Exp. 1
Exp. 2
1µg
2µg
TRB. Exp. Average
M. furfur
M. restricta

FIG. 2A

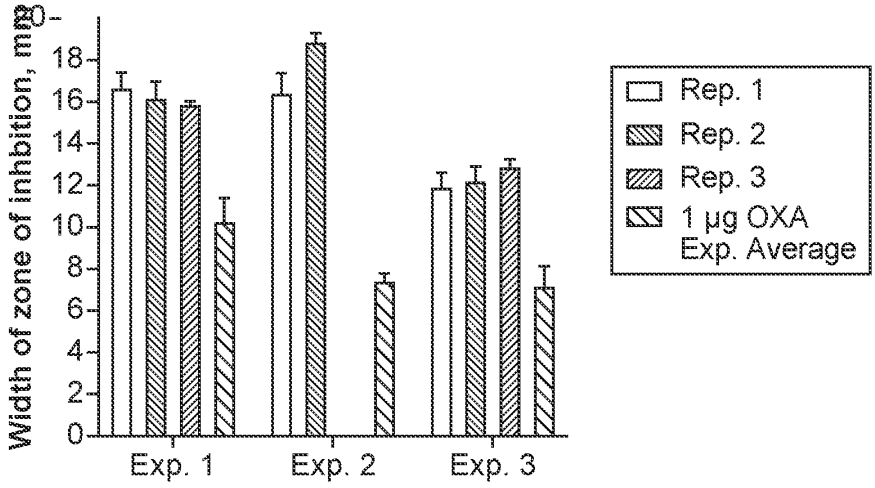
Width of zone of inhbition, mm
20
18
16
14
12
10
8
6
4
2
0
Exp. 1
Exp. 2
Exp. 3
Rep. 1
Rep. 2
Rep. 3
1 µg OXA Exp. Average

FIG. 2B

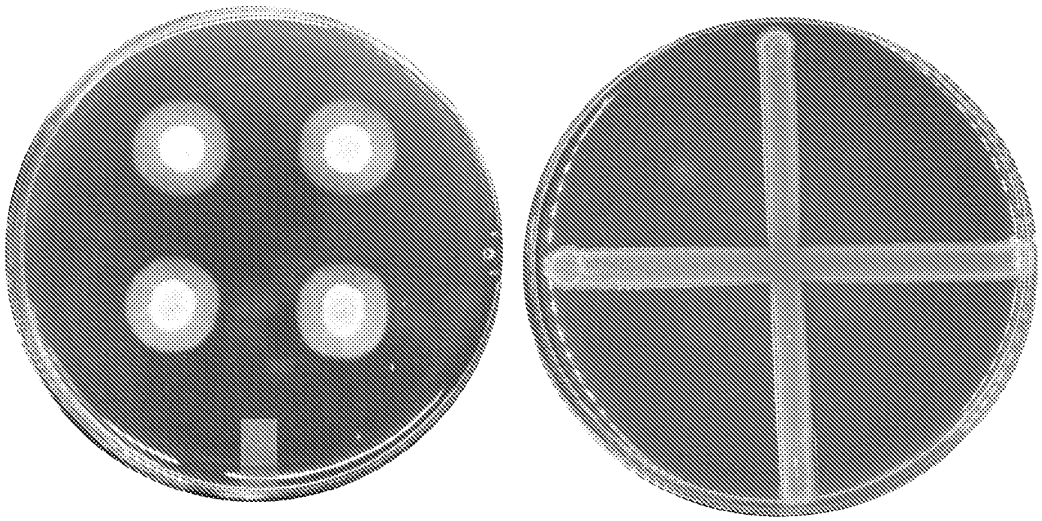

FIG. 2C

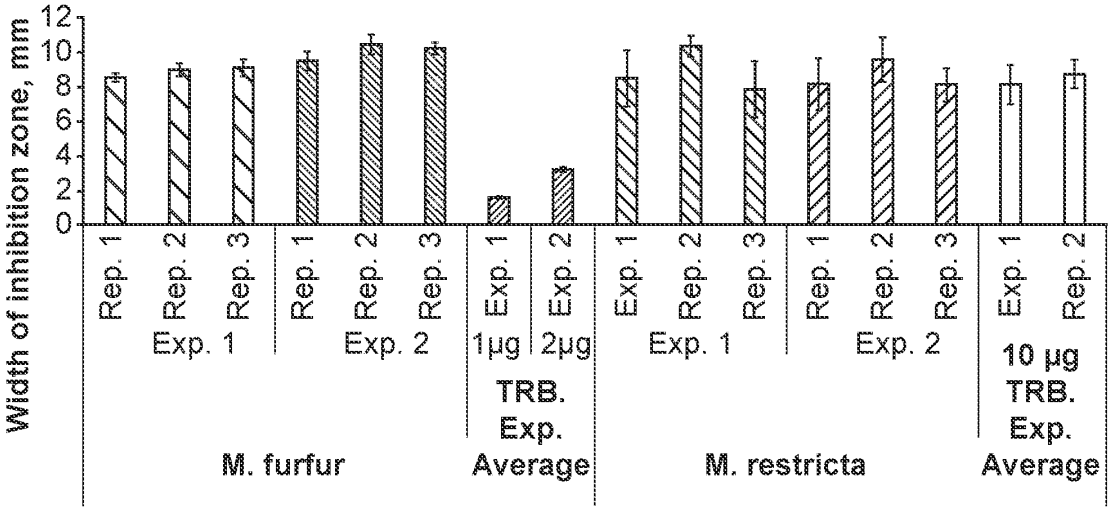
Width of inhibition zone, mm
0
2
4
6
8
10
12
Rep. 1
Rep. 2
Rep. 3
Exp. 1
Exp. 2
1µg
2µg
TRB. Exp. Average
M. furfur
10 µg TRB. Exp. Average
M. restricta

FIG. 2D

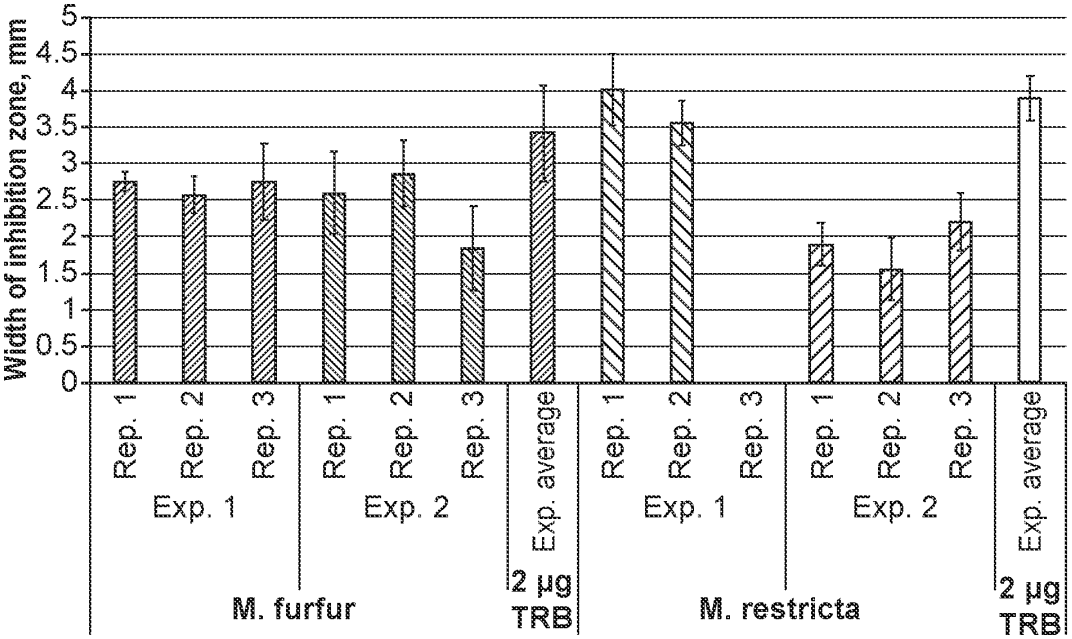
Width of inhibition zone, mm
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Rep. 1
Rep. 2
Rep. 3
Exp. 1
Exp. 2
Exp. average
2 µg TRB
M. furfur
M. restricta

FIG. 3A

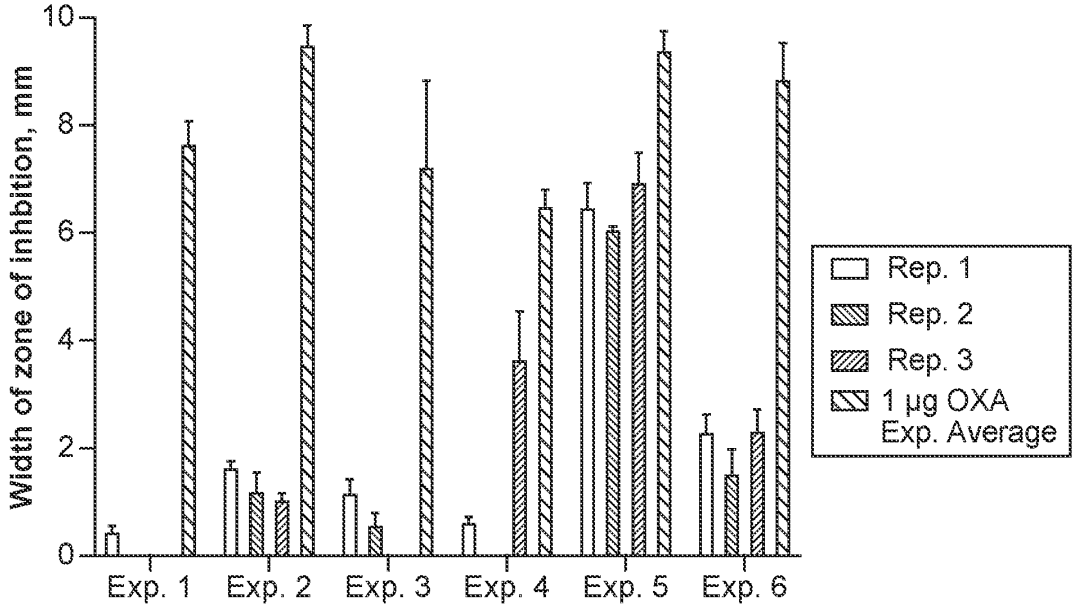
Width of zone of inhbition, mm
10
8
6
4
2
0
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Exp. 6
Rep. 1
Rep. 2
Rep. 3
1 µg OXA Exp. Average

FIG. 3B

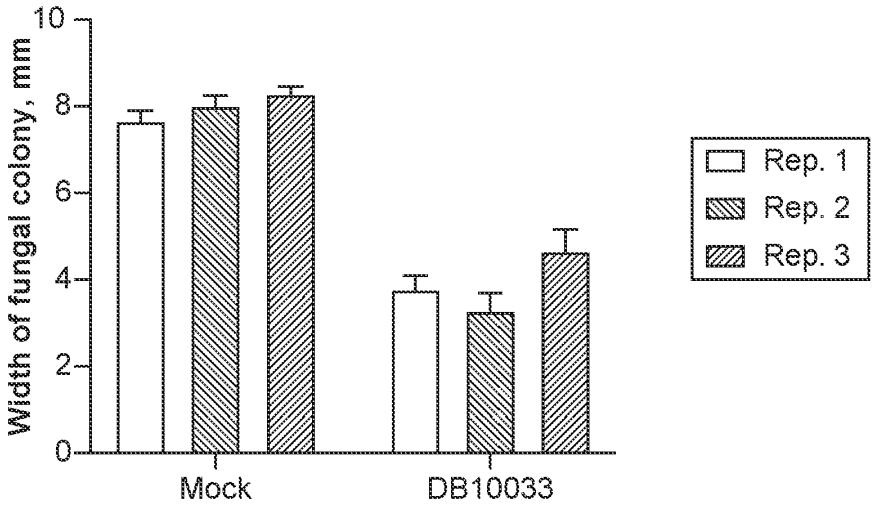
Width of fungal colony, mm
10
8
6
4
2
0
Mock
DB10033
Rep. 1
Rep. 2
Rep. 3

FIG. 3C

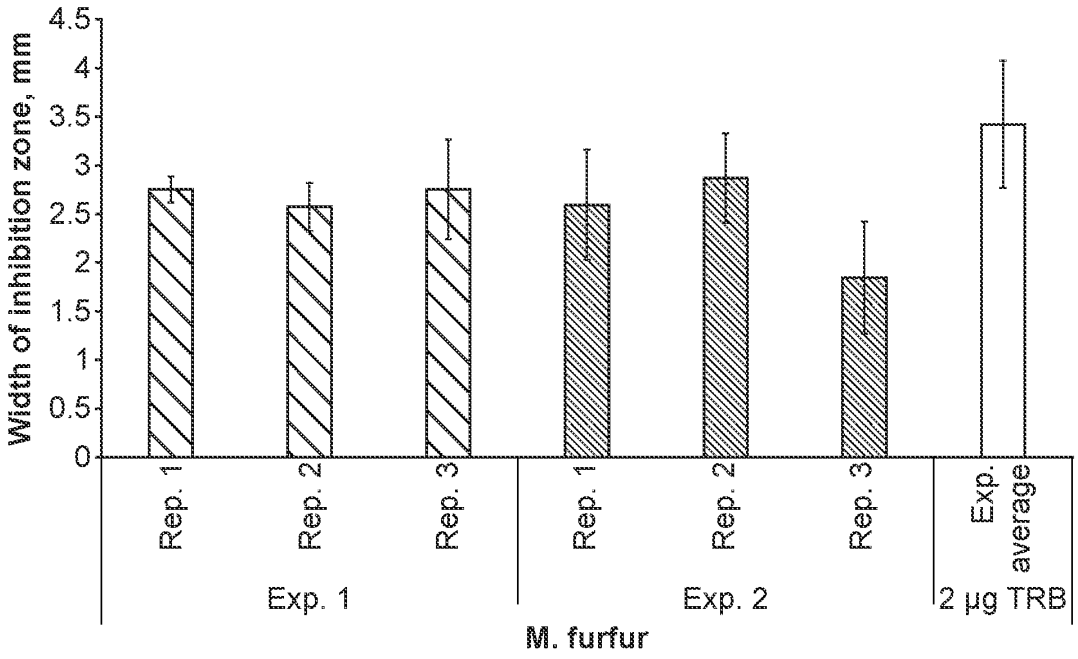
Width of inhibition zone, mm
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Rep. 1
Rep. 2
Rep. 3
Rep. 1
Rep. 2
Rep. 3
Exp. average
Exp. 1
Exp. 2
2 µg TRB
M. furfur

FIG. 3D

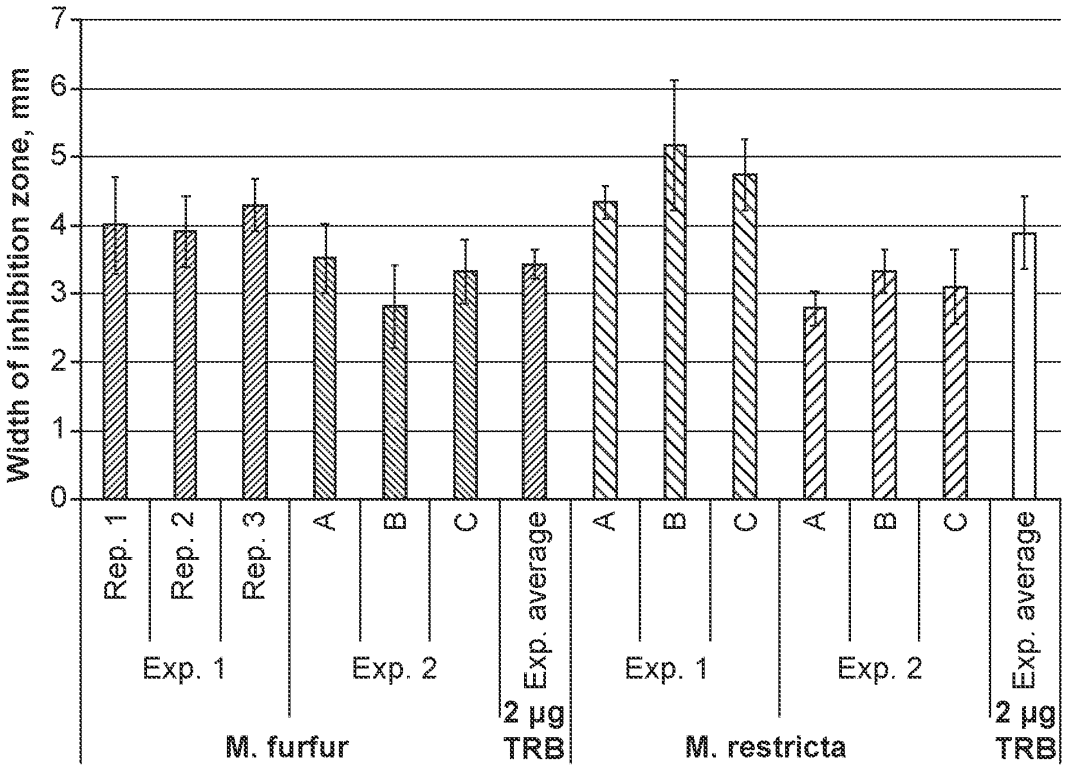
Width of inhibition zone, mm
0
1
2
3
4
5
6
7
Rep. 1
Rep. 2
Rep. 3
A
B
C
Exp. average
A
B
C
A
B
C
Exp. average
Exp. 1
Exp. 2
2 µg TRB
M. furfur
Exp. 1
Exp. 2
2 µg TRB
M. restricta

FIG. 4A

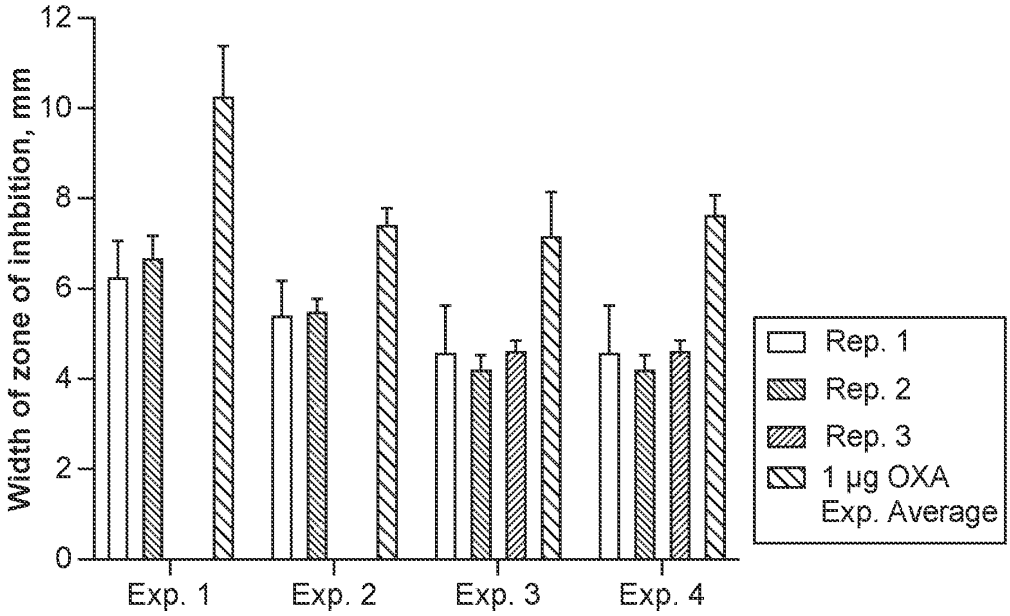
Width of zone of inhbition, mm
0
2
4
6
8
10
12
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Rep. 1
Rep. 2
Rep. 3
1 µg OXA Exp. Average

FIG. 4B

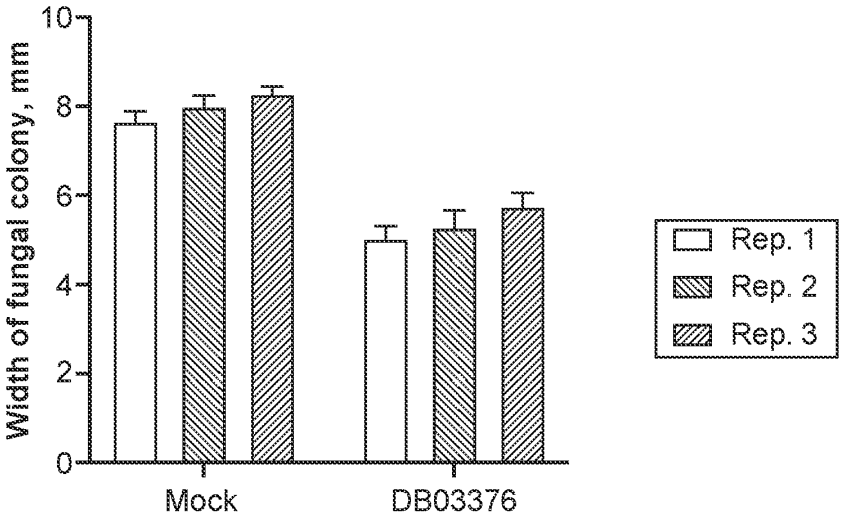
Width of fungal colony, mm
10
8
6
4
2
0
Mock
DB03376
Rep. 1
Rep. 2
Rep. 3

FIG. 4C

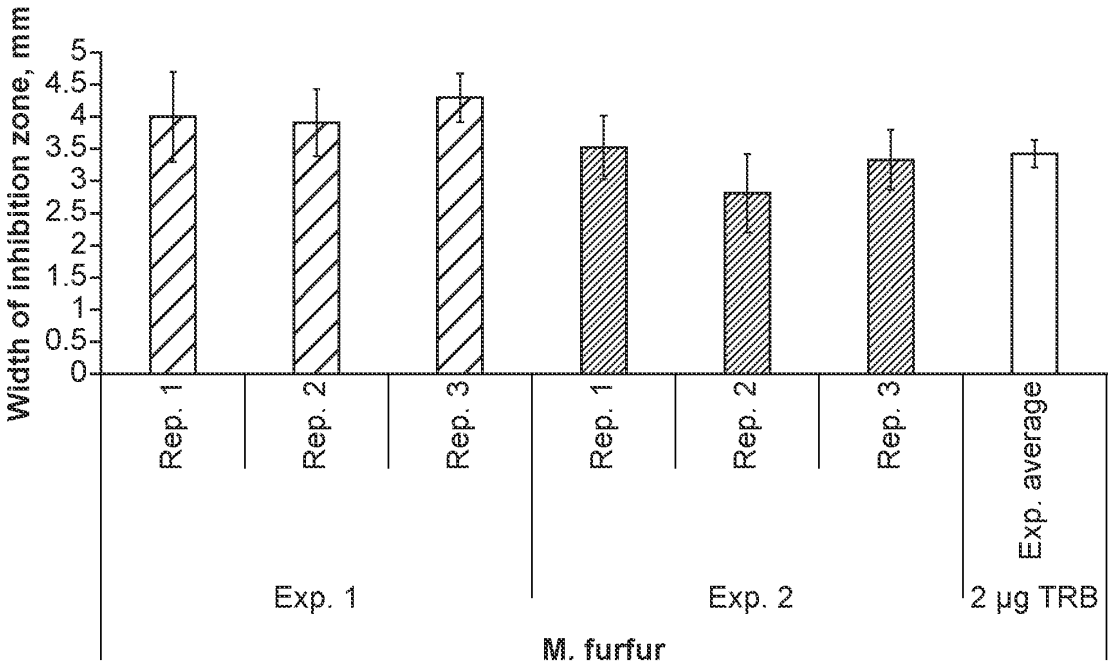
Width of inhibition zone, mm
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Rep. 1
Rep. 2
Rep. 3
Rep. 1
Rep. 2
Rep. 3
Exp. average
Exp. 1
Exp. 2
2 µg TRB
M. furfur

FIG. 4D

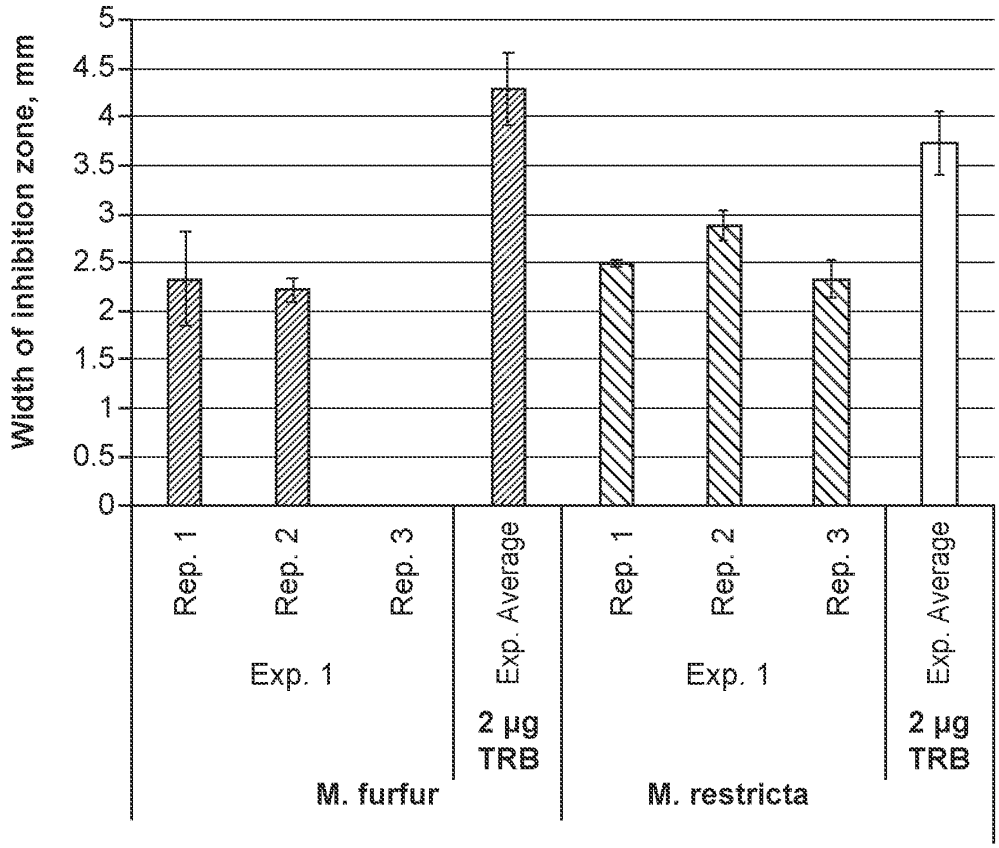
Width of inhibition zone, mm
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Rep. 1
Rep. 2
Rep. 3
Exp. Average
Exp. 1
2 µg TRB
M. furfur
Rep. 1
Rep. 2
Rep. 3
Exp. Average
Exp. 1
2 µg TRB
M. restricta

FIG. 5A

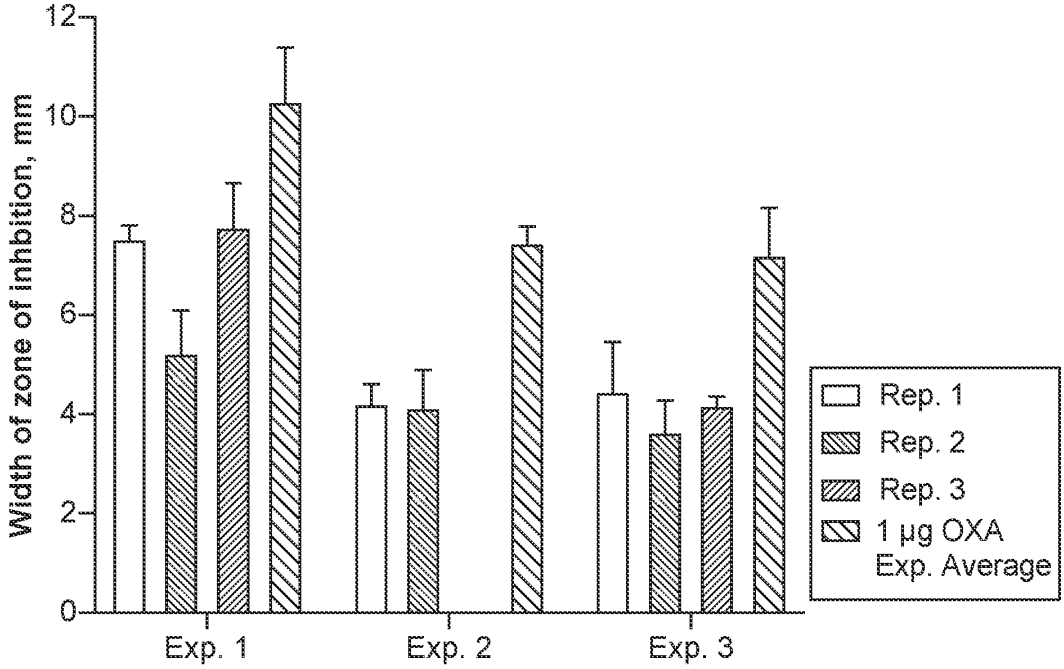
Width of zone of inhbition, mm
12
10
8
6
4
2
0
Exp. 1
Exp. 2
Exp. 3
Rep. 1
Rep. 2
Rep. 3
1 µg OXA Exp. Average

FIG. 5B

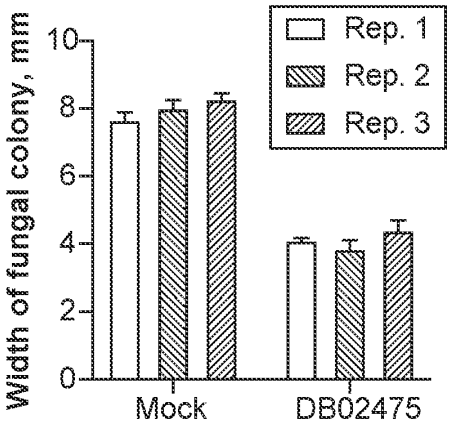
Width of fungal colony, mm
10
8
6
4
2
0
Rep. 1
Rep. 2
Rep. 3
Mock
DB02475

FIG. 5C

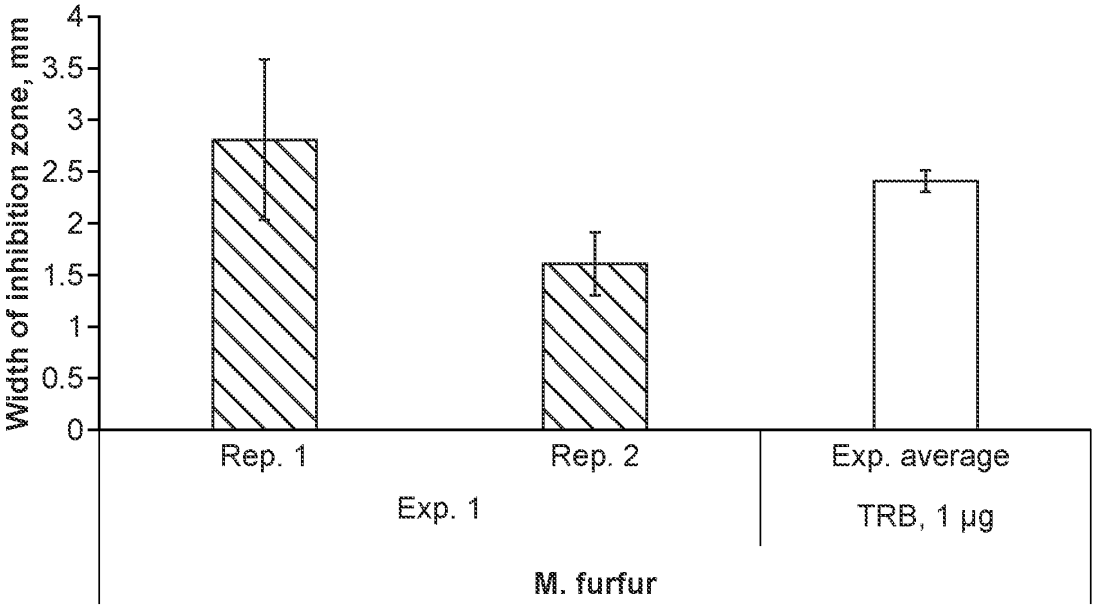
Width of inhibition zone, mm
4
3.5
3
2.5
2
1.5
1
0.5
0
Rep. 1
Rep. 2
Exp. average
Exp. 1
TRB, 1 µg
M. furfur

FIG. 5D

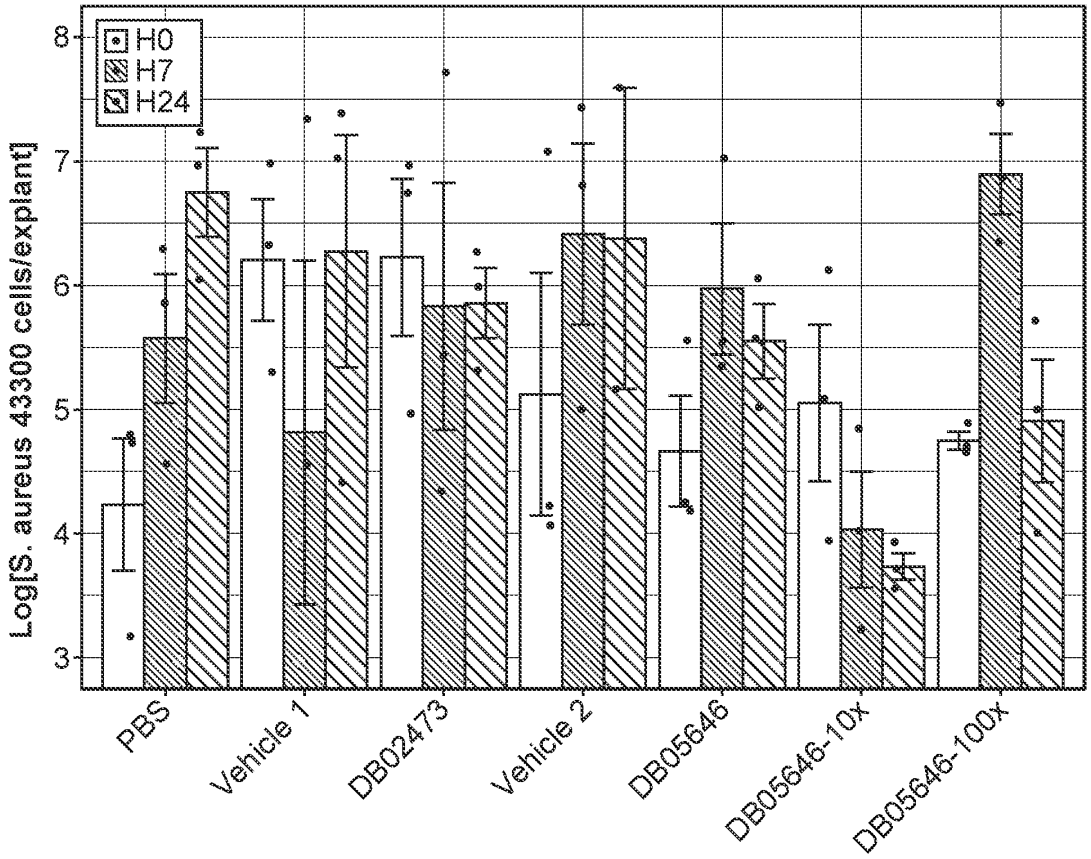
H0
H7
H24
Log[S. aureus 43300 cells/explant]
8
7
6
5
4
3
PBS
Vehicle 1
DB02473
Vehicle 2
DB05646
DB05646-10x
DB05646-100x

FIG. 6

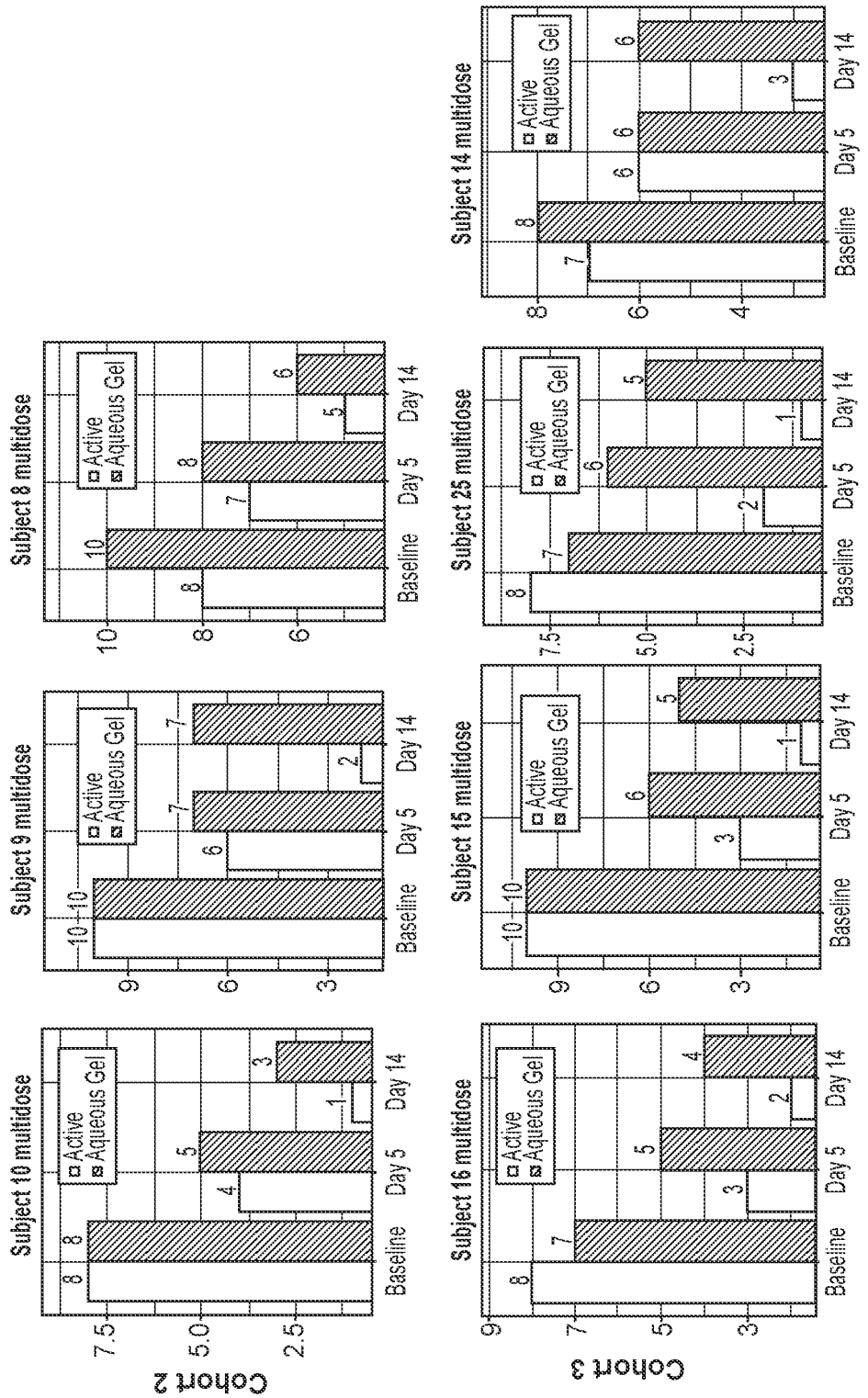
Cohort 2
Cohort 3
Subject 10 multidose
Subject 9 multidose
Subject 8 multidose
Subject 16 multidose
Subject 15 multidose
Subject 25 multidose
Subject 14 multidose
Active
Aqueous Gel
Baseline
Day 5
Day 14

FIG. 7

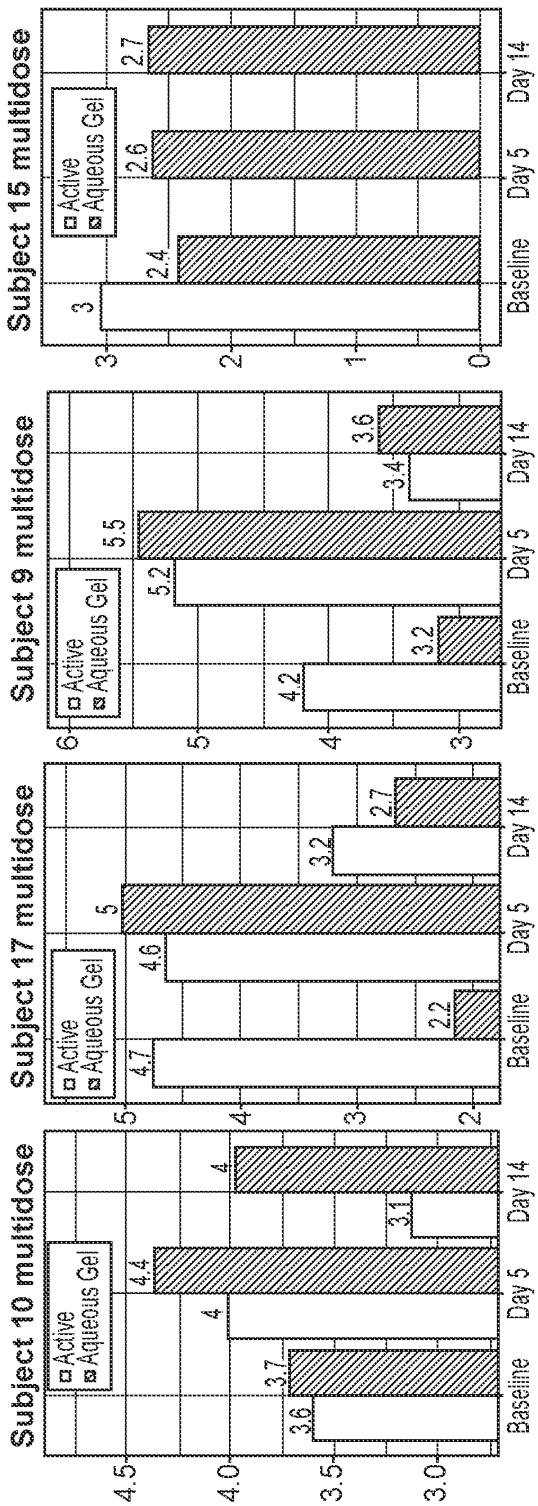
Subject 10 multidose
Subject 17 multidose
Subject 9 multidose
Subject 15 multidose
Active
Aqueous Gel
Baseline
Day 5
Day 14
4.4
4
3.7
3.6
4
3.1
4.7
4.6
2.2
5
3.2
2.7
4.2
5.2
3.2
5.5
3.4
3.6
3
2.4
2.6
2.7

FIG. 8

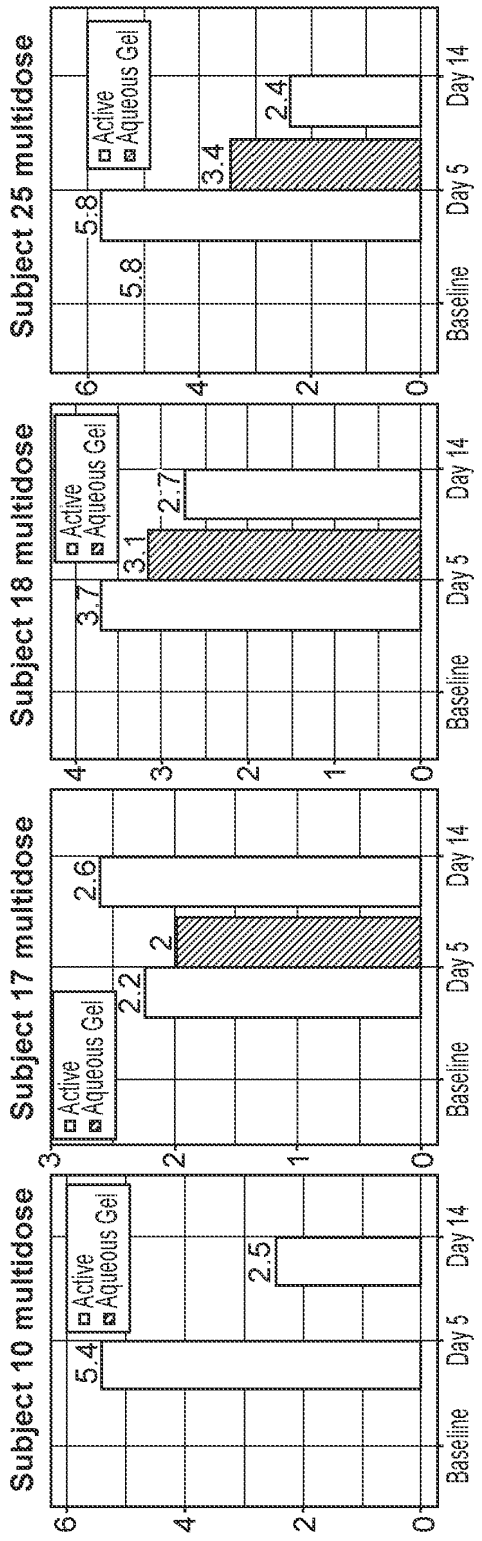
Subject 10 multidose
Subject 17 multidose
Subject 18 multidose
Subject 25 multidose
Active
Aqueous Gel
Baseline
Day 5
Day 14
5.4
2.5
2.2
2
2.6
3.7
3.1
2.7
5.8
5.8
3.4
2.4

FIG. 9

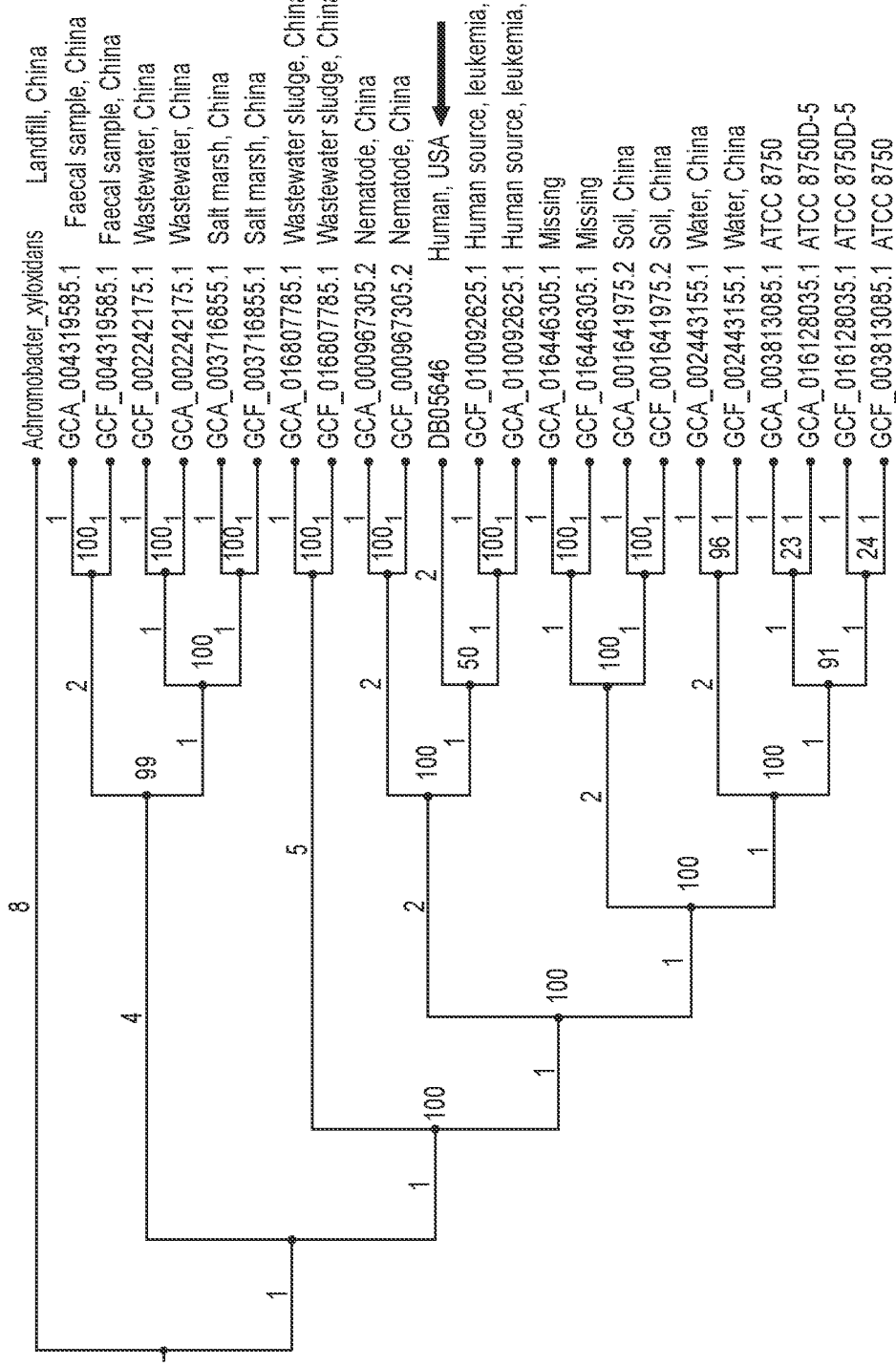
Achromobacter_xyloxidans Landfill, China
GCA_004319585.1 Faecal sample, China
GCF_004319585.1 Faecal sample, China
GCF_002242175.1 Wastewater, China
GCA_002242175.1 Wastewater, China
GCA_003716855.1 Salt marsh, China
GCF_003716855.1 Salt marsh, China
GCA_016807785.1 Wastewater sludge, China
GCF_016807785.1 Wastewater sludge, China
GCA_000967305.2 Nematode, China
GCF_000967305.2 Nematode, China
DB05646 Human, USA
GCF_010092625.1 Human source, leukemia, Poland
GCA_010092625.1 Human source, leukemia, Poland
GCA_016446305.1 Missing
GCF_016446305.1 Missing
GCA_001641975.2 Soil, China
GCF_001641975.2 Soil, China
GCA_002443155.1 Water, China
GCF_002443155.1 Water, China
GCA_003813085.1 ATCC 8750
GCA_016128035.1 ATCC 8750D-5
GCF_016128035.1 ATCC 8750D-5
GCF_003813085.1 ATCC 8750
0.2

FIG. 10

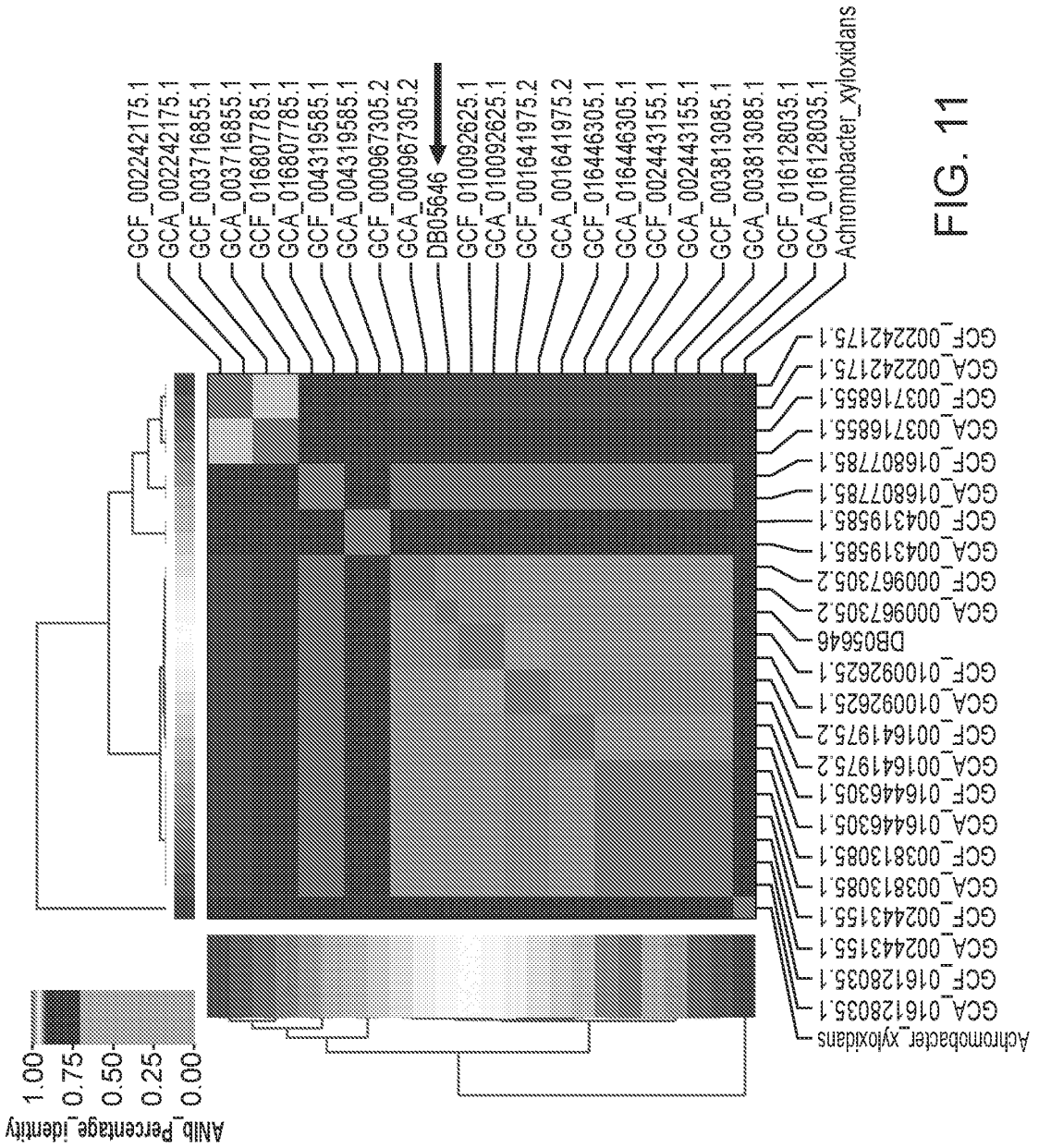
GCF_002242175.1
GCA_002242175.1
GCF_003716855.1
GCA_003716855.1
GCF_016807785.1
GCA_016807785.1
GCF_004319585.1
GCA_004319585.1
GCF_000967305.2
GCA_000967305.2
DB05646
GCF_010092625.1
GCA_010092625.1
GCF_001641975.2
GCA_001641975.2
GCF_016446305.1
GCA_016446305.1
GCF_002443155.1
GCA_002443155.1
GCF_003813085.1
GCA_003813085.1
GCF_016128035.1
GCA_016128035.1
Achromobacter_xyloxidans
ANIb_Percentage_Identity
1.00
0.75
0.50
0.25
0.00

FIG. 11

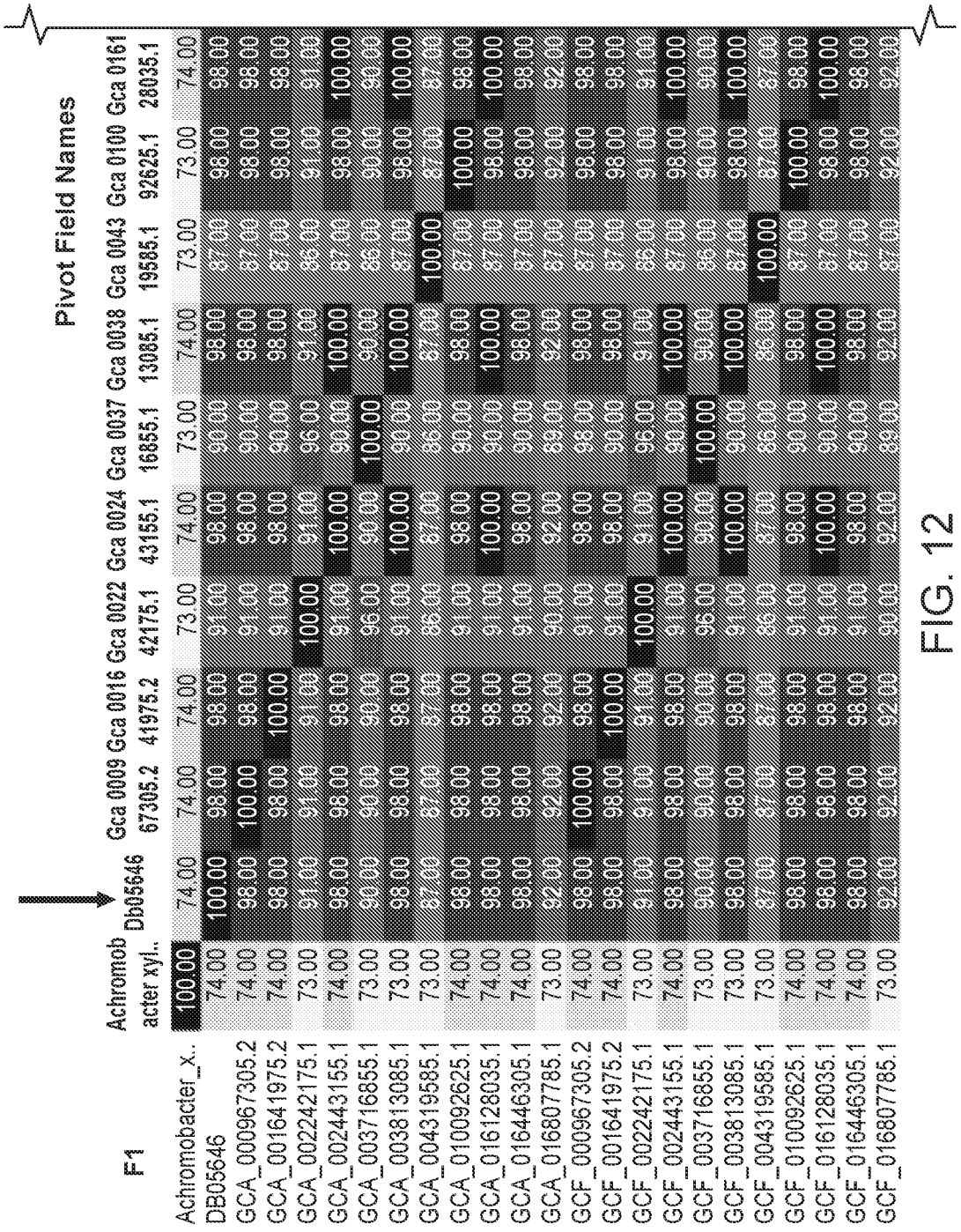
Pivot Field Names
F1
Achromobacter xyl..
Db05646
Gca 0009 67305.2
Gca 0016 41975.2
Gca 0022 42175.1
Gca 0024 43155.1
Gca 0037 16855.1
Gca 0038 13085.1
Gca 0043 19585.1
Gca 0100 92625.1
Gca 0161 28035.1
Achromobacter_x..
DB05646
GCA_000967305.2
GCA_001641975.2
GCA_002242175.1
GCA_002443155.1
GCA_003716855.1
GCA_003813085.1
GCA_004319585.1
GCA_010092625.1
GCA_016128035.1
GCA_016446305.1
GCA_016807785.1
GCF_000967305.2
GCF_001641975.2
GCF_002242175.1
GCF_002443155.1
GCF_003716855.1
GCF_003813085.1
GCF_004319585.1
GCF_010092625.1
GCF_016128035.1
GCF_016446305.1
GCF_016807785.1

FIG. 12

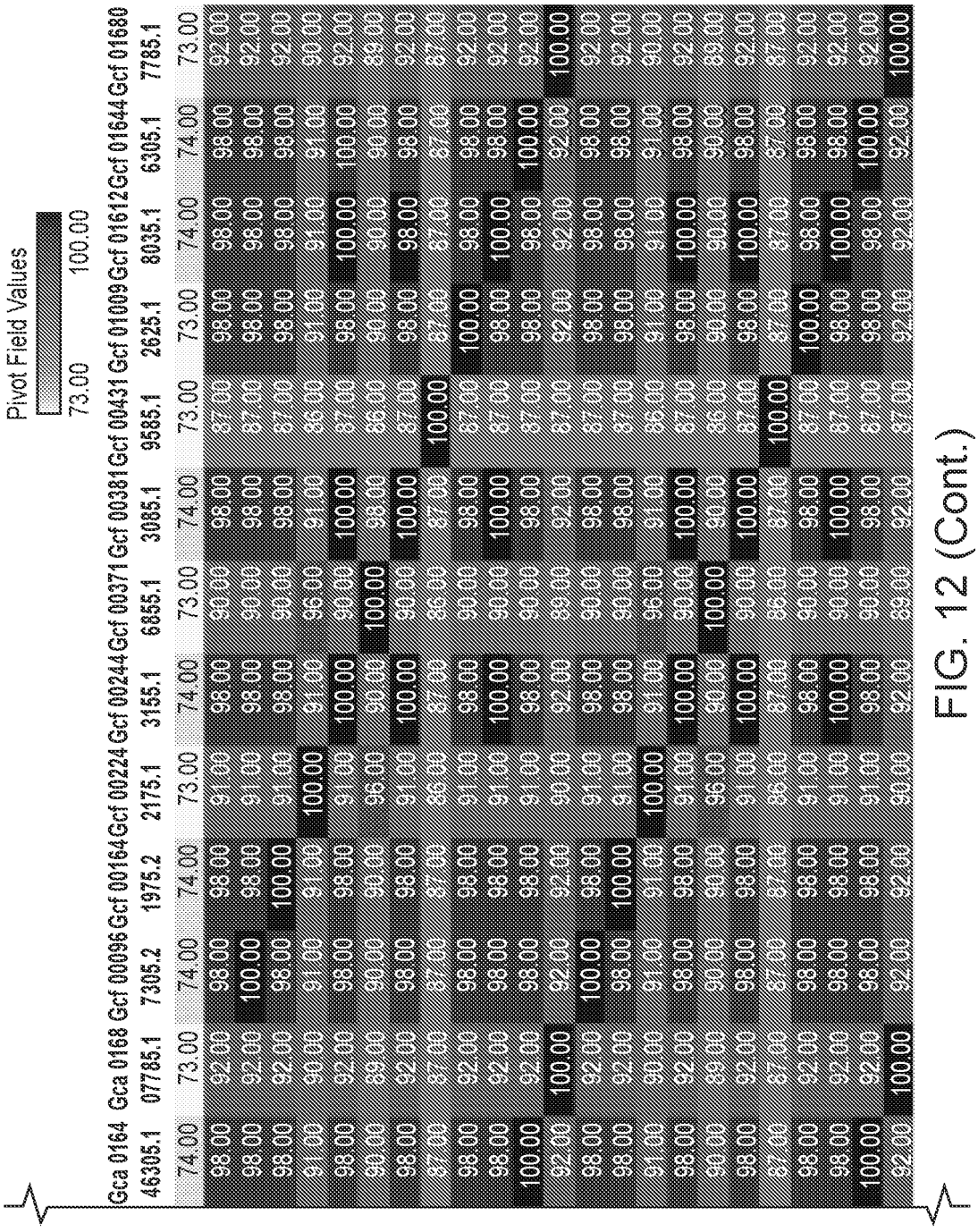
Pivot Field Values
73.00
100.00
Gca 0164 Gca 0168 Gcf 00096 Gcf 00164 Gcf 00224 Gcf 00244 Gcf 00371 Gcf 00381 Gcf 00431 Gcf 01009 Gcf 01612 Gcf 01644 Gcf 01680
46305.1 07785.1 7305.2 1975.2 2175.1 3155.1 6855.1 3085.1 9585.1 2625.1 8035.1 6305.1 7785.1

FIG. 12 (Cont.)

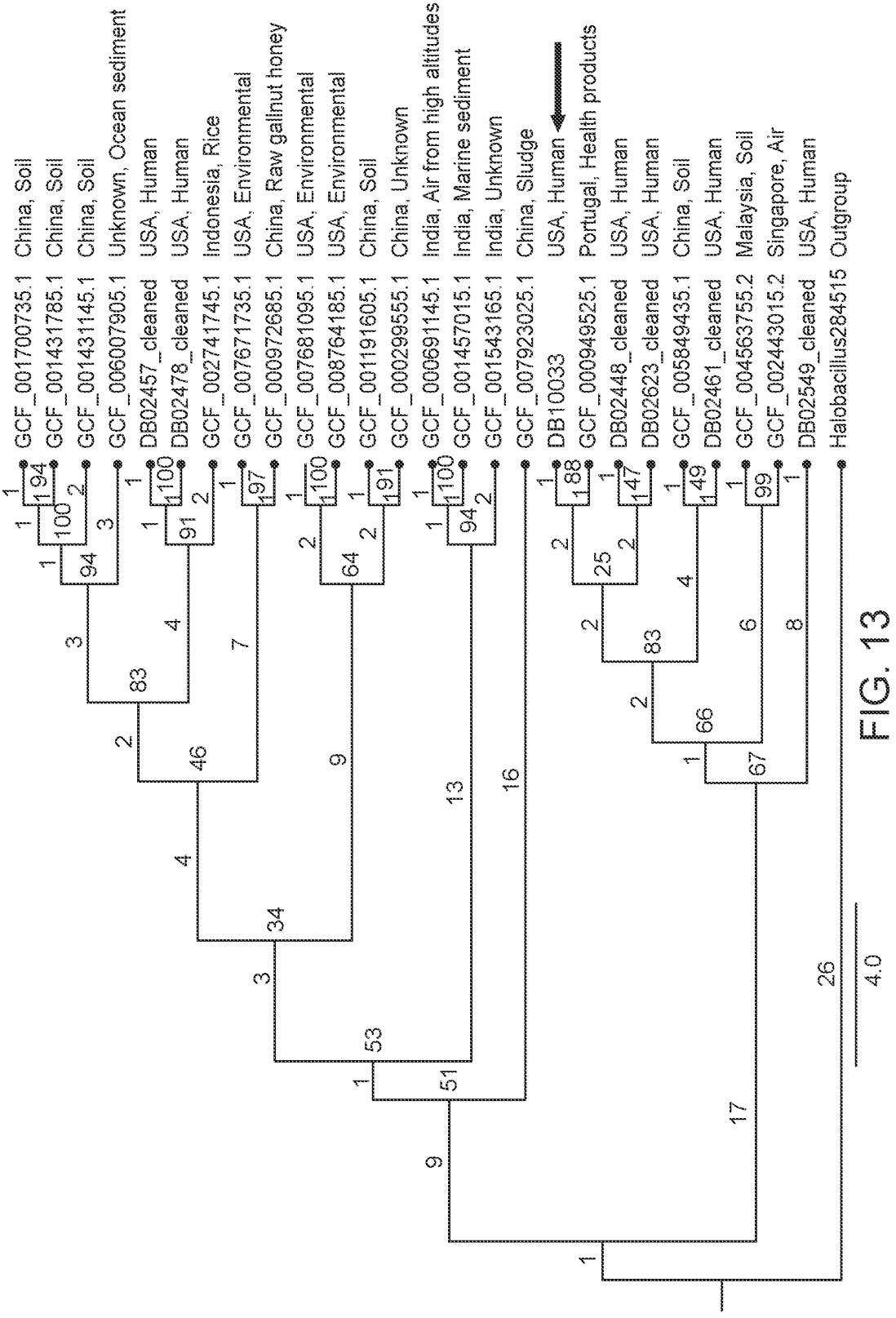
GCF_001700735.1 China, Soil
GCF_001431785.1 China, Soil
GCF_001431145.1 China, Soil
GCF_006007905.1 Unknown, Ocean sediment
DB02457_cleaned USA, Human
DB02478_cleaned USA, Human
GCF_002741745.1 Indonesia, Rice
GCF_007671735.1 USA, Environmental
GCF_000972685.1 China, Raw gallnut honey
GCF_007681095.1 USA, Environmental
GCF_008764185.1 USA, Environmental
GCF_001191605.1 China, Soil
GCF_000299555.1 China, Unknown
GCF_000691145.1 India, Air from high altitudes
GCF_001457015.1 India, Marine sediment
GCF_001543165.1 India, Unknown
GCF_007923025.1 China, Sludge
DB10033 USA, Human
GCF_000949525.1 Portugal, Health products
DB02448_cleaned USA, Human
DB02623_cleaned USA, Human
GCF_005849435.1 China, Soil
DB02461_cleaned USA, Human
GCF_004563755.2 Malaysia, Soil
GCF_002443015.2 Singapore, Air
DB02549_cleaned USA, Human
Halobacillus284515 Outgroup
4.0

FIG. 13

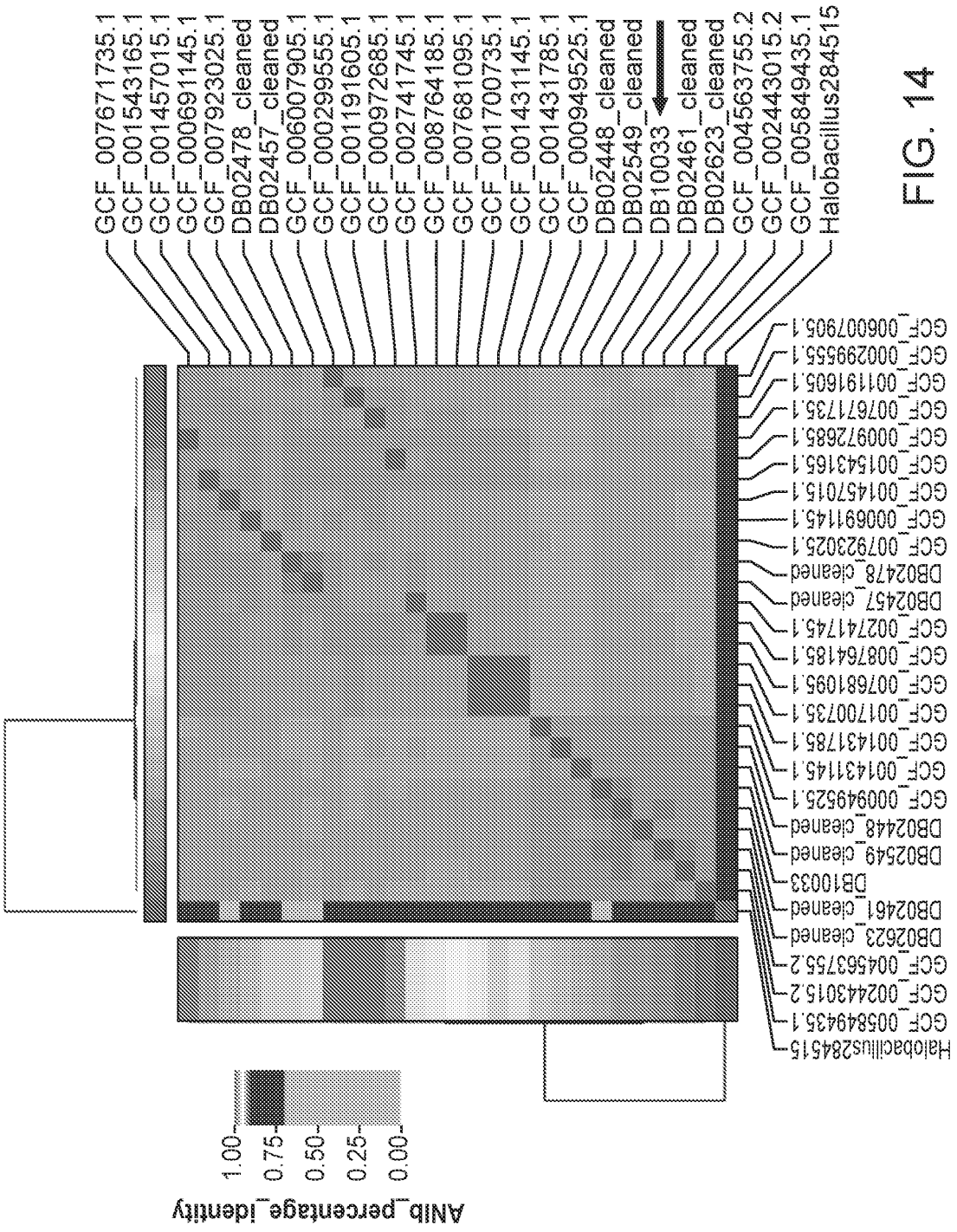
GCF_007671735.1
GCF_001543165.1
GCF_001457015.1
GCF_000691145.1
GCF_007923025.1
DB02478_cleaned
DB02457_cleaned
GCF_006007905.1
GCF_000299555.1
GCF_001191605.1
GCF_000972685.1
GCF_002741745.1
GCF_008764185.1
GCF_007681095.1
GCF_001700735.1
GCF_001431145.1
GCF_001431785.1
GCF_000949525.1
DB02448_cleaned
DB02549_cleaned
DB10033
DB02461_cleaned
DB02623_cleaned
GCF_004563755.2
GCF_002443015.2
GCF_005849435.1
Halobacillus284515
ANIb_percentage_identity
1.00
0.75
0.50
0.25
0.00

FIG. 14

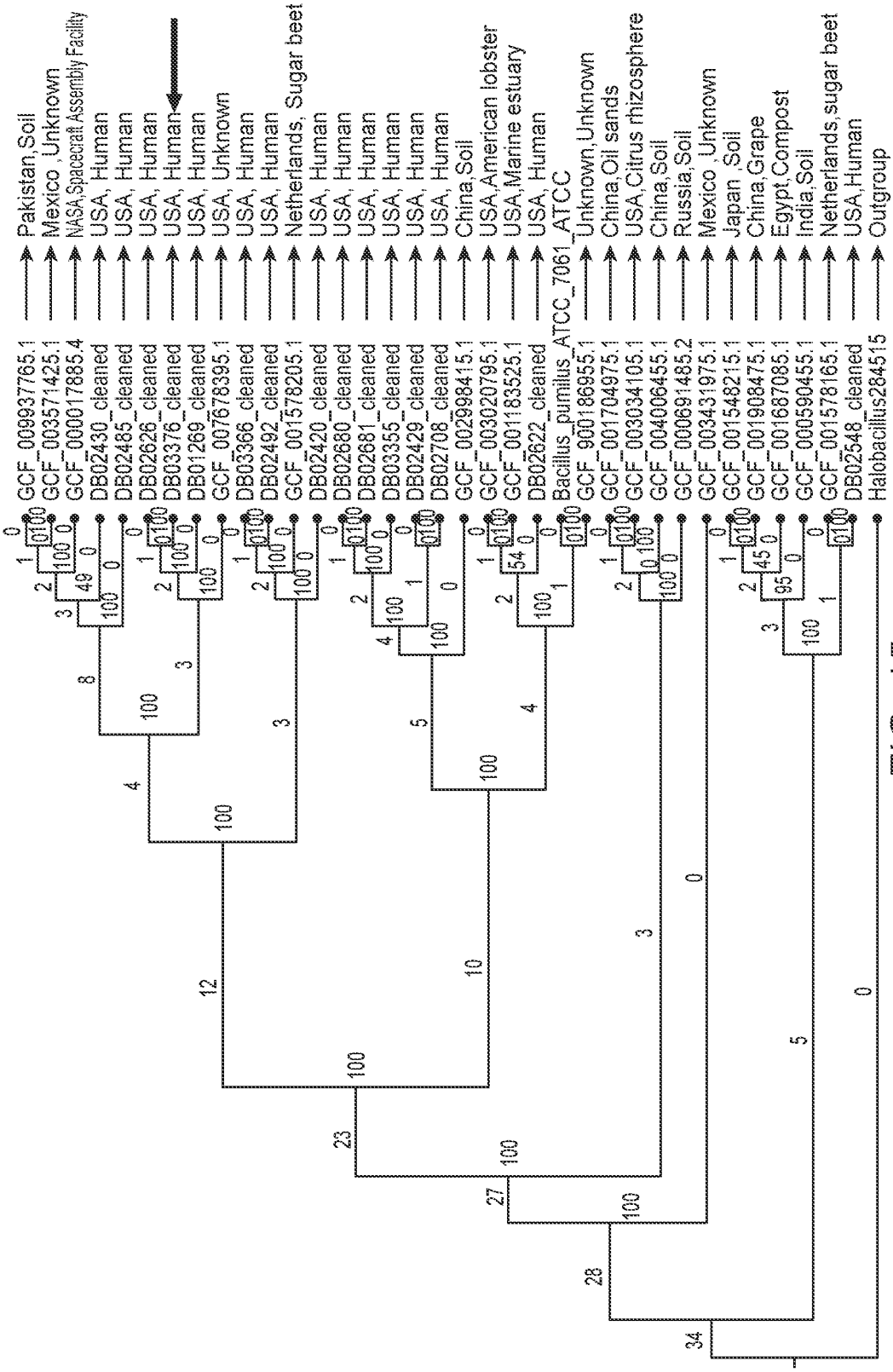
GCF_009937765.1 Pakistan,Soil
GCF_003571425.1 Mexico ,Unknown
GCF_000017885.4 NASA,Spacecraft Assembly Facility
DB02430_cleaned USA, Human
DB02485_cleaned USA, Human
DB02626_cleaned USA, Human
DB03376_cleaned USA, Human
DB01269_cleaned USA, Human
GCF_007678395.1 USA, Unknown
DB03366_cleaned USA, Human
DB02492_cleaned USA, Human
GCF_001578205.1 Netherlands, Sugar beet
DB02420_cleaned USA, Human
DB02680_cleaned USA, Human
DB02681_cleaned USA, Human
DB03355_cleaned USA, Human
DB02429_cleaned USA, Human
DB02708_cleaned USA, Human
GCF_002998415.1 China,Soil
GCF_003020795.1 USA,American lobster
GCF_001183525.1 USA,Marine estuary
DB02622_cleaned USA, Human
Bacillus_pumilus_ATCC_7061_ATCC
GCF_900186955.1 Unknown,Unknown
GCF_001704975.1 China,Oil sands
GCF_003034105.1 USA,Citrus rhizosphere
GCF_004006455.1 China,Soil
GCF_000691485.2 Russia,Soil
GCF_003431975.1 Mexico ,Unknown
GCF_001548215.1 Japan ,Soil
GCF_001908475.1 China,Grape
GCF_001687085.1 Egypt,Compost
GCF_000590455.1 India,Soil
GCF_001578165.1 Netherlands,sugar beet
DB02548_cleaned USA,Human
Halobacillus284515 Outgroup

FIG. 15

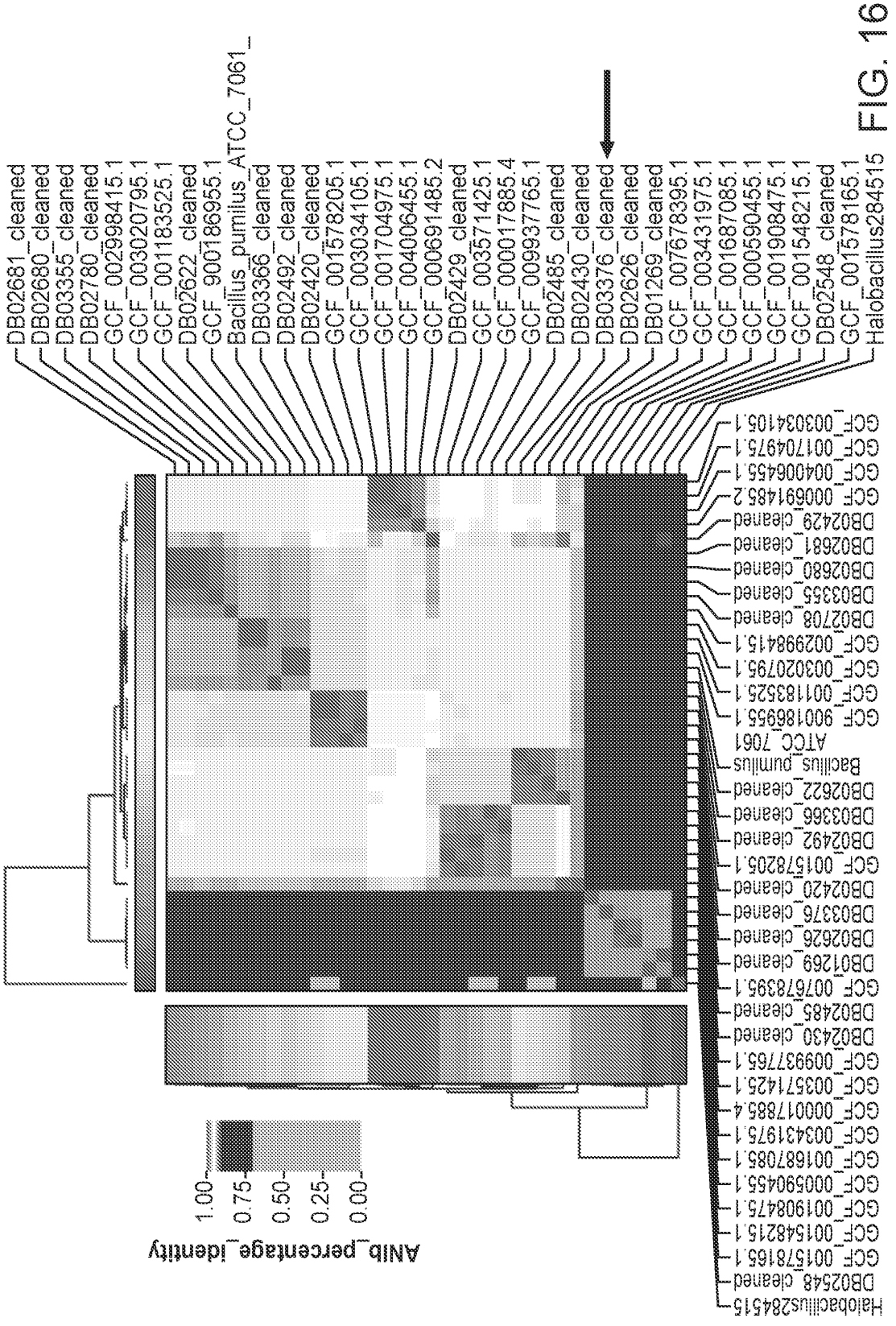
DB02681_cleaned
DB02680_cleaned
DB03355_cleaned
DB02780_cleaned
GCF_002998415.1
GCF_003020795.1
GCF_001183525.1
DB02622_cleaned
GCF_900186955.1
Bacillus_pumilus_ATCC_7061_
DB03366_cleaned
DB02492_cleaned
DB02420_cleaned
GCF_001578205.1
GCF_003034105.1
GCF_001704975.1
GCF_004006455.1
GCF_000691485.2
DB02429_cleaned
GCF_003571425.1
GCF_000017885.4
GCF_009937765.1
DB02485_cleaned
DB02430_cleaned
DB03376_cleaned
DB02626_cleaned
DB01269_cleaned
GCF_007678395.1
GCF_003431975.1
GCF_001687085.1
GCF_000590455.1
GCF_001908475.1
GCF_001548215.1
DB02548_cleaned
GCF_001578165.1
Halobacillus284515
1.00
0.75
0.50
0.25
0.00
ANIb_percentage_identity

FIG. 16

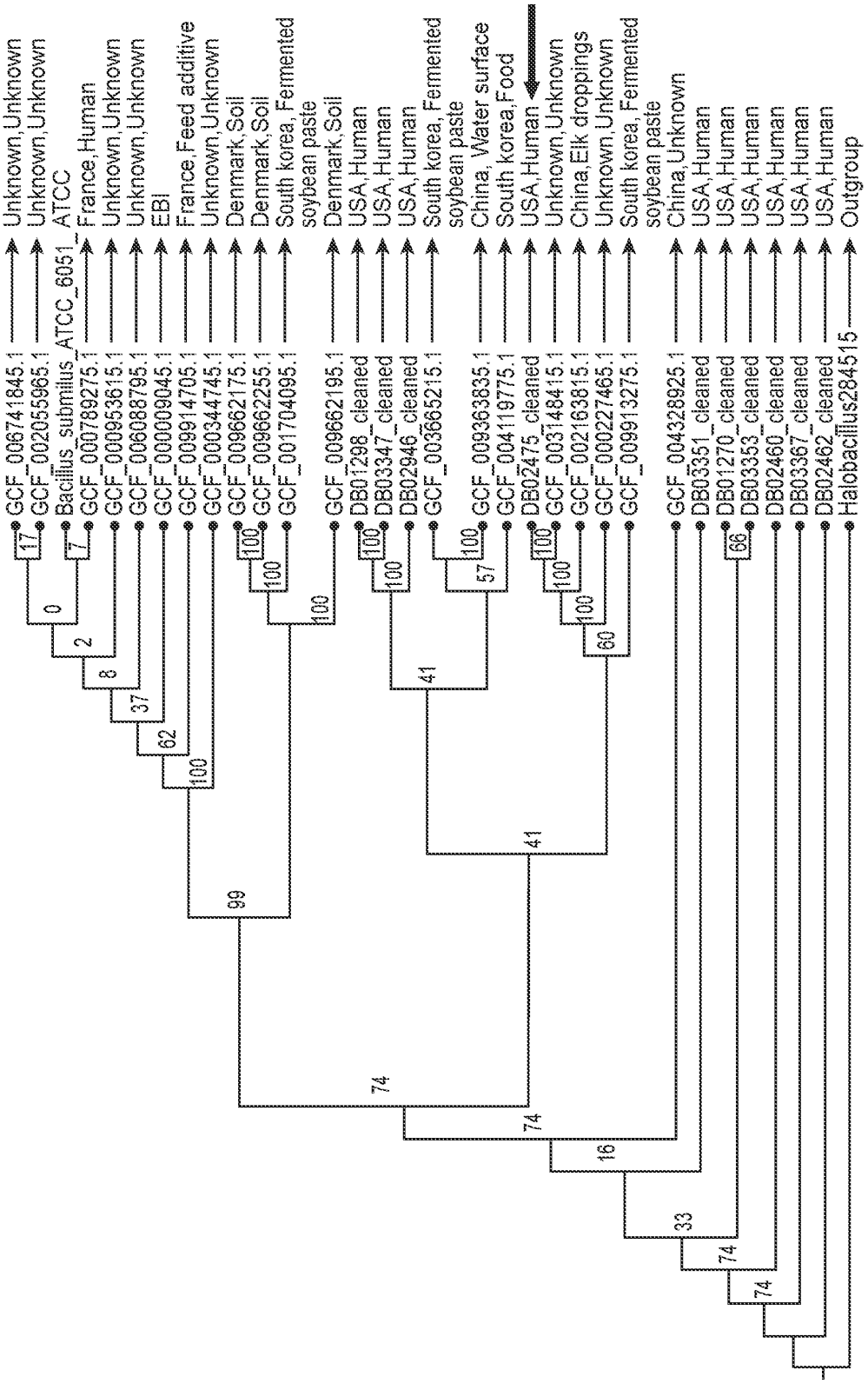
GCF_006741845.1 Unknown,Unknown
GCF_002055965.1 Unknown,Unknown
Bacillus_subtilis_ATCC_6051_ ATCC
GCF_000789275.1 France,Human
GCF_000953615.1 Unknown,Unknown
GCF_000688795.1 Unknown,Unknown
GCF_000009045.1 EBI
GCF_009914705.1 France,Feed additive
GCF_000344745.1 Unknown,Unknown
GCF_009662175.1 Denmark,Soil
GCF_009662255.1 Denmark,Soil
GCF_001704095.1 South korea, Fermented soybean paste
GCF_009662195.1 Denmark,Soil
DB01298_cleaned USA,Human
DB03347_cleaned USA,Human
DB02946_cleaned USA,Human
GCF_003665215.1 South korea, Fermented soybean paste
GCF_009363835.1 China, Water surface
GCF_004119775.1 South korea,Food
DB02475_cleaned USA,Human
GCF_003148415.1 Unknown,Unknown
GCF_002163815.1 China,Elk droppings
GCF_000227465.1 Unknown,Unknown
GCF_009913275.1 South korea, Fermented soybean paste
GCF_004328925.1 China,Unknown
DB03351_cleaned USA,Human
DB01270_cleaned USA,Human
DB03353_cleaned USA,Human
DB02460_cleaned USA,Human
DB03367_cleaned USA,Human
DB02462_cleaned USA,Human
Halobacillus284515 Outgroup

FIG. 17

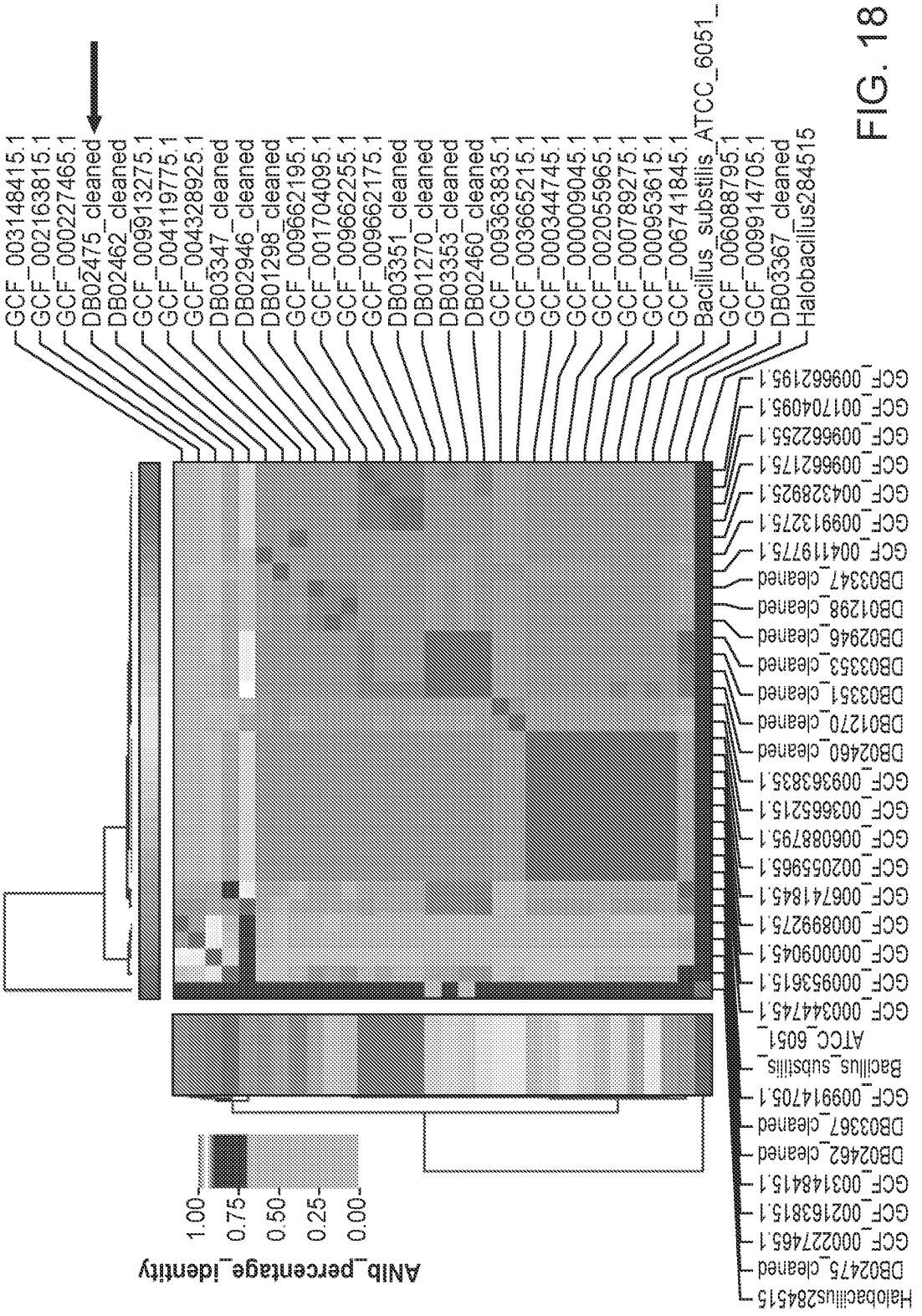
GCF_003148415.1
GCF_002163815.1
GCF_000227465.1
DB02475_cleaned
DB02462_cleaned
GCF_009913275.1
GCF_004119775.1
GCF_004328925.1
DB03347_cleaned
DB02946_cleaned
DB01298_cleaned
GCF_009662195.1
GCF_001704095.1
GCF_009662255.1
GCF_009662175.1
DB03351_cleaned
DB01270_cleaned
DB03353_cleaned
DB02460_cleaned
GCF_009363835.1
GCF_003665215.1
GCF_000344745.1
GCF_000009045.1
GCF_002055965.1
GCF_000789275.1
GCF_000953615.1
GCF_006741845.1
Bacillus_substilis_ATCC_6051_
GCF_006088795.1
GCF_009914705.1
DB03367_cleaned
Halobacillus284515
GCF_009662195.1
GCF_001704095.1
GCF_009662255.1
GCF_009662175.1
GCF_004328925.1
GCF_009913275.1
GCF_004119775.1
DB03347_cleaned
DB01298_cleaned
DB02946_cleaned
DB03353_cleaned
DB03351_cleaned
DB01270_cleaned
DB02460_cleaned
GCF_009363835.1
GCF_003665215.1
GCF_006088795.1
GCF_002055965.1
GCF_006741845.1
GCF_000789275.1
GCF_000009045.1
GCF_000344745.1
GCF_000953615.1
Bacillus_substilis_ATCC_6051_
GCF_009914705.1
DB03367_cleaned
DB02462_cleaned
GCF_003148415.1
GCF_002163815.1
GCF_000227465.1
DB02475_cleaned
Halobacillus284515
1.00
0.75
0.50
0.25
0.00
ANIb_percentage_identity

FIG. 18

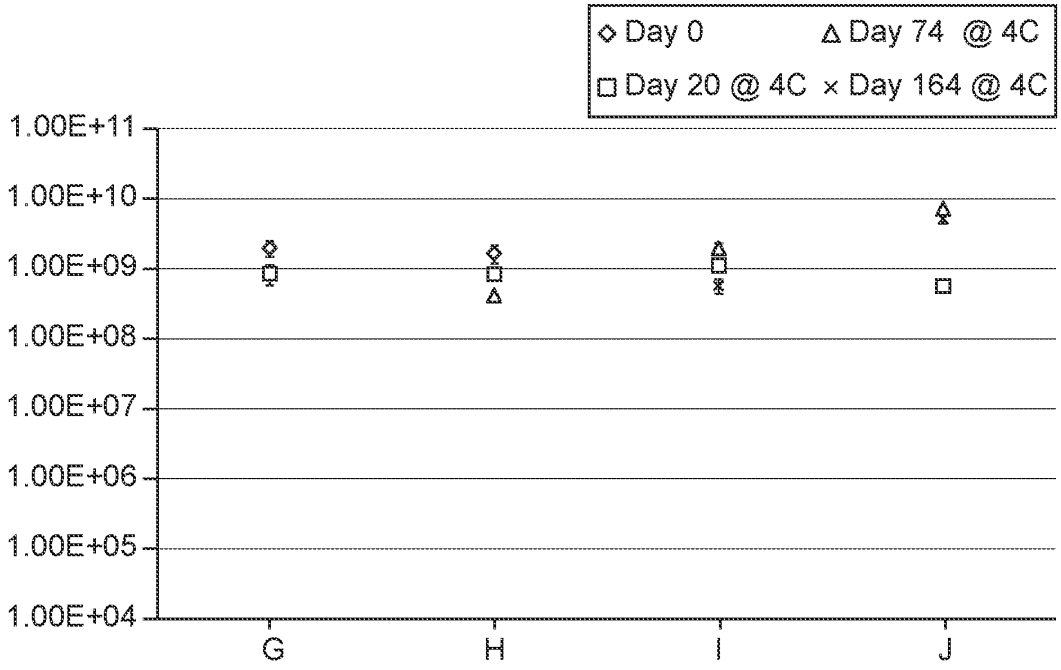
Day 0
Day 74 @ 4C
Day 20 @ 4C
Day 164 @ 4C
1.00E+11
1.00E+10
1.00E+09
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
G
H
I
J

FIG. 19

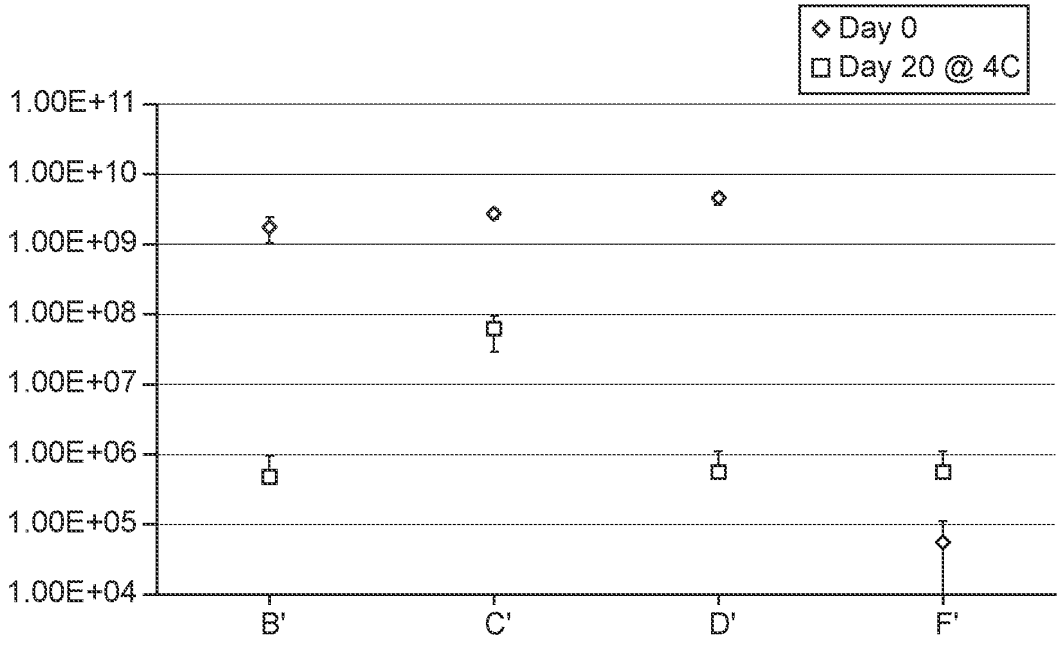
Day 0
Day 20 @ 4C
1.00E+11
1.00E+10
1.00E+09
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
B'
C'
D'
F'

FIG. 20

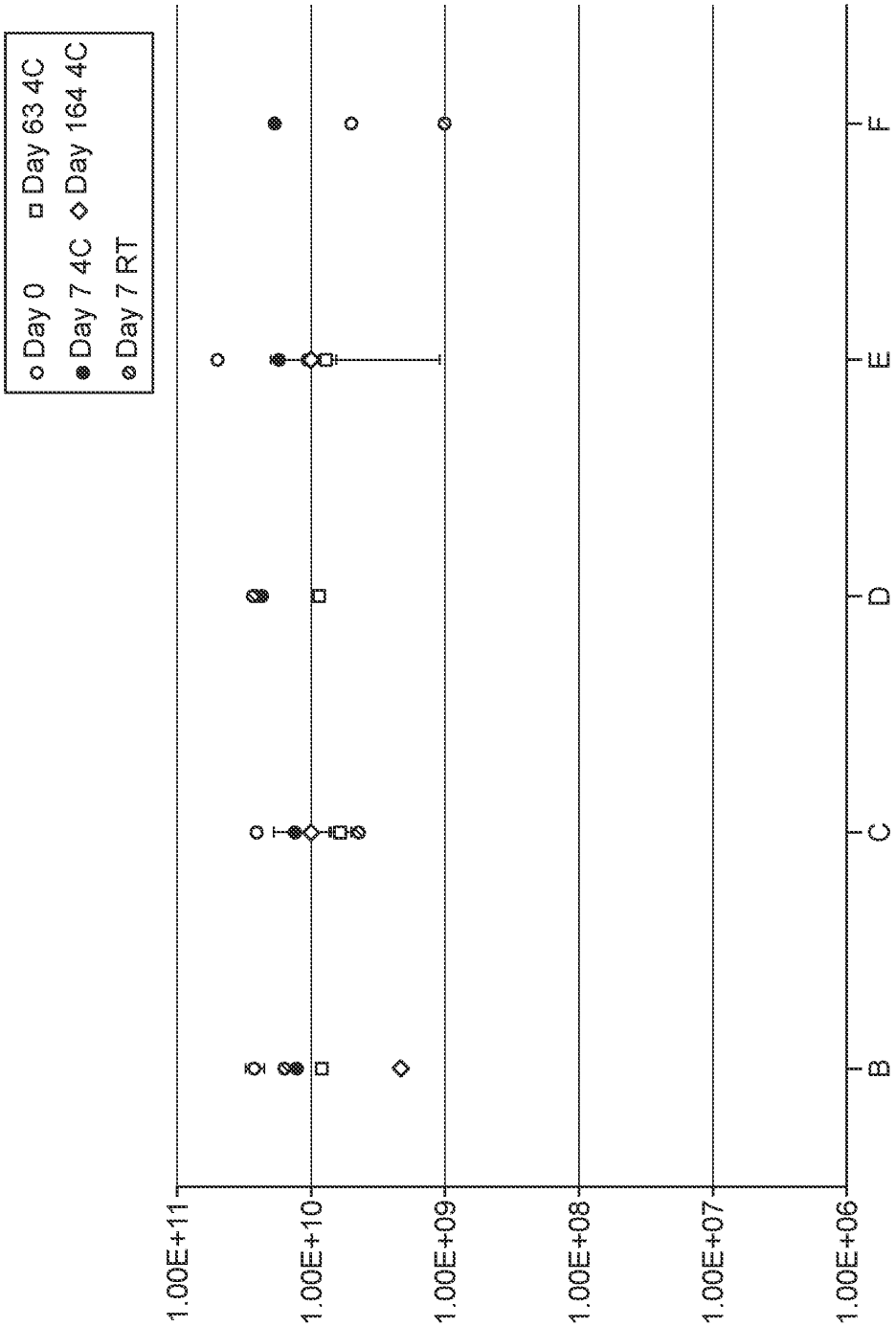
Day 0
Day 63 4C
Day 7 4C
Day 164 4C
Day 7 RT
1.00E+11
1.00E+10
1.00E+09
1.00E+08
1.00E+07
1.00E+06
B
C
D
E
F

FIG. 21

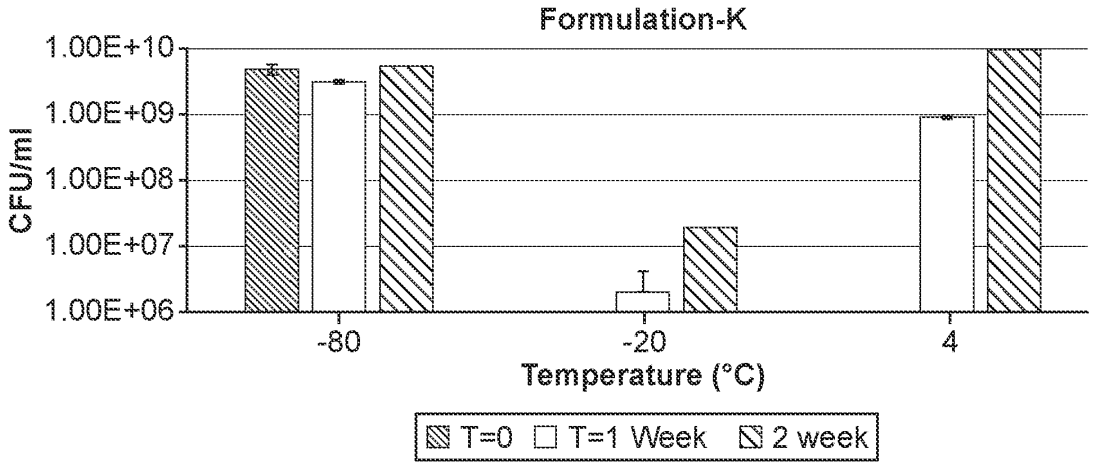

FIG. 22A

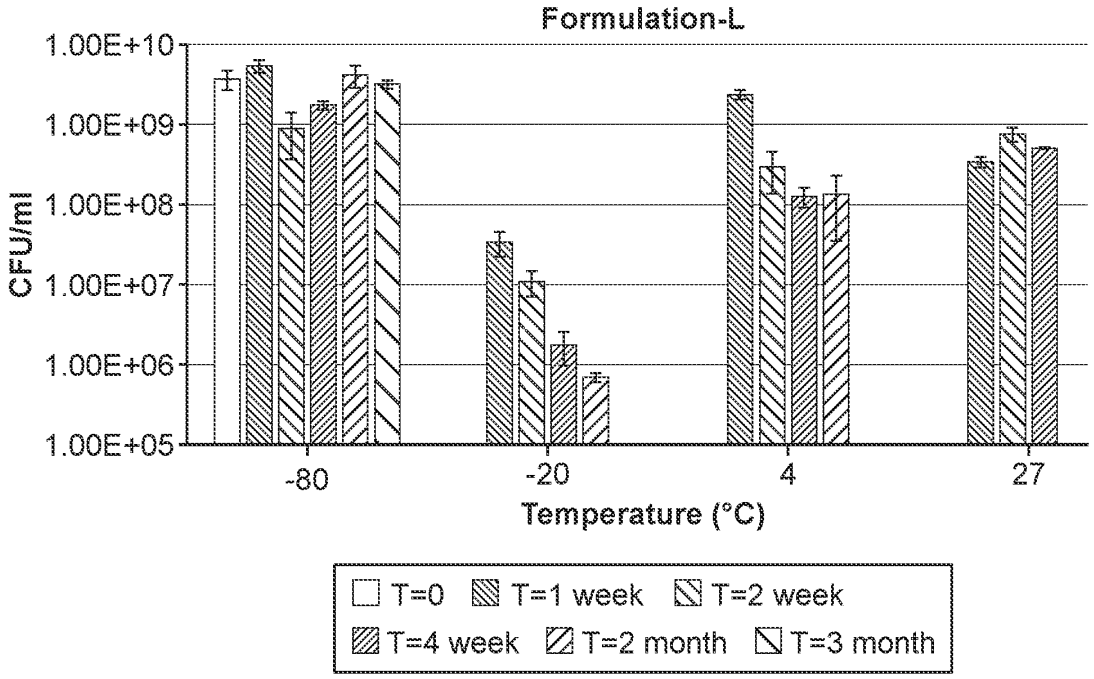

FIG. 22B

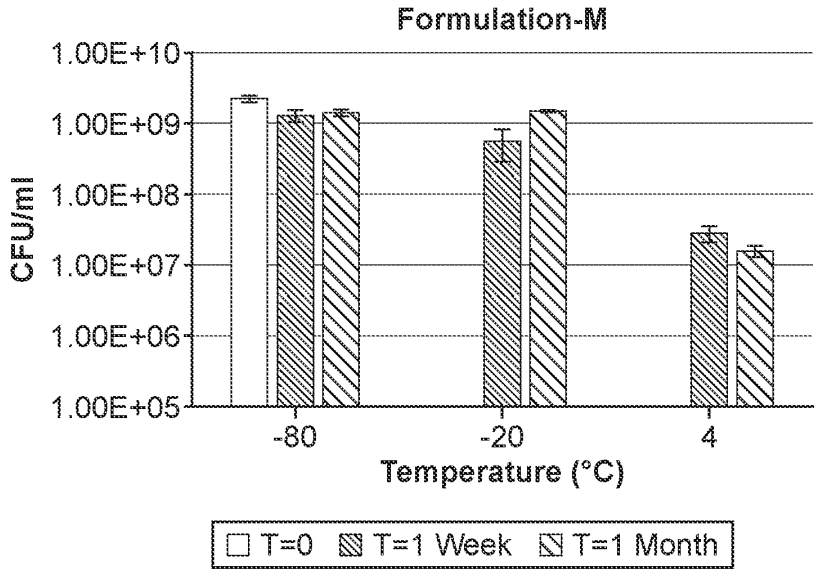

FIG. 22C

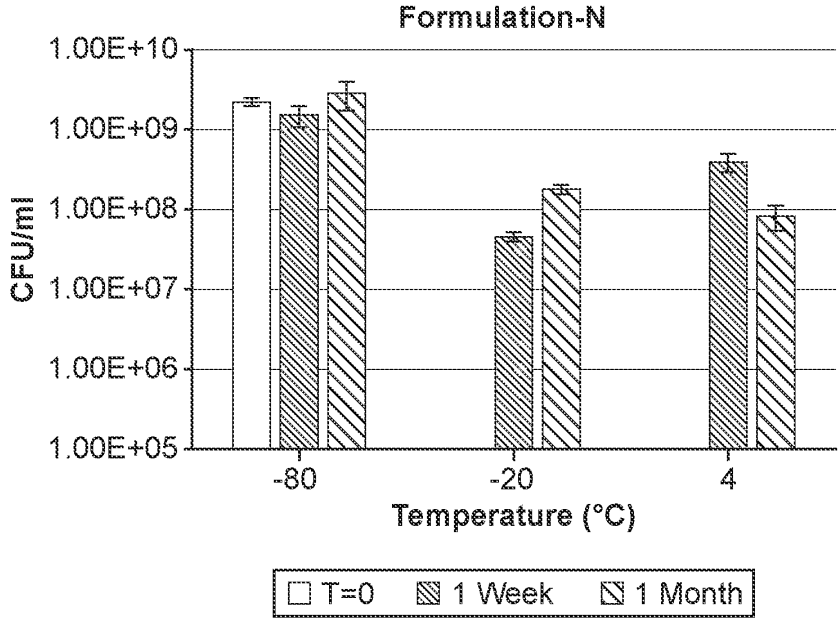

FIG. 22D

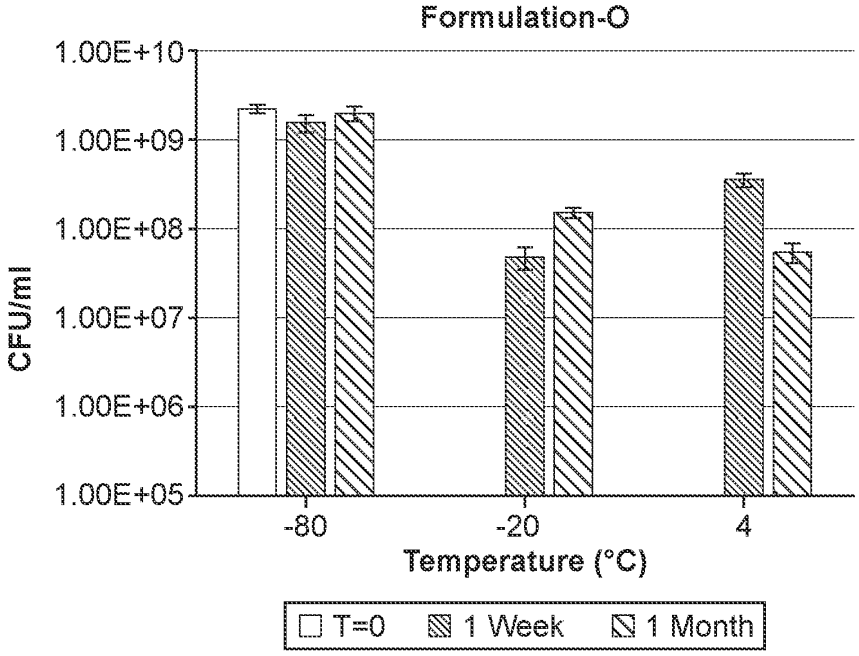

FIG. 22E

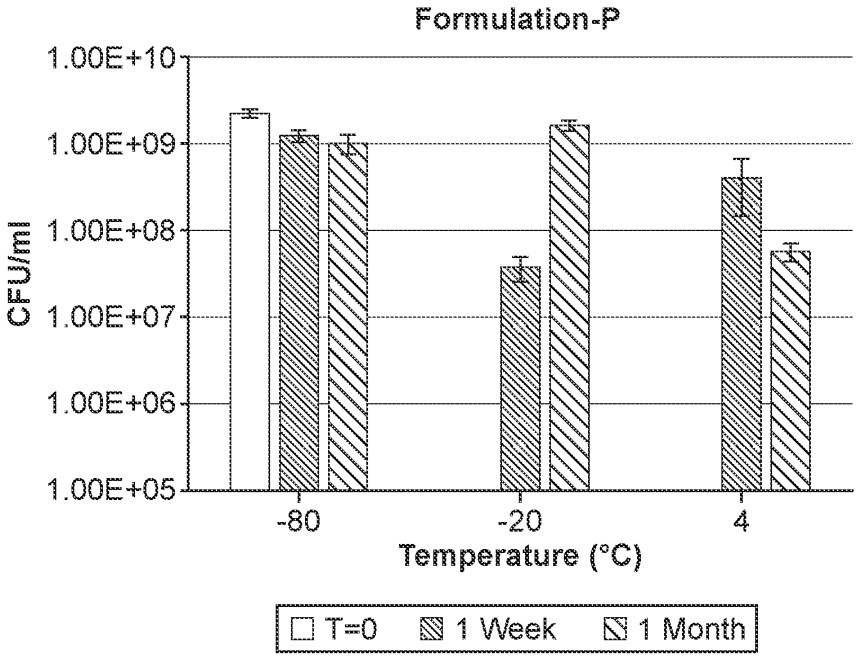

FIG. 22F

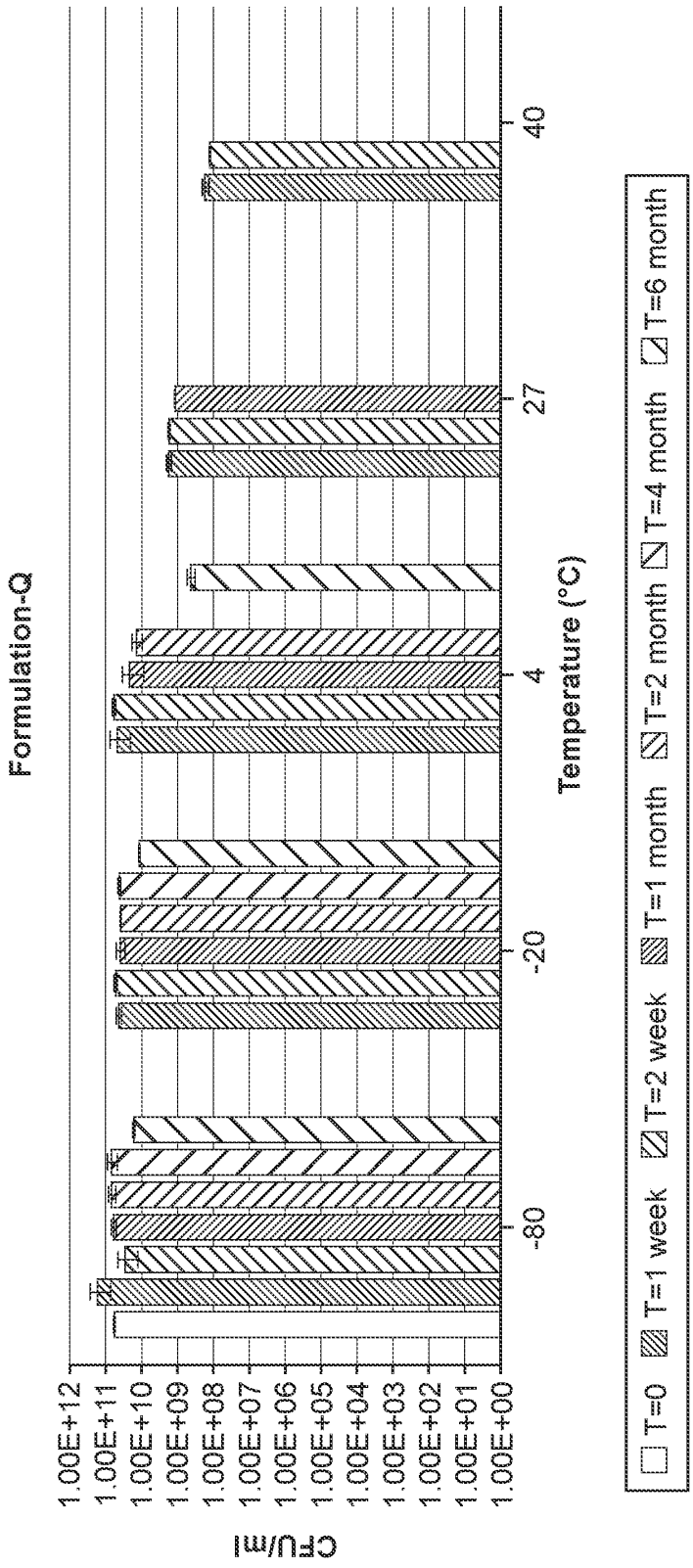
Formulation-Q
CFU/ml
1.00E+12
1.00E+11
1.00E+10
1.00E+09
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
-80
-20
4
27
40
Temperature (°C)
T=0
T=1 week
T=2 week
T=1 month
T=2 month
T=4 month
T=6 month

FIG. 23A

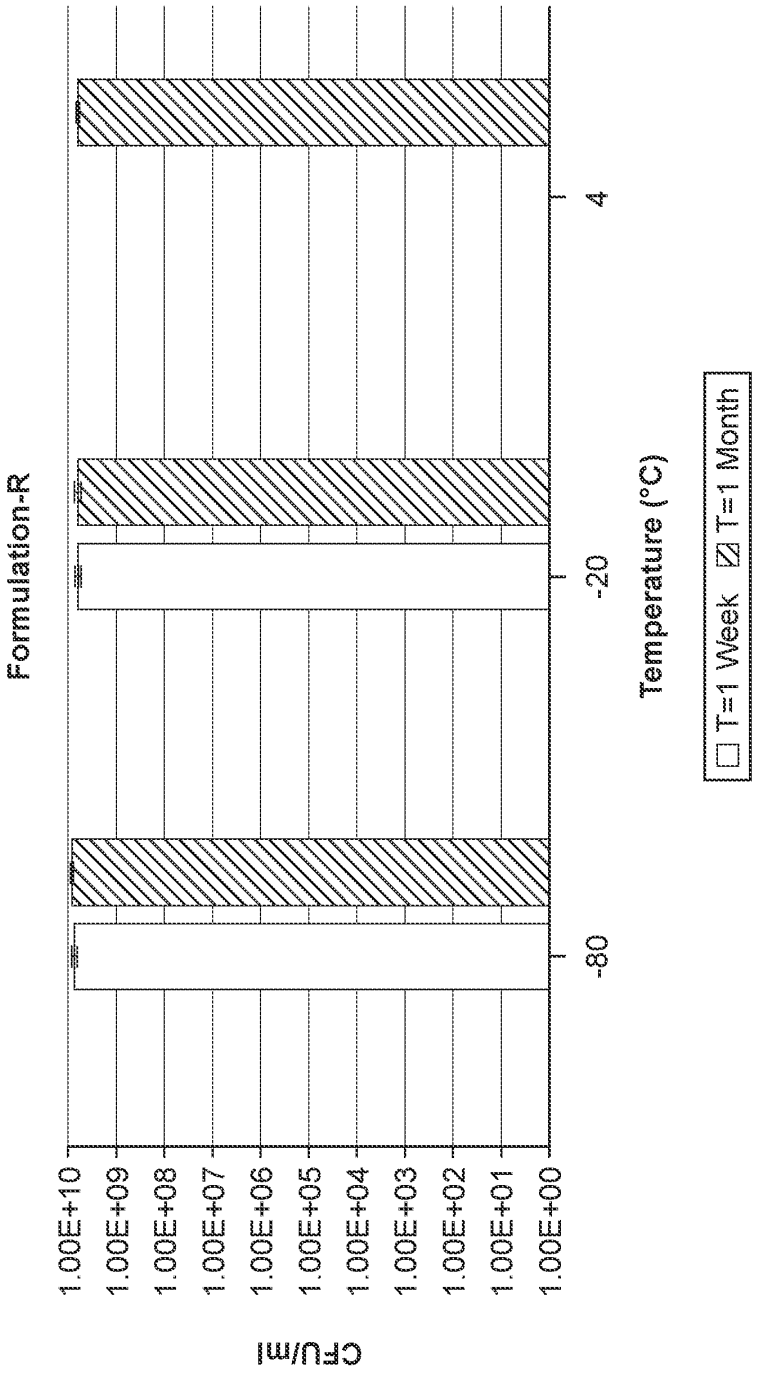
Formulation-R
CFU/ml
1.00E+10
1.00E+09
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
-80
-20
4
Temperature (°C)
T=1 Week
T=1 Month

FIG. 23B

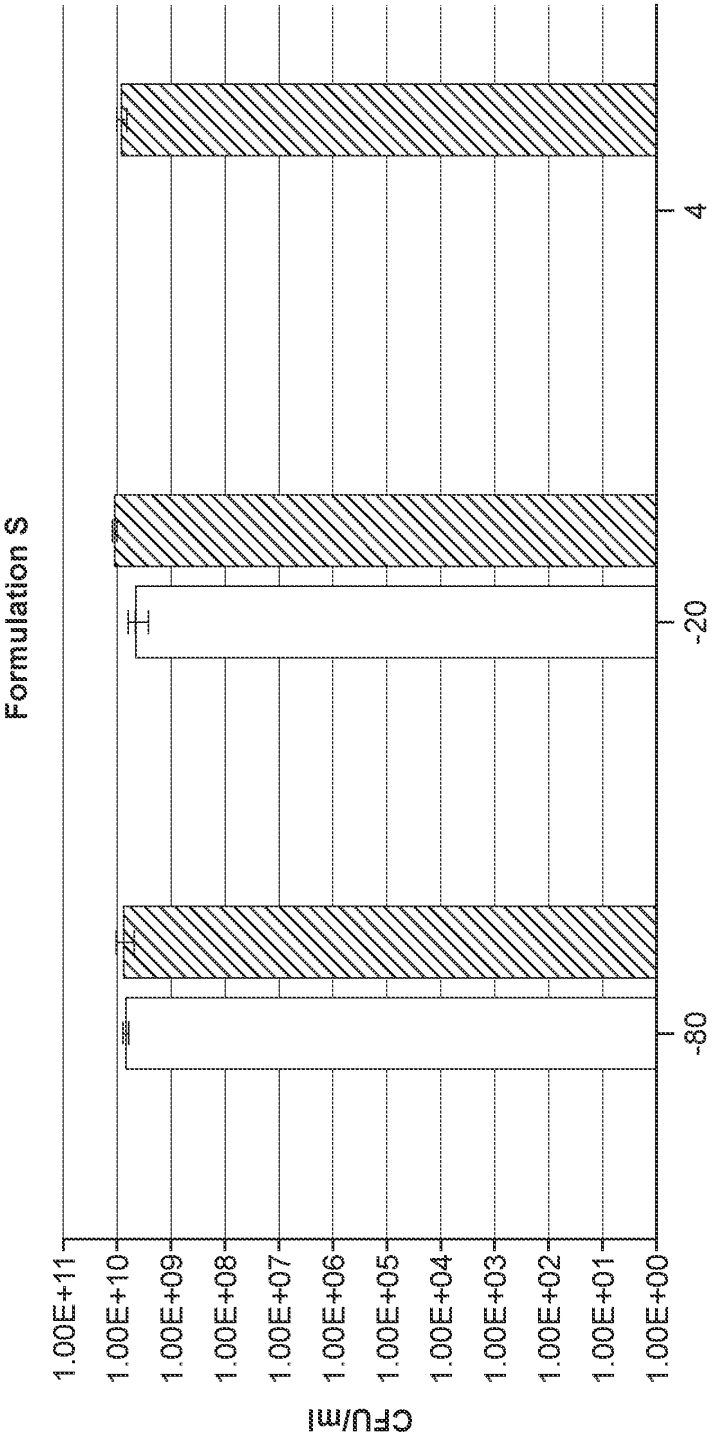
Formulation S
CFU/ml
1.00E+11
1.00E+10
1.00E+09
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
-80
-20
4
Temperature (°C)
1 Week
1 Month

FIG. 23C

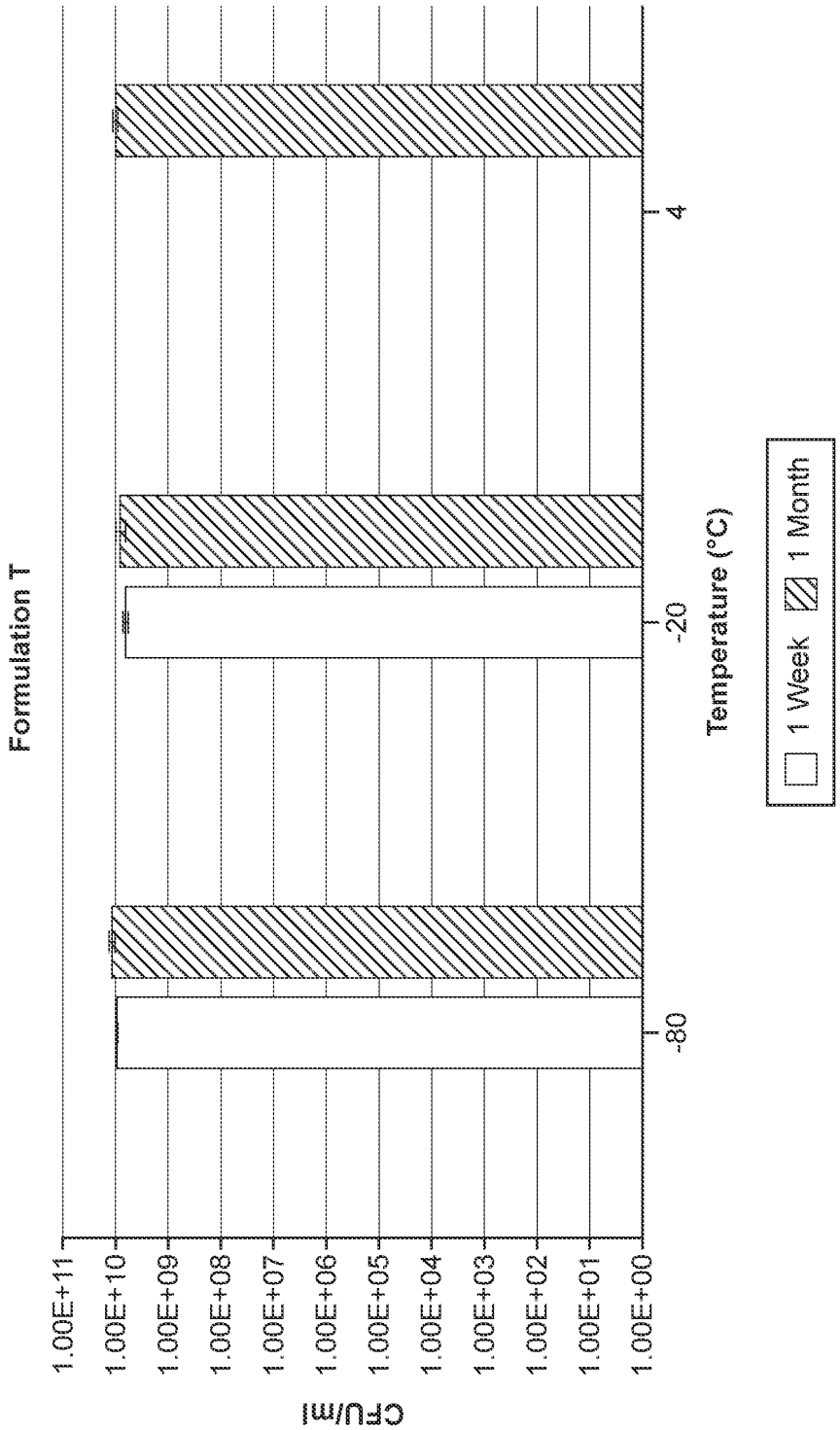
Formulation T
CFU/ml
1.00E+11
1.00E+10
1.00E+09
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
-80
-20
4
Temperature (°C)
1 Week
1 Month

FIG. 23D

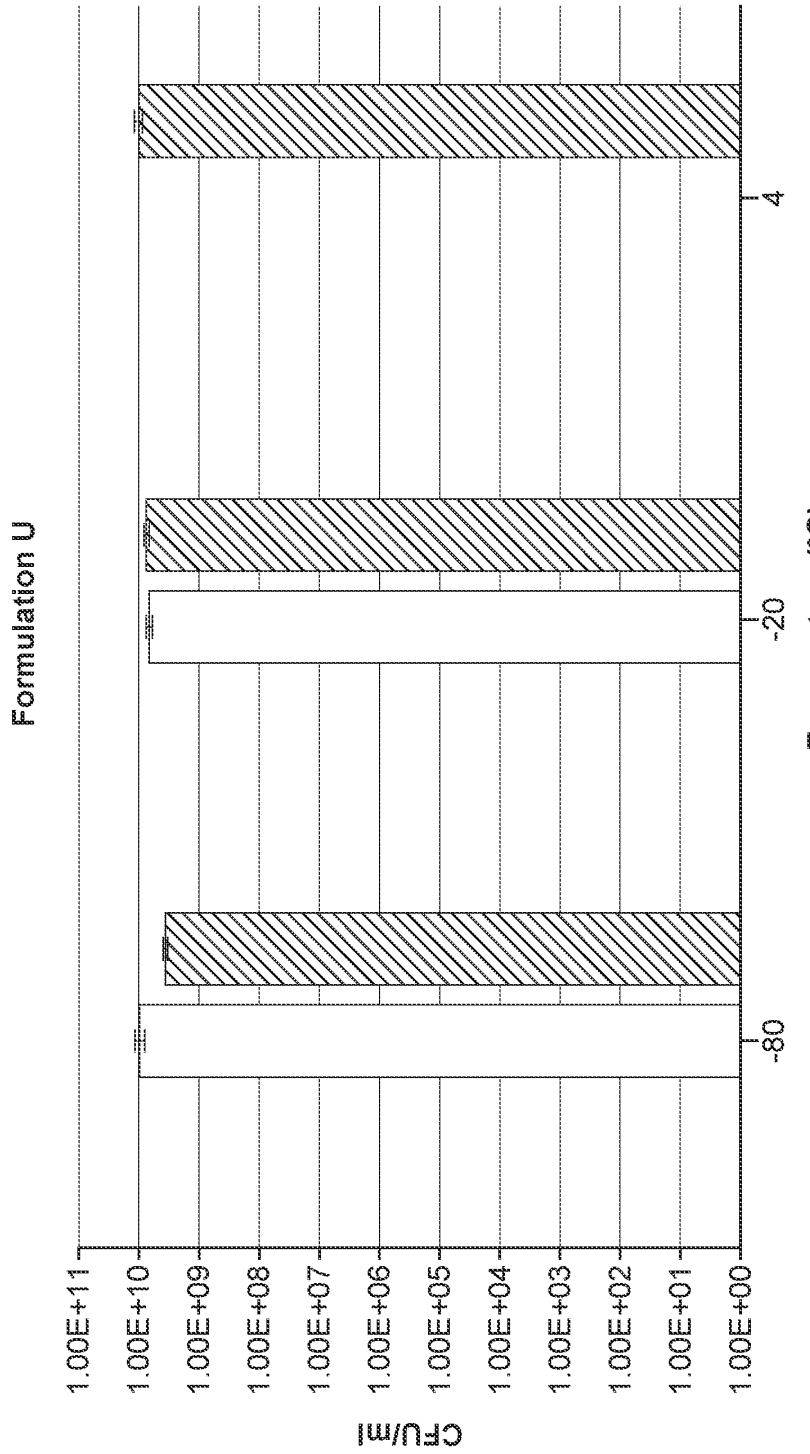
Formulation U
CFU/ml
1.00E+11
1.00E+10
1.00E+09
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
-80
-20
4
Temperature (°C)
1 Week
1 Month

FIG. 23E